

## Sewall Wetland Consulting, Inc.

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Fall City, WA 98024

Phone: 253-859-0515

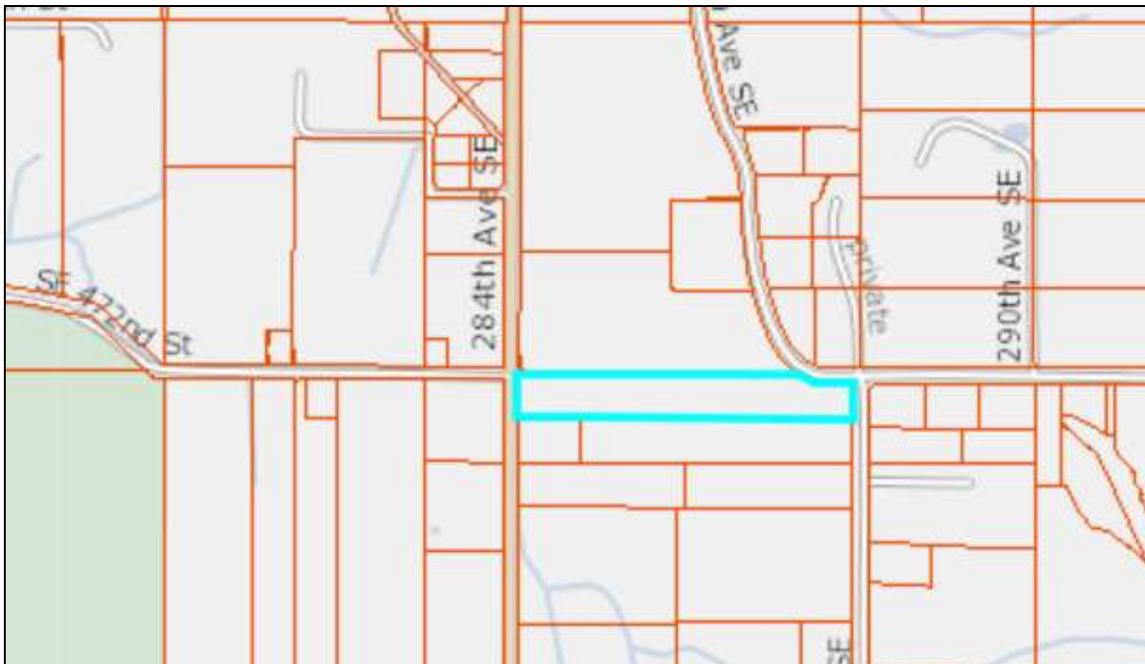
March 12, 2025

Scott Woodbury  
PO Box 662  
Enumclaw, Washington 98022

RE: Critical Area Report – Parcel #3120079032  
SWC Job #25-102

Dear Scott,

This report describes our observations of jurisdictional wetlands, streams and buffers on or within 225' of Parcel #3120079032, located on the east side of 284<sup>th</sup> Avenue SE, just east of its intersection with SE 472<sup>nd</sup> Street in the Enumclaw area of unincorporated King County, Washington (the “site”).



*Above: Vicinity Map of the site.*

The site is an irregular shaped, 4.73 acre parcel located within the SE  $\frac{1}{4}$  of Section 31, Township 20 North, Range 7 East of the W.M.

The site contains a single family home on its eastern end with the remainder being mowed pasture and a small forested area near the center.

### *Proposed Project*

The proposed project is the replacement of a water line overdue for replacement across the site to service the home on the eastern side of the site as well as one other parcel. The water line will extend from 284<sup>th</sup> Avenue SE, easterly through the site and up the hill.

## **METHODOLOGY**

Ed Sewall of Sewall Wetland Consulting, Inc. inspected the site on January 20, 2025. The site was reviewed using methodology described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987), and the *Western Mountains, Valleys and Coast region Supplement* (Version 2.0) dated June 24, 2010, as required by the US Army Corps of Engineers. Soil colors were identified using the 1990 Edited and Revised Edition of the Munsell Soil Color Charts (Kollmorgen Instruments Corp. 1990).



*Above King County iMap air photo of the site.*

## **OBSERVATIONS**

### *Existing Site Documentation.*

Prior to visiting the site, a review of several natural resource inventory maps was conducted. Resources reviewed included the National Wetland Inventory Map and the NRCS Soil Survey online mapping and Data and the King County iMap website with wetland and stream layers activated and WDNR Fpars stream mapping website and the WDFW Priority Habitats and Species maps.

### **King County iMap**

The King County iMap website with wetland and stream layers activated depicts a stream classified as a Type 2S under the old SAO classification, which equates to a Type F stream under today's classification methods.

The west side of the site is also depicted within the 100 Year Floodplain as well as the Rural Residential Shoreline designation area.



*Above King County iMap wetlands and stream mapping of the site.*



*Above King County iMap Shoreline Management Designation of the site.*



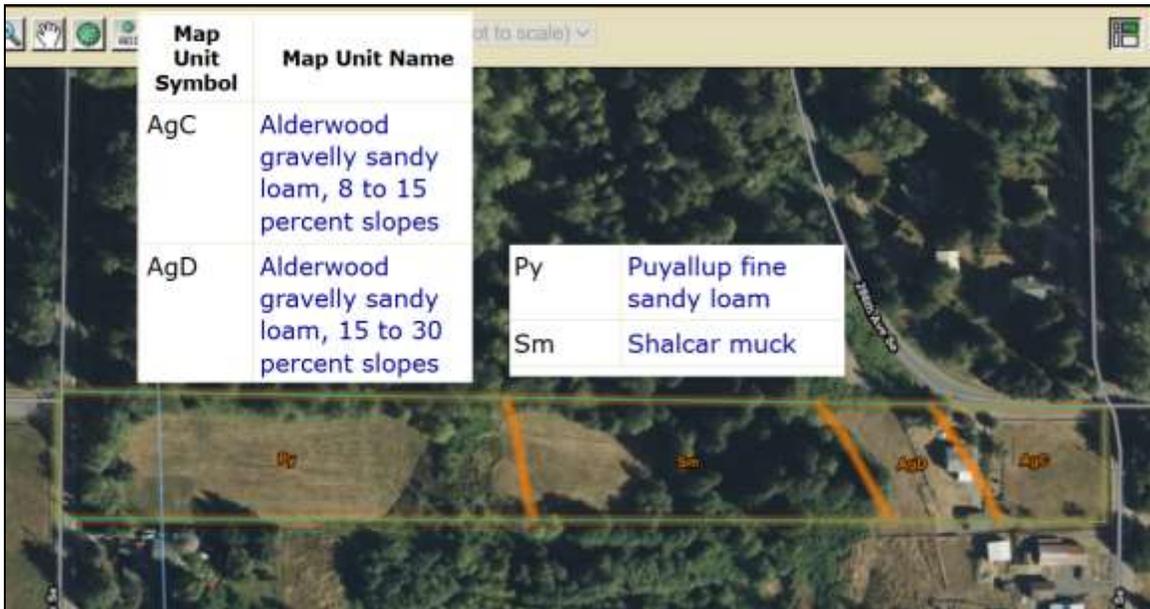
*Above King County iMap 100 Year Floodplain map of the site.*

## Soil Survey

According to the NRCS Soil Mapper, the eastern side of the site is mapped as Alderwood gravelly sandy loam soils.

The central portion of the site is mapped as very poorly drained Shalcar muck soils, and the western side moderately well drained Puyallup fine sandy loam.

The Shalcar soil series is considered a wetland/hydric soils.



*Above: USDA Soil Survey Map of the site*

### **National Wetlands Inventory (NWI)**

According to the NWI map for the site, there is an emergent and forested wetland in the same location as the Shalcar muck soil series. There is also a stream depicted along the western edge of the site.



*Above: National Wetlands Inventory Map of the site.*

### **WDNR Fpars Stream Mapping**

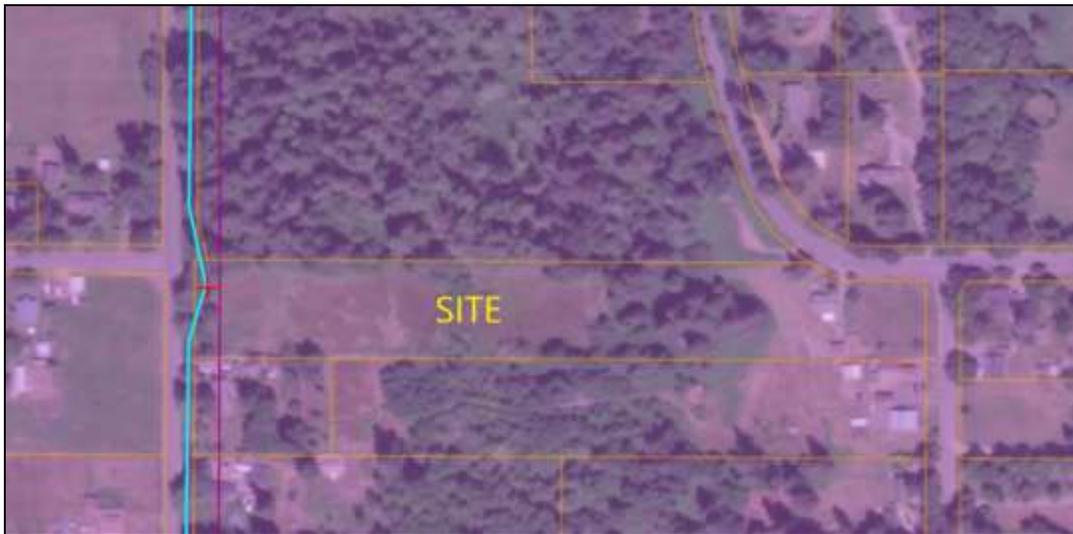
According to the WDNR Fpars stream mapping website, there is a Type F stream on the western side of the site.



*Above: WDNR stream mapping for area of the site*

### **WDFW Priority Habitats and Species Maps**

According to the WDFW Priority Habitat and Species maps for the site, the site is within the area of elk habitat and winter range used by the White River herd. The stream on the western side of the site is depicted as supporting resident cutthroat trout and coho salmon.



*Above: WDFW Priority Habitat and Species Map of the site. Pink shading indicates Elk habitat and the blue line represent stream used by cutthroat trout and coho salmon.*

#### **CADS14-0314 - Parcel #3120079101**

A CAD map for the parcel immediately to the north (Parcel #3120079101) was signed 11-9-18 and appears to cover the eastern half of this parcel. It depicts a Category II wetland located north of the site. A copy of this CAD is included at the end of this report.

#### **Field observations**

##### *Uplands*

As previously described, the site is a roughly rectangular shaped parcel with a single family home on the eastern side of the site. County roads border the west and eastern ends of the site and large single family parcels border the north and south end of the site. A gravel farm road leads from the existing home down the slope to the west to the pasture on the western half of the site. A portion of the pasture has become fallow but most of it is mowed yearly. An old crossing of the creek along the western side of the site is present which was used to access the pasture from 284<sup>th</sup> Avenue SE. The creek flows along the western side of the site to the north and appears to be a southern fork or tributary of Boise Creek.

Soil pits excavated throughout the upland portion of the site on the west side revealed a gravelly loam soil with a chroma of 3-4 in the B horizon. Upland soil pits in this area site were dry to depths of -18" during our site visit. Soil pits on the eastern slope area were a gravelly loam with a B-horizon color of 10YR 3/2 and were also dry to the bottom of the pit.

## **Wetlands**

There are two areas meeting wetland criteria on the site. Below is a description of these areas;

### Wetland A

Wetland A is located near the center of the site and appears to extend off-site to the north and south. This is the same wetland identified as a Category II wetland on the parcel to the north in the 2018 CAD. This wetland was delineated with purple flags labeled A1-A5 (gps 433-438) on the west and AA1-AA4 on the east.

The wetland on-site is characterized by a mix of fallow emergent pasture as well as scrub-shrub areas. Vegetation in these areas includes soft rush, reed canary grass, fescue and buttercup, alder saplings and some sitka willow. Off-site the wetland is forested with alder and cedar in the overstory with salmonberry, willow and blackberry.

Soil pits excavated along the edge of the wetland revealed a sapric muck with a soil color of 10YR 2/2 and were saturated to the surface during our winter observation of the site.

Using the 2014 WADOE Wetland Rating system and rating the wetland as a depressional type wetland, this wetland scored a total of 20 points with 6 for habitat. This indicates a Category II wetland. A Category II wetland with 6 habitat points in the rural areas of King County for a moderate intensity land use such as a single family home have a 110' buffer measured from the wetland edge. In addition, a 15' BSBL is measured from the edge of the buffer to any structures. This buffer would not encroach onto the site.

WETLAND CATEGORY AND CHARACTERISTICS	INTENSITY OF IMPACT OF ADJACENT LAND USE		
	HIGH IMPACT	MODERATE IMPACT	LOW IMPACT
<b>Category I</b>			
Wetlands of High Conservation Value	250 feet	190 feet	125 feet
Bog	250 feet	190 feet	125 feet
Estuarine	200 feet	150 feet	100 feet
Coastal Lagoon	200 feet	150 feet	100 feet
Forested	Buffer width to be based on score for habitat functions or water quality functions		
Habitat score from 8 to 9 points (high level of function)	300 feet	225 feet	150 feet
Habitat score from 6 to 7 points (moderate level of function)	150 feet	110 feet	75 feet
Category I wetlands not meeting any of the criteria above	100 feet	75 feet	50 feet
<b>Category II</b>			
Estuarine	150 feet	110 feet	75 feet
Habitat score from 8 to 9 points (high level of function)	300 feet	225 feet	150 feet
Habitat score from 6 to 7 points (moderate level of function)	150 feet	110 feet	75 feet
Category II wetlands not meeting any of the criteria above	100 feet	75 feet	50 feet
<b>Category III</b>			
Habitat score from 8 to 9 points (high level of function)	300 feet	225 feet	150 feet
Habitat score from 6 to 7 points (moderate level of function)	150 feet	110 feet	75 feet
Category III wetlands not meeting any of the criteria above	80 feet	60 feet	40 feet
<b>Category IV</b>	50 feet	40 feet	25 feet

Wetland B

Wetland B is a small emergent wetland in a shallow depression in the mowed pasture on the western side of the site. This area was delineated with gps points 439-442.

The wetland is characterized by a mix of soft rush and buttercup with a soil comprised of a sandy loam with a soil color of 7.5YR 2.5/2 with few, fine faint redoximorphic concentrations. Soils were saturated at a depth of -10” during our site visit.

Using the 2014 WADOE Wetland Rating system and rating the wetland as a depressional type wetland, this wetland scored a total of 18 points with 5 for habitat. This indicates a Category III wetland. A Category III wetland with 5 habitat points in the rural areas of King County for a moderate intensity land use such as a single family home have a \60’ buffer measured from the wetland edge. In addition, a 15’ BSBL is measured from the edge of the buffer to any structures. This buffer would not encroach onto the site.

Boise Creek tributary

As previously described, a northerly flowing ditched stream is located along the western edge of the site. An old farm road crossing with a culvert is present near the center of the western site edge. The OHWM of the creek was flagged with blue flags W1-W4 and E1-E4. The creek as a vertical dug ditch configuration with blackberry, alder and reed canary grass along the edges.

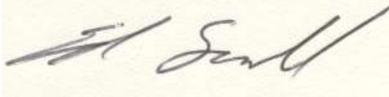
This creek is depicted as a Type F stream on most inventories however a "Residential Shoreline" is depicted along this same area. The classification of the channel is either a Type F or Type S water, both of which have a 165' buffer in this area.

**Proposed Project**

The proposed project is the replacement of an existing water line across the north side of the site. The old pipe location is not specifically known and will be abandoned in place. A new water line will be bored under the creek on the west, and then trenched across the western side of the site in the buffer areas, and then bored under Wetland A to the eastern hillside. Some temporary disturbance of the mowed pasture buffer on the west will occur during the boring and trenching. These areas will be restored back to pasture. Although no woody vegetation is proposed to be disturbed, any that is disturbed will be restored with native vegetation where needed.

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

Sincerely,  
Sewall Wetland Consulting, Inc.



Ed Sewall  
Senior Wetlands Ecologist PWS #212

*Attached: Rating Forms & data sheets*



## **REFERENCES**

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

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

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

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

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

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

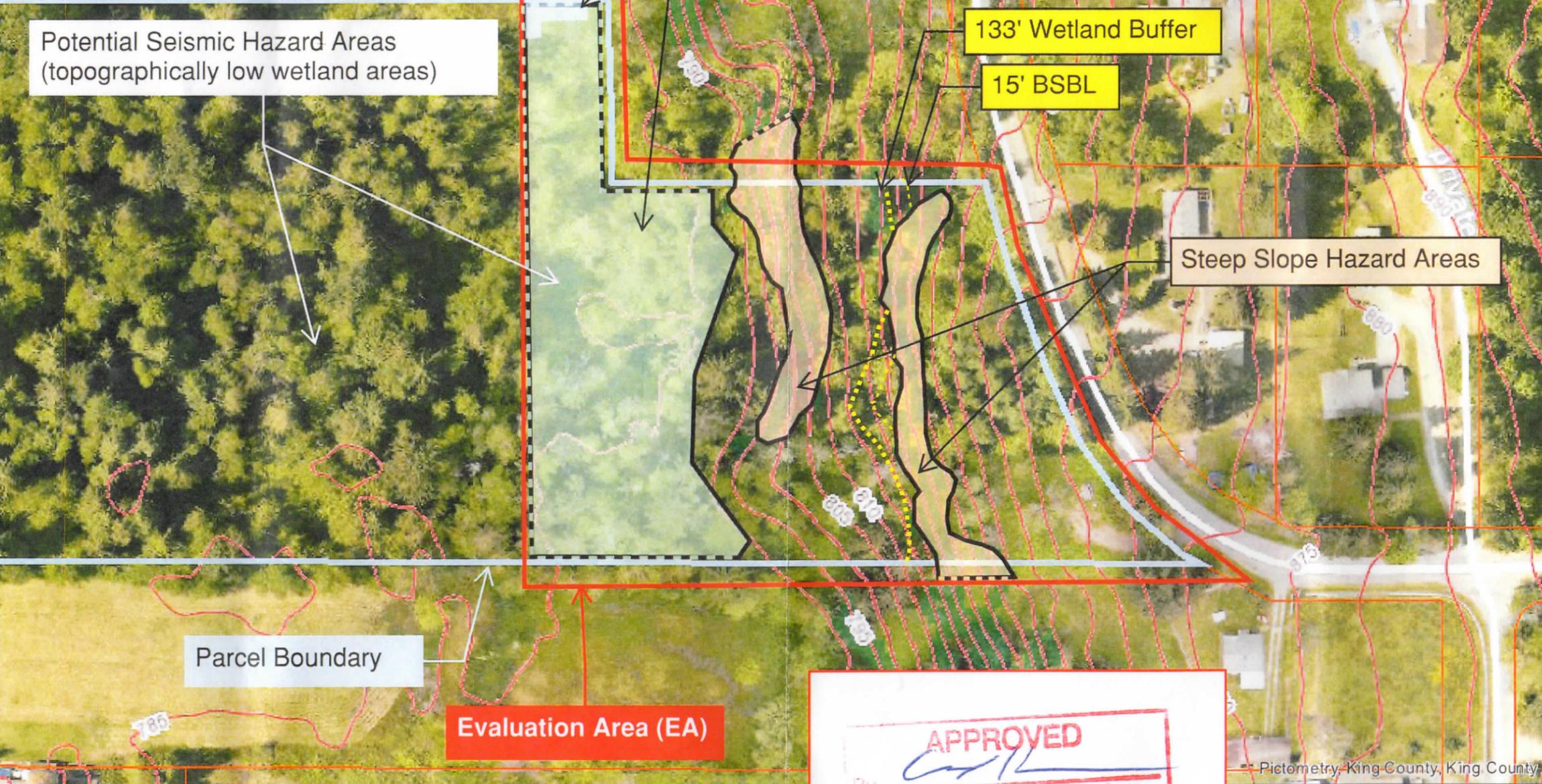
Reed, P.B. Jr. 1993. 1993 Supplement to the list of plant species that occur in wetlands: Northwest (Region 9). USFWS supplement to Biol. Rpt. 88(26.9) May 1988.

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

# CADS14-0314

## Critical Areas located within the Evaluation Area (EA):

- Erosion Hazard Area (not shown)
- Steep Slope Hazard Areas
- Category II Wetland
- Potential Seismic Hazard Area (not shown)
- Shoreline Management Designation; Rural



Potential Seismic Hazard Areas  
(topographically low wetland areas)

Shoreline Management Designation, Rural

Category II Wetland  
(extends west of the EA)

133' Wetland Buffer

15' BSBL

Steep Slope Hazard Areas

Parcel Boundary

Evaluation Area (EA)

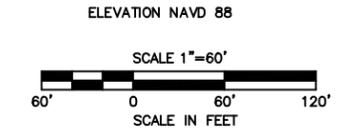
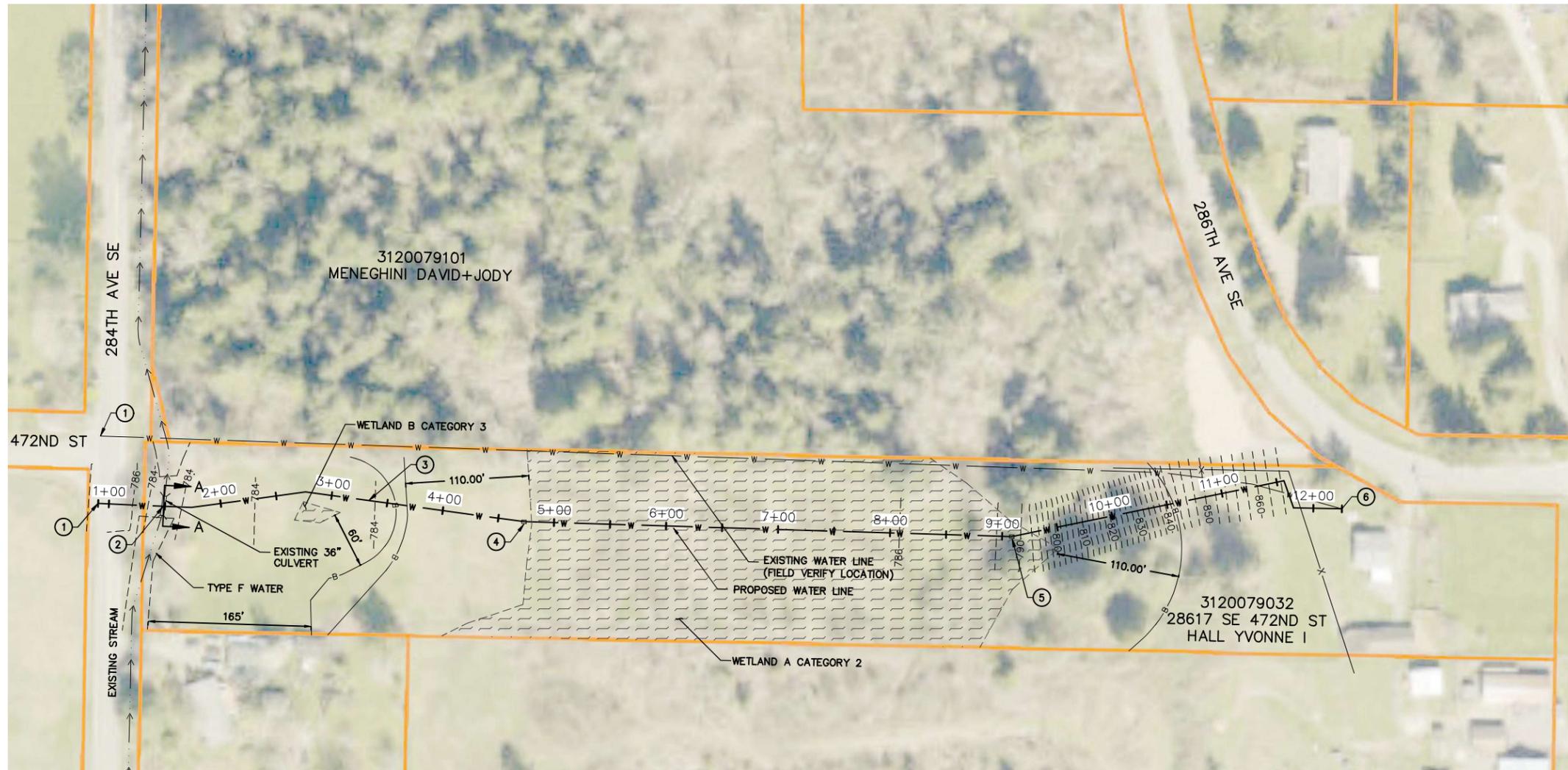
**APPROVED**  
By. *[Signature]*  
KC Critical Area Review  
DATE 4/9/18

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Date: 11/8/2018

Notes: Map not to scale.





**LEGEND**

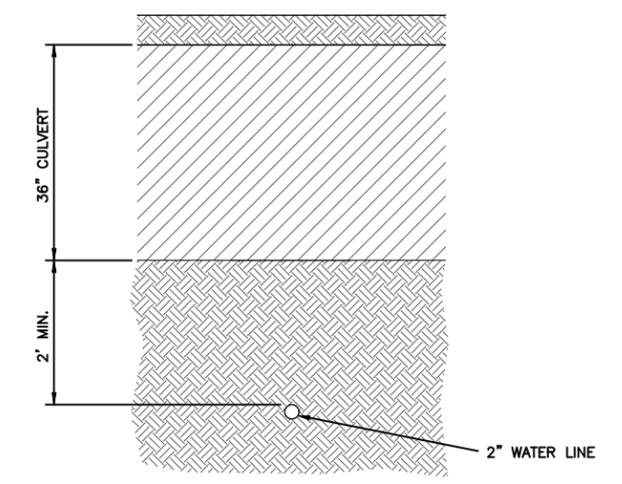
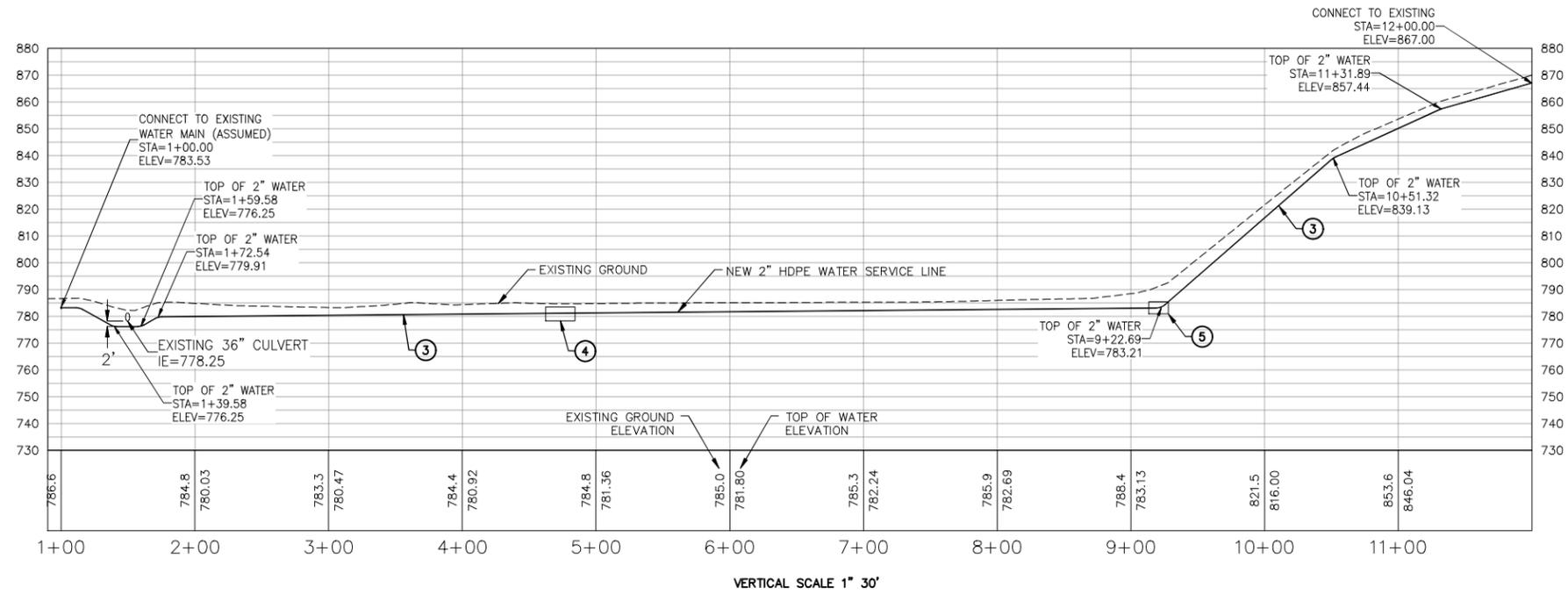
	EXISTING WATER LINE
	PROPOSED WATER LINE
	EXISTING STREAM
	BUFFER LINE
	EXISTING WETLAND

**WATER LINE/ EROSION CONTROL NOTES**

- ROAD CROSSING AND CONNECTION OF NEW WATER LINE TO EXISTING WATER MAIN AND DISCONNECTION OF THE EXISTING LINE AND REMOVAL OF METER/PRV BOX BY CITY OF ENUMCLAW. WORK IN 284TH SUBJECT TO KING COUNTY RIGHT-OF-WAY PERMIT TO BE OBTAINED BY THE CITY OF ENUMCLAW.
- OPEN CUT INSTALL NEW 2" WATER LINE UNDER EXISTING DRIVEWAY CULVERT, PROVIDING 2' CLEARANCE BELOW CULVERT INVERT FOR 10' EACH SIDE ASSUMING THE CULVERT IS REMOVED IN THE FUTURE AND OPEN CHANNEL RESTORED. INSTALL STRAW WATTLES ON EACH SIDE OF TRENCH TO PROTECT STREAM.
- OPEN CUT INSTALL NEW 2" WATER LINE A MINIMUM OF 3' BELOW SURFACE. DEFLECT AROUND WETLAND B
- INSTALL 3'x4'x4' DEEP LAUNCHING PIT TO INSTALL 2" LINE AT A MINIMUM 3' BELOW SURFACE BY HORIZONTAL DIRECTIONAL DRILL (HDD) UNDER WETLAND AREA.
- INSTALL 3'x4'x4' DEEP HDD PULLBACK PIT NEAR TOE OF STEEP SLOPE IN EXISTING ACCESS ROAD FROM RESIDENCE TO EAST. INSTALL STRAW WATTLES AROUND WESTERLY END OF THE PIT TO PROTECT THE WETLAND AREA TO THE WEST. NARROW WETLAND AREA EAST OF THE ACCESS ROAD/BORE PIT AT THE TOE OF THE STEEP SLOPE THAT IS DOMINATED BY BLACKBERRY WILL BE IMPACTED BY OPEN TRENCHING FROM BORE PIT TO EAST.
- CONNECT TWO WATER METERS SERVED BY THE EXISTING LINE TO THE NEW 2" LINE AT PUMP HOUSE. EX WATER LINE AND PUMP TO BE DISCONNECTED.

**ACCESS RESTORATION NOTES**

- LIMIT AREAS ACCESSED BY EQUIPMENT TO ALONG THE PROPOSED WATER LINE ALIGNMENT AS MUCH AS POSSIBLE, WITH NO EQUIPMENT ALLOWED IN THE WETLAND AREA BETWEEN THE BORE PITS.
- RESTORE DISTURBED AREAS TO ORIGINAL GRADE AND RESEED WITH NATIVE PASTURE GRASS MIX WITH STRAW MULCH COVER.
- REMOVE WATTLES AFTER RESEEDING AREAS HAVE REESTABLISHED GRASS COVER.



TYPICAL SECTION AT CULVERT CROSSING A-A  
N.T.S

CALL 2 DAYS BEFORE YOU DIG  
1-800-424-5555

**REVISIONS**

NO.	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			

**PROJECT INFORMATION**

PROJECT NO:	N/A
SURVEYED BY:	GIS
DESIGNED BY:	SW
DRAWN BY:	DAW
CHECKED BY:	SW
DATE:	28FEB2025

**WATER LINE/ EROSION CONTROL PLAN**

**1 OF 1**

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

Project/Site: Woodbury City/County: King Co Sampling Date: 1-20-25  
 Applicant/Owner: \_\_\_\_\_ State: WA Sampling Point: DP#1  
 Investigator(s): Ed Sembl Section, Township, Range: S31 T20 N R7E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Puyallup NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ 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.
1. <u>Dactylis glanata</u>	<u>90</u>	<u>FACU</u>		
2. <u>Plantago</u>	<u>10</u>	<u>FAC</u>		
3. _____	_____	_____		
4. _____	_____	_____		
5. _____	_____	_____		
6. _____	_____	_____		
7. _____	_____	_____		
8. _____	_____	_____		
9. _____	_____	_____		
10. _____	_____	_____		
11. _____	_____	_____		
_____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
<b>% Bare Ground in Herb Stratum _____</b>				
Remarks:				



wetland A

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

Project/Site: Woodbury City/County: King Co Sampling Date: 1-20-25
Applicant/Owner: State: WA Sampling Point: DP#2
Investigator(s): Ed Semel Section, Township, Range: S31 T20 N R7E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: Puyallup NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes No
Hydric Soil Present? Yes No
Wetland Hydrology Present? Yes No
Is the Sampled Area within a Wetland? Yes No
Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ) Absolute % Cover Dominant Species? Indicator Status
1. 2. 3. 4. = Total Cover
Sapling/Shrub Stratum (Plot size: ) 1. 2. 3. 4. 5. = Total Cover
Herb Stratum (Plot size: ) 1. Festuca arundinacea 80 FAC
2. Juncus effusus 20 FAC
3. 4. 5. 6. 7. 8. 9. 10. 11. = Total Cover
Woody Vine Stratum (Plot size: ) 1. 2. = Total Cover
% Bare Ground in Herb Stratum
Remarks:



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

Project/Site: Woodbury City/County: King Co Sampling Date: 1-20-25  
 Applicant/Owner: \_\_\_\_\_ State: WA Sampling Point: DPI# 3  
 Investigator(s): Ed Semel Section, Township, Range: S31 T20 N R7E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Puyallup NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

**VEGETATION – Use scientific names of plants.**

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
<b>Tree Stratum</b>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)	
1. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
2. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)	
3. _____					
4. _____				<b>Prevalence Index worksheet:</b>	
= Total Cover					Total % Cover of: _____ Multiply by: _____
<b>Sapling/Shrub Stratum</b>				OBL species _____ x 1 = _____	
1. _____				FACW species _____ x 2 = _____	
2. _____				FAC species <u>60</u> x 3 = <u>180</u>	
3. _____				FACU species <u>40</u> x 4 = <u>160</u>	
4. _____				UPL species _____ x 5 = _____	
5. _____				Column Totals: <u>100</u> (A) <u>340</u> (B)	
= Total Cover				Prevalence Index = B/A = <u>3.4</u>	
<b>Herb Stratum</b>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Festuca arvensis</u>	<u>60</u>		<u>FAC</u>		___ Dominance Test is >50%
2. <u>Dactylis glomerata</u>	<u>40</u>		<u>FACU</u>		___ Prevalence Index is ≤3.0 <sup>1</sup>
3. _____					___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. _____					___ Wetland Non-Vascular Plants <sup>1</sup>
5. _____					___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
6. _____					<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. _____					<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>
8. _____					
9. _____					
10. _____					
11. _____					
= Total Cover					
<b>Woody Vine Stratum</b>					
1. _____					
2. _____					
= Total Cover					
% Bare Ground in Herb Stratum _____					
Remarks:					

**SOIL**

Sampling Point: DP#3

**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>		
8	7.5 YR 2.5/3							
16	10 YR 3/4						gully in	

<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"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

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

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one required; check all that apply)</b>		<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Saturation Present? (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:

m.v.s

Wetland B

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

Project/Site: Woodbury City/County: King Co Sampling Date: 1-20-25
Applicant/Owner: Ed Semml State: WA Sampling Point: DP#4
Investigator(s): Ed Semml Section, Township, Range: S31 T20 N R7E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: Puyallup NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes No
Hydric Soil Present? Yes No
Wetland Hydrology Present? Yes No
Is the Sampled Area within a Wetland? Yes No
Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ) Absolute % Cover Dominant Species? Indicator Status
1.
2.
3.
4.
= Total Cover
Sapling/Shrub Stratum (Plot size: )
1.
2.
3.
4.
5.
= Total Cover
Herb Stratum (Plot size: )
1. Ranunculus repens 60 FACU
2. Juncus effusus 30 FACU
3.
4.
5.
6.
7.
8.
9.
10.
11.
= Total Cover
Woody Vine Stratum (Plot size: )
1.
2.
= Total Cover
% Bare Ground in Herb Stratum
Hydrophytic Vegetation Present? Yes No
Remarks:



Wet A - east side

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

Project/Site: Woodbury City/County: King Co Sampling Date: 1-20-25
Applicant/Owner: Ed Semml State: WA Sampling Point: DP#5
Investigator(s): Ed Semml Section, Township, Range: S31 T20 N R7E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: Puyallup NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes No
Hydric Soil Present? Yes No
Wetland Hydrology Present? Yes No
Is the Sampled Area within a Wetland? Yes No
Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ) Absolute % Cover Dominant Species? Indicator Status
1. Thuja plicata 30 FAC
2.
3.
4.
= Total Cover
Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species x 1 =
FACW species x 2 =
FAC species x 3 =
FACU species x 4 =
UPL species x 5 =
Column Totals: (A) (B)
Prevalence Index = B/A =
Hydrophytic Vegetation Indicators:
Dominance Test is >50%
Prevalence Index is <=3.0
Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
Wetland Non-Vascular Plants
Problematic Hydrophytic Vegetation (Explain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Hydrophytic Vegetation Present? Yes No
% Bare Ground in Herb Stratum
Remarks:



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

Project/Site: Woodbury City/County: King Co Sampling Date: 1-20-25  
 Applicant/Owner: \_\_\_\_\_ State: WA Sampling Point: DP#4  
 Investigator(s): Ed Semel Section, Township, Range: S31 T20 N R7E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Puyallup NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

**VEGETATION – Use scientific names of plants.**

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<b>Tree Stratum</b>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
1. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
2. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
3. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
4. _____				
_____ = Total Cover				
<b>Sapling/Shrub Stratum</b>				
1. <u>Rubus discolor</u>	<u>80</u>		<u>FAC</u>	
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
<b>Herb Stratum</b>				<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ 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.
1. <u>Equisetum spp</u>	<u>30</u>		<u>FAC</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
<b>Woody Vine Stratum</b>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				



Wetland name or number A

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): Woodbury Wet A Date of site visit: 1-20-25  
 Rated by El Smith Trained by Ecology?  Yes  No Date of training \_\_\_\_\_  
 HGM Class used for rating Depressional Wetland has multiple HGM classes?  Y  N

**NOTE: Form is not complete without the required figures (figures can be combined).**  
 Source of base aerial photo/map Google earth 2024

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

### 1. Category of wetland based on FUNCTIONS

- Category I – Total score = 23 - 27
- Category II – Total score = 20 - 22
- Category III – Total score = 16 - 19
- Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H <u>M</u> L	H M <u>L</u>	H <u>M</u> L	
Landscape Potential	<u>H</u> M L	H <u>M</u> L	H <u>M</u> L	
Value	<u>H</u> M L	<u>H</u> M L	H <u>M</u> L	<b>TOTAL</b>
Score Based on Ratings	<u>8</u>	<u>6</u>	<u>6</u>	<u>20</u>

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

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

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	<input checked="" type="checkbox"/>

Wetland name or number     

**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 total habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

**Riverine Wetlands**

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

**Lake Fringe Wetlands**

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

## HGM Classification of Wetlands in Western Washington

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

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

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

NO – go to 2

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

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

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

YES – **Freshwater Tidal Fringe**

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

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

NO – go to 3

YES – The wetland class is **Flats**

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

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

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

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

NO – go to 4

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

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

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

The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheet flow, 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).

Wetland name or number A

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.

Wetland name or number A

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

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

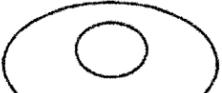
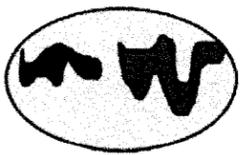
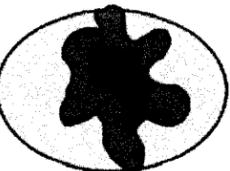
<b>D 5.0. Does the landscape have the potential to support hydrologic functions of the site?</b>		
<b>D 5.1. Does the wetland receive stormwater discharges?</b>	Yes = <u>1</u> No = 0	<b>1</b>
<b>D 5.2. Is &gt;10% of the area within 150 ft of the wetland in land uses that generate excess runoff?</b>	Yes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

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

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

Wetland name or number   A  

<b>These questions apply to wetlands of all HGM classes.</b> <b>HABITAT FUNCTIONS - Indicators that site functions to provide important habitat</b>	
<b>H 1.0. Does the site have the potential to provide habitat?</b>	
<p>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 if the unit is at least 2.5 ac, or more than 10% of the unit if it is smaller than 2.5 ac.</p> <p> <input type="checkbox"/> Aquatic bed <span style="float: right;">4 structures or more: points = <u>4</u></span>  <input checked="" type="checkbox"/> Emergent <span style="float: right;">3 structures: points = 2</span>  <input checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have &gt; 30% cover) <span style="float: right;">2 structures: points = 1</span>  <input checked="" type="checkbox"/> Forested (areas where trees have &gt; 30% cover) <span style="float: right;">1 structure: points = 0</span>            If the unit has a Forested class, check if:  <input checked="" type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/groundcover) that each cover 20% within the Forested polygon         </p>	<b>4</b>
<p>H 1.2. Hydroperiods</p> <p>Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland if the unit is &lt; 2.5 ac, or ¼ ac if the unit is at least 2.5 ac to count (see text for descriptions of hydroperiods).</p> <p> <input type="checkbox"/> Permanently flooded or inundated <span style="float: right;">4 or more types present: points = 3</span>  <input checked="" type="checkbox"/> Seasonally flooded or inundated <span style="float: right;">3 types present: points = 2</span>  <input type="checkbox"/> Occasionally flooded or inundated <span style="float: right;">2 types present: points = <u>1</u></span>  <input checked="" type="checkbox"/> Saturated only <span style="float: right;">1 type present: points = 0</span>  <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland  <input type="checkbox"/> Intermittently or seasonally flowing stream in, or adjacent to, the wetland  <input type="checkbox"/> <b>Lake Fringe wetland</b> <span style="float: right;"><b>2 points</b></span>  <input type="checkbox"/> <b>Freshwater tidal wetland</b> <span style="float: right;"><b>2 points</b></span> </p>	<b>1</b>
<p>H 1.3. Richness of plant species</p> <p>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. <b>Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canada thistle</b></p> <p>If you counted: &gt; 19 species <span style="float: right;">points = <u>2</u></span>            5 - 19 species <span style="float: right;">points = 1</span>            &lt; 5 species <span style="float: right;">points = 0</span></p>	<b>2</b>
<p>H 1.4. Interspersion of habitats</p> <p>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.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p><b>None = 0 points</b></p> </div> <div style="text-align: center;">  <p><b>Low = 1 point</b></p> </div> <div style="text-align: center;">  <p><b>Moderate = 2 points</b></p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 20px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p>All three diagrams in this row are <b>High = 3 points</b></p>	<b>2</b>

Wetland name or number A

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<p>H 1.5. Special habitat features:          Check the habitat features that are present in the wetland. The number of checks is the number of points.  <input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (&gt; 4 in. diameter and 6 ft long).  <input checked="" type="checkbox"/> Standing snags (dbh &gt; 4 in.) within the wetland  <input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> overhanging plants extend at least 3.3 ft (1 m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)  <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt; 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)  <input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)  <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)</p>		2
Total for H 1	Add the points in the boxes above	11

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

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>		
<p>H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland.          Calculate: % relatively undisturbed habitat <u>5</u> + [(% moderate and low intensity land uses)/2] <u>8</u> = <u>13</u> %          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 <u>points = 1</u>          &lt; 10% of 1 km Polygon points = 0</p>		1
<p>H 2.2. Total habitat in 1 km Polygon around the wetland.          Calculate: % relatively undisturbed habitat <u>30</u> + [(% moderate and low intensity land uses)/2] <u>10</u> = <u>40</u> %          Total habitat &gt; 50% of Polygon points = 3          Total habitat 10-50% and in 1-3 patches <u>points = 2</u>          Total habitat 10-50% and &gt; 3 patches points = 1          Total habitat &lt; 10% of 1 km Polygon points = 0</p>		2
<p>H 2.3. Land use intensity in 1 km Polygon:          &gt; 50% of 1 km Polygon is high intensity land use points = (-2)          ≤ 50% of 1 km Polygon is high intensity <u>points = 0</u></p>		0
Total for H 2	Add the points in the boxes above	3

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

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

## WDFW Priority Habitats

See complete descriptions of Priority Habitats listed by WDFW, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008 (current year, as revised). Priority Habitat and Species List.<sup>133</sup> This list was updated for consistency with guidance from WDFW.

This question is independent of the land use between the wetland unit and the Priority Habitat. All vegetated wetlands are by definition a Priority Habitat but are not included in this list because they are addressed by this rating system.

Count how many of the following Priority Habitats are within 330 ft (100 m) of the wetland unit:

- **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. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.
- **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.
- **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).
- **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **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. Do not select if Fresh Deepwater habitat is also present.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.
- **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) diameter at breast height (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.

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<sup>133</sup> <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf>  
Wetland Rating System for Western WA: 2014 Update  
Rating Form – Version 2, July 2023

Wetland name or number A

- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, WDFW's Management Recommendations for Oregon White Oak<sup>134</sup> provides more detail for determining if they are Priority Habitats
- **Riparian:** The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **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.
- **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.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

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<sup>134</sup> <https://wdfw.wa.gov/publications/00030/wdfw00030.pdf>  
Wetland Rating System for Western WA: 2014 Update  
Rating Form – Version 2, July 2023

Wetland name or number A

**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<p><b>SC 1.0. Estuarine wetlands</b>            Does the wetland meet the following criteria for Estuarine wetlands?            — The dominant water regime is tidal,            — Vegetated, and            — With a salinity greater than 0.5 ppt      Yes – Go to <b>SC 1.1</b>      <b>No = Not an estuarine wetland</b></p>	
<p><b>SC 1.1.</b> Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?            Yes = <b>Category I</b>      No – Go to <b>SC 1.2</b></p>	Cat. I
<p><b>SC 1.2.</b> Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?            — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species. If non-native species are <i>Spartina</i>, see chapter 4.8 in the manual.            — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.            — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.            Yes = <b>Category I</b>      No = <b>Category II</b></p>	Cat. I  Cat. II
<p><b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b>  <b>SC 2.1.</b> Does the wetland overlap with any known or historical rare plant or rare &amp; high-quality ecosystem polygons on the WNHP Data Explorer?<sup>135</sup>      Yes = <b>Category I</b>      <b>No – Go to SC 2.2</b>  <b>SC 2.2.</b> Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements.            Yes – <u>Submit data to WA Natural Heritage Program for determination</u>,<sup>136</sup> Go to <b>SC 2.3</b>      <b>No = Not a WHCV</b>  <b>SC 2.3.</b> Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria?            Yes = <b>Category I</b>      No = <b>Not a WHCV</b></p>	Cat. I
<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>  <b>SC 3.1.</b> Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in. or more of the first 32 in. of the soil profile?      Yes – Go to <b>SC 3.3</b>      No – Go to <b>SC 3.2</b>  <b>SC 3.2.</b> Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?      Yes – Go to <b>SC 3.3</b>      No = <b>Not a bog</b>  <b>SC 3.3.</b> Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?      Yes = <b>Category I bog</b>      <b>No – Go to 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.  <b>SC 3.4.</b> 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?      Yes = <b>Category I bog</b>      No = <b>Not a bog</b></p>	Cat. I

<sup>135</sup> <https://www.dnr.wa.gov/NHPdata>

<sup>136</sup> [https://www.dnr.wa.gov/Publications/amp\\_nh\\_sighting\\_form.pdf](https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf)

Wetland name or number A

<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? <i>If you answer YES, you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> <li>— <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>— <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;">Yes = <b>Category I</b>    No = <b>Not a forested wetland for this section</b></p>	<p>Cat. I</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>— 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>— 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> <li>— The lagoon retains some of its surface water at low tide during spring tides</li> </ul> <p>Yes – Go to <b>SC 5.1</b>    No = <b>Not a wetland in a coastal lagoon</b></p> <p><b>SC 5.1. Does the wetland meet all of the following three conditions?</b></p> <ul style="list-style-type: none"> <li>— 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 in H 1.5 in the manual).</li> <li>— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.</li> <li>— The wetland is larger than 1/10 ac (4350 ft<sup>2</sup>)</li> </ul> <p>Yes = <b>Category I</b>    No = <b>Category II</b></p>	<p>Cat. I</p> <p>Cat. II</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)? <i>If you answer YES, you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> <li>— Long Beach Peninsula: Lands west of SR 103</li> <li>— Grayland-Westport: Lands west of SR 105</li> <li>— Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW.</li> </ul> <p style="text-align: right;">Yes – Go to <b>SC 6.1</b>    No = <b>Not an interdunal wetland for rating</b></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)?  <span style="float: right;">Yes = <b>Category I</b>    No – Go to <b>SC 6.2</b></span></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?  <span style="float: right;">Yes = <b>Category II</b>    No – Go to <b>SC 6.3</b></span></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?  <span style="float: right;">Yes = <b>Category III</b>    No = <b>Category IV</b></span></p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>Cat. IV</p>
<p><b>Category of wetland based on Special Characteristics</b>          If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>NA</p>

Wetland name or number B

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): Woodbury - Wetland B Date of site visit: 1-20-25  
 Rated by Ed Smith Trained by Ecology?  Yes  No Date of training 2017  
 HGM Class used for rating Deposited Wetland has multiple HGM classes?  Y  N

**NOTE: Form is not complete without the required figures (figures can be combined).**  
 Source of base aerial photo/map \_\_\_\_\_

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

### 1. Category of wetland based on FUNCTIONS

- Category I – Total score = 23 - 27
- Category II – Total score = 20 - 22
- Category III – Total score = 16 - 19
- Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H <u>(M)</u> L	H M <u>(L)</u>	H M <u>(L)</u>	
Landscape Potential	H <u>(M)</u> L	H <u>(M)</u> L	H <u>(M)</u> L	
Value	<u>(H)</u> M L	<u>(H)</u> M L	H <u>(M)</u> L	<b>TOTAL</b>
Score Based on Ratings	<u>7</u>	<u>6</u>	<u>5</u>	<u>18</u>

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

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

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	<input checked="" type="checkbox"/>

Wetland name or number B

**Maps and figures required to answer questions correctly for Western Washington**

**Depressional Wetlands**

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

**Riverine Wetlands**

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

**Lake Fringe Wetlands**

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

## HGM Classification of Wetlands in Western Washington

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

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

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

**NO** – go to 2

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

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

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

**YES** – **Freshwater Tidal Fringe**

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

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

**NO** – go to 3

**YES** – The wetland class is **Flats**

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

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

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

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

**NO** – go to 4

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

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

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

The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheet flow, 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).

Wetland name or number B

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.

Wetland name or number \_\_\_\_\_

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

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

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

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

<b>D 3.0. Is the water quality improvement provided by the site valuable to society?</b>		
<b>D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?</b>	Yes = 1 No = 0	<b>1</b>
<b>D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?</b>	Yes = 1 No = 0	<b>1</b>
<b>D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (Answer YES if there is a TMDL in development or in effect for the basin in which the unit is found.)</b>	Yes = 2 No = 0	<b>2</b>
<b>Total for D 3</b>		<b>4</b>

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

Wetland name or number B

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

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

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

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

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

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



Wetland name or number B

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

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

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>	
<p>H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland.)</p> <p>Calculate: % relatively undisturbed habitat <u>5</u> + [(% moderate and low intensity land uses)/2] <u>8</u> = <u>13</u> %</p> <p>Total accessible habitat is:</p> <p>&gt; 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon <u>points = 1</u></p> <p>&lt; 10% of 1 km Polygon points = 0</p>	1
<p>H 2.2. Total habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % relatively undisturbed habitat <u>2</u> + [(% moderate and low intensity land uses)/2] <u>18</u> = <u>40</u> %</p> <p>Total habitat &gt; 50% of Polygon points = 3</p> <p>Total habitat 10-50% and in 1-3 patches <u>points = 2</u></p> <p>Total habitat 10-50% and &gt; 3 patches points = 1</p> <p>Total habitat &lt; 10% of 1 km Polygon points = 0</p>	2
<p>H 2.3. Land use intensity in 1 km Polygon:</p> <p>&gt; 50% of 1 km Polygon is high intensity land use points = (-2)</p> <p>≤ 50% of 1 km Polygon is high intensity <u>points = 0</u></p>	0
<p>Total for H 2</p>	3

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

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>	
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated.</p> <p>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 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 data</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) within 100 m <u>points = 1</u></p> <p>Site does not meet any of the criteria above points = 0</p>	0

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

Wetland name or number \_\_\_\_\_

## WDFW Priority Habitats

See complete descriptions of Priority Habitats listed by WDFW, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008 (current year, as revised). Priority Habitat and Species List.<sup>133</sup> This list was updated for consistency with guidance from WDFW.

This question is independent of the land use between the wetland unit and the Priority Habitat. All vegetated wetlands are by definition a Priority Habitat but are not included in this list because they are addressed by this rating system.

Count how many of the following Priority Habitats are within 330 ft (100 m) of the wetland unit:

- **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. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.
- **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.
- **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).
- **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **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. Do not select if Fresh Deepwater habitat is also present.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.
- **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) diameter at breast height (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.

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<sup>133</sup> <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf>  
Wetland Rating System for Western WA: 2014 Update  
Rating Form – Version 2, July 2023

Wetland name or number B

- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, WDFW's Management Recommendations for Oregon White Oak<sup>134</sup> provides more detail for determining if they are Priority Habitats
- **Riparian:** The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **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.
- **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.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

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<sup>134</sup> <https://wdfw.wa.gov/publications/00030/wdfw00030.pdf>  
Wetland Rating System for Western WA: 2014 Update  
Rating Form – Version 2, July 2023

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**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<p><b>SC 1.0. Estuarine wetlands</b>            Does the wetland meet the following criteria for Estuarine wetlands?            — The dominant water regime is tidal,            — Vegetated, and            — With a salinity greater than 0.5 ppt      Yes – Go to <b>SC 1.1</b>      No – <b>Not an estuarine wetland</b></p>	
<p><b>SC 1.1.</b> Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?            Yes = <b>Category I</b>      No – Go to <b>SC 1.2</b></p>	Cat. I
<p><b>SC 1.2.</b> Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?            — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species. If non-native species are <i>Spartina</i>, see chapter 4.8 in the manual.            — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.            — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.            Yes = <b>Category I</b>      No = <b>Category II</b></p>	Cat. I Cat. II
<b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b>	
<p><b>SC 2.1.</b> Does the wetland overlap with any known or historical rare plant or rare &amp; high-quality ecosystem polygons on the WNHP Data Explorer?<sup>135</sup>            Yes = <b>Category I</b>      No – Go to <b>SC 2.2</b></p>	Cat. I
<p><b>SC 2.2.</b> Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements.            Yes – Submit data to WA Natural Heritage Program for determination,<sup>136</sup> Go to <b>SC 2.3</b>      No = <b>Not a WHCV</b></p>	
<p><b>SC 2.3.</b> Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria?            Yes = <b>Category I</b>      No = <b>Not a WHCV</b></p>	
<b>SC 3.0. Bogs</b>	
<p>Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below. <b>If you answer YES, you will still need to rate the wetland based on its functions.</b></p>	
<p><b>SC 3.1.</b> Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in. or more of the first 32 in. of the soil profile?            Yes – Go to <b>SC 3.3</b>      No – Go to <b>SC 3.2</b></p>	
<p><b>SC 3.2.</b> Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?            Yes – Go to <b>SC 3.3</b>      No = <b>Not a bog</b></p>	
<p><b>SC 3.3.</b> Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?            Yes = <b>Category I bog</b>      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.</p>	Cat. I
<p><b>SC 3.4.</b> 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?            Yes = <b>Category I bog</b>      No = <b>Not a bog</b></p>	

<sup>135</sup> <https://www.dnr.wa.gov/NHPdata>

<sup>136</sup> [https://www.dnr.wa.gov/Publications/amp\\_nh\\_sighting\\_form.pdf](https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf)

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<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? <i>If you answer YES, you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> <li>— <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>— <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) <u>exceeding 21 in. (53 cm).</u></li> </ul> <p>Yes = <b>Category I</b>    <del>No = Not a forested wetland for this section</del></p>	<p>Cat. I</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>— 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>— 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> <li>— The lagoon retains some of its surface water at low tide during spring tides</li> </ul> <p>Yes – Go to <b>SC 5.1</b>    <del>No = Not a wetland in a coastal lagoon</del></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>— 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 in H 1.5 in the manual).</li> <li>— At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.</li> <li>— The wetland is larger than 1/10 ac (4350 ft<sup>2</sup>)</li> </ul> <p>Yes = <b>Category I</b>    No = <b>Category II</b></p>	<p>Cat. I</p> <p>Cat. II</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)? <i>If you answer YES, you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> <li>— Long Beach Peninsula: Lands west of SR 103</li> <li>— Grayland-Westport: Lands west of SR 105</li> <li>— Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW.</li> </ul> <p>Yes – Go to <b>SC 6.1</b>    <del>No = Not an interdunal wetland for rating</del></p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = <b>Category I</b>    No – Go to <b>SC 6.2</b></p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = <b>Category II</b>    No – Go to <b>SC 6.3</b></p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = <b>Category III</b>    No = <b>Category IV</b></p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>Cat. IV</p>
<p><b>Category of wetland based on Special Characteristics</b> If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>NA</p>

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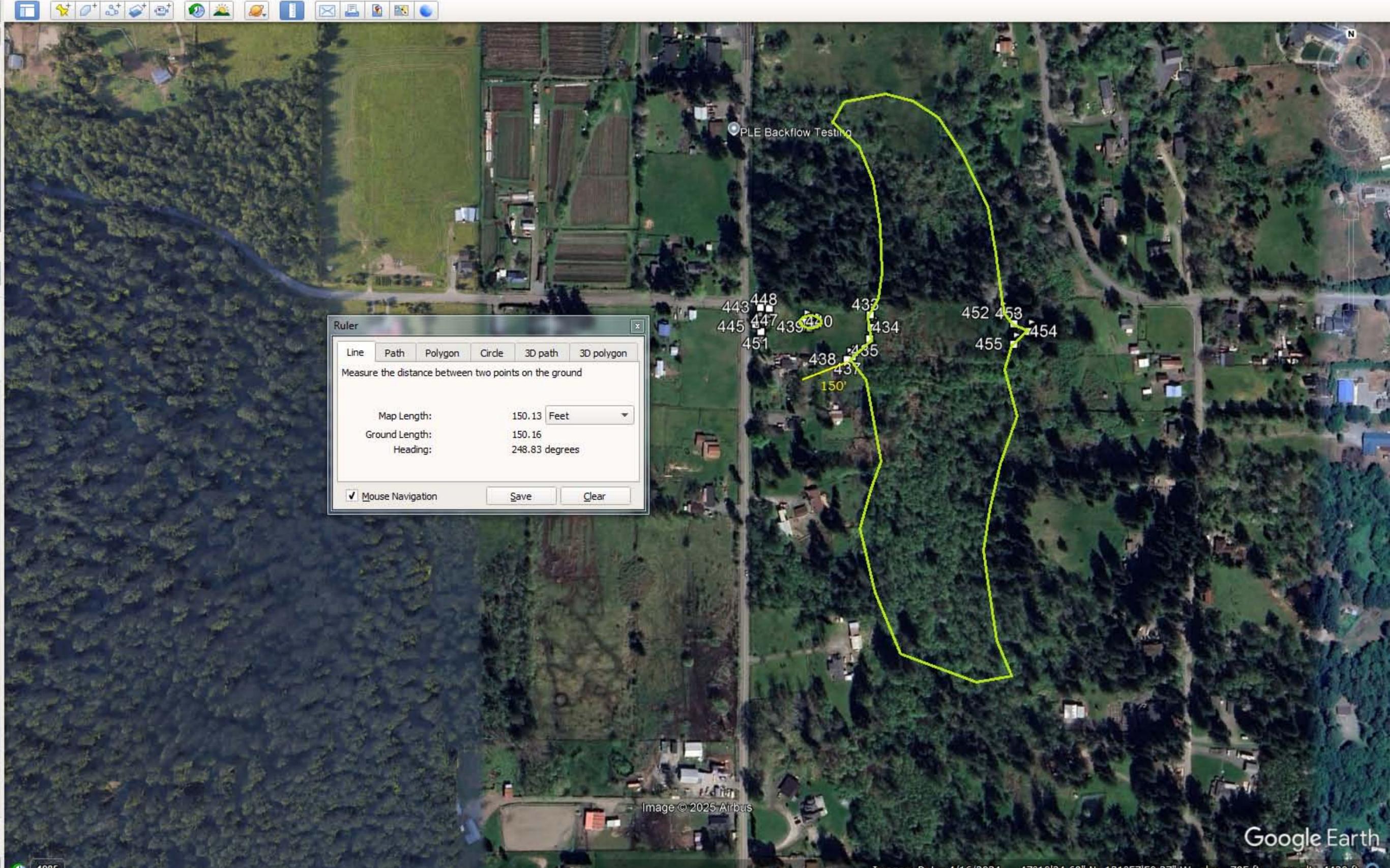
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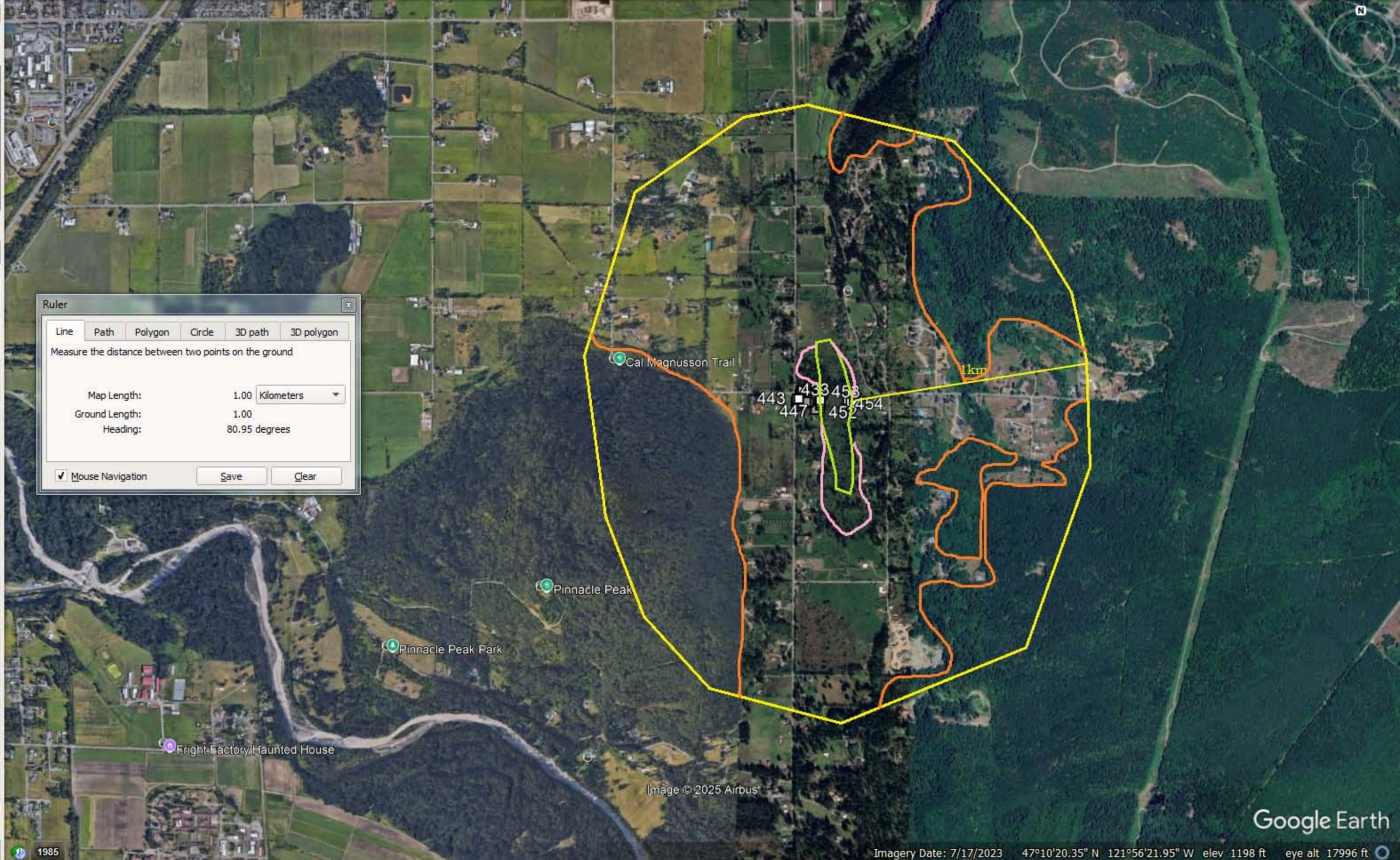
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Ruler

Line Path Polygon Circle 3D path 3D polygon

Measure the distance between two points on the ground

Map Length: 1.00 Kilometers

Ground Length: 1.00

Heading: 80.95 degrees

Mouse Navigation Save Clear

Layers

1985



# Water Quality Atlas Map

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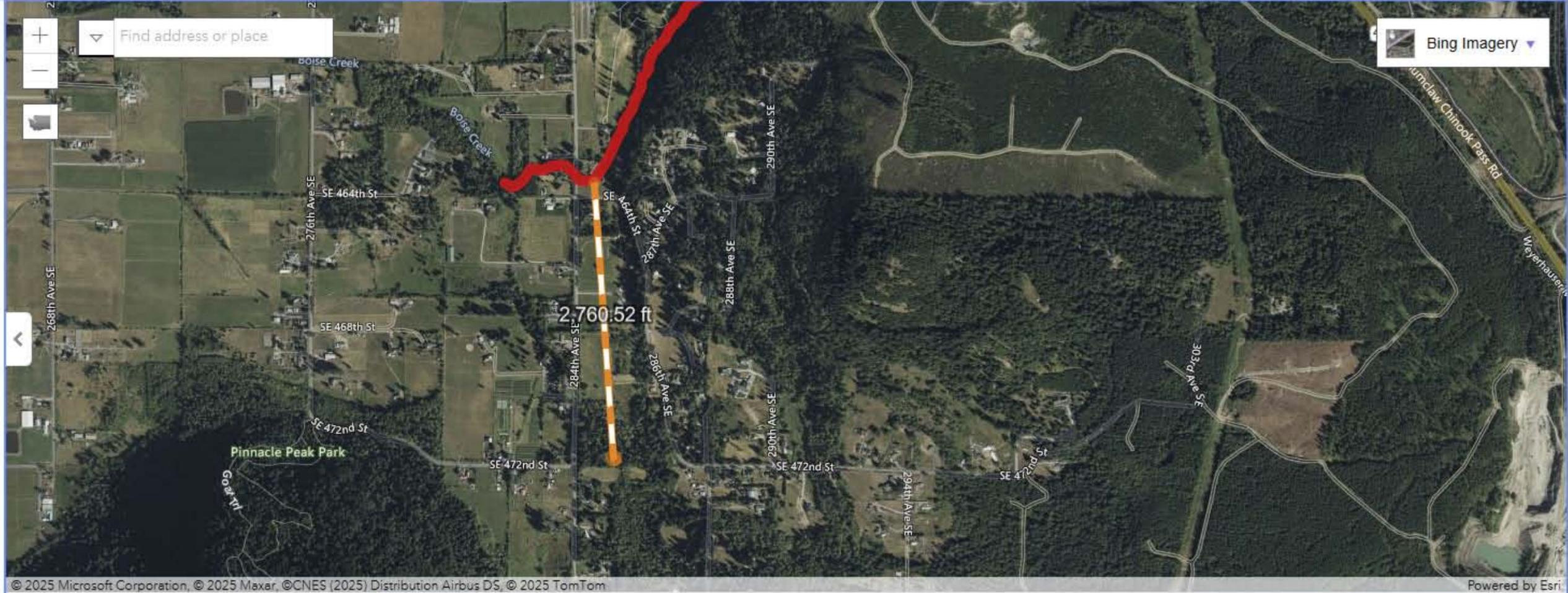
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Usage: Click on map to add measure points. Double-click to finish.

Unit:

Distance: 2,760.52 ft

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Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details
	3724	17060108000228_001_001	5	Water	Temperature	<a href="#">View</a>
	3726	17030003000236_001_001	5	Water	Temperature	<a href="#">View</a>
	3727	17030001000538_001_001	5	Water	Temperature	<a href="#">View</a>
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