Sewall Wetland Consulting, Inc.
PO Box 880
Fall City, WA 98024
Phone: 253-859-0515

May 23, 2024

Zach Schneider
Schneider Homes
6510 Southcenter Boulevard, Suite 100
Tukwila, Washington 98188

RE: *Revised* Critical Areas Report – Midway Church Site
SWC Job#22-196

1.0 INTRODUCTION

This report describes our observations of any jurisdictional wetlands, streams and buffers on the Midway Church property consisting of Parcels #092104-9305, 9131, 9116 & 9326, located on the east side of I-5 and north of South 312th Lane, in unincorporated King County, Washington.

Above: Vicinity Map

Above: King County iMap 2021 aerial photograph of the site.

The site consists of four abutting irregular shaped parcels with a total area of 4.7 acres located in the NE ¼ of Section 9 Township 21 North, Range 4 East of the W.M.

METHODOLOGY

Ed Sewall of Sewall Wetland Consulting, Inc. inspected the site on November 16, 2022. In addition, Ed Sewall reviewed the site in 1992 and 2002 as an employee of B-twelve Associates, Inc. in a previous study for Midway Christian church.

The site was reviewed using methodology described in the *Washington State Wetlands Identification Manual* (WADOE, March 1997). This is the methodology currently recognized by the King County and the State of Washington for wetland determinations and delineations. The site was also inspected using the 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).

OBSERVATIONS

Existing Site Documentation.

Prior to visiting the site, a review of several natural resource inventory maps was conducted. Resources reviewed included previous studies by of the site by B-twelve Associates, Inc. in 1992 and 2002, the King County iMap website, National Wetland Inventory Map and the NRCS Soil Survey online mapping and Data, the WADNR Fpars stream mapping website, and the WDFW Priority Habitats and species maps website.

B-twelve Associates, Inc. Midway Christian Church Critical Areas Study 1992 & 2002.

In 1992 and 2002, Ed Sewall of B-twelve Associates, Inc. conducted critical areas studies of the site for the Midway Christian Church. In 1992, the western side of the site was logged. The logging extended into the buffer of a Class 2 wetland which was delineated on the eastern edge of the site at the time by B-twelve. The delineation and classification of the wetland were reviewed by Bill Kerschke of King County BALD at the time and approved.

Above: King County 1998 iMap aerial photograph depictig the logged portions of the site on the west.

King County iMap website

According to the King County iMap website with wetland, stream and Notice on Title layers activated the site is identified with a Notice on Title layer (red) indicating a Class 2 wetland under the old classification system is located on the site.

Above: King County iMap 2021 aerial photograph of the site with wetland, stream and Notice on Title layers activated.

Soil Survey

According to data on file with the NRCS Soil Survey, the site is mapped as moderately well drained Alderwood gravelly, sandy loam. Alderwood soils are not considered hydric or wetland soils.

Above: NRCS Soil map of the study area.

National Wetlands Inventory (NWI)

The NWI map depicts no wetlands or streams on or within 300' of the site.

Above: NWI Map of the study area

WDFW Priority Habitats Maps

According to the WDFW Priority Habitat Website with Public access layers activated depicts no priority habitats or listed species on or near the site. The same wetlands depicted on other inventories >300' from the site are identified as priority habitats.

Above: WDFW Priority Habitat mapping of the site.

WDNR Fpars Water Type Map

According to the WDNR Fpars website which depicts known streams and waterbodies, depicts no streams or water bodies on or within 300' of the site. The site is depicted with the break in drainage basins (purple line) near the center of the site.

Above: WDNR Fpars Water Type Mapping of the site

Field observations

As previously described, the site was logged approximately 30 years ago, and following that logging Ed Sewall of B-twelve Associates at that time delineated a forested wetland on the eastern edge of the site. The site has now grown up with volunteer red alder and cottonwoods which are 3”-8” dbh at this time. The understory of the previously logged area is a mix of salmonberry, salal, elderberry and vine maple. The area that as not logged on the east contains some western red cedar with red alder and cottonwood as well.

Soil pits excavated throughout upland portion of the site were found to have dry, gravelly loam soils with soil color of 10YR 3/2-3/3 with no hydric characteristics or evidence of wetland hydrology. Soils were found to be dry within the upper 16” during our site visit.

Critical Areas

A single forested wetland that was previously identified in past studies is present on the eastern edge of the site. The wetland borders a sewer easement along the eastern property line. Below is a description of this area;

Wetland A, is a narrow band of forested wetland located along the eastern edge of the site. The western edge of the wetland was flagged with pink Wetland Delineation flags labeled A1-A14. Several old flags from the previous delineations were found along the wetland edge.

The wetland is a forested wetland with an overstory of western red cedar and red alder, with slough sedge, Himalayan blackberry, skunk cabbage, salmonberry, lady fern and creeping buttercup in the understory.

Areas of previous soil disturbance from the logging activity in 1992 were noted as mounds throughout the area.
The wetland appears isolated to a depression which drains to the roadside ditch.

Soil pits excavated within this off-site wetland revealed a soil with a B-horizon matrix color of 10YR 2/2 with common, medium, distinct redoximorphic concentrations. Soils were saturated to the surface during out non-growing season site visit.

Using the 2014 WADOE Wetland Rating system and rating the wetland as a depressional wetland, this wetland scored a total of 18 points with 5 for habitat. This indicates a Category III wetland. According to King County Municipal Code Chapter 21A.24.325, Category III wetlands with a habitat score of 5 points have a 60' buffer measured from the wetland edge for a moderate land use intensity project such as a single family home, or an 80' buffer for a higher impact project such as a subdivision or plat with >1 home per acre.

A previous CAD for Parcel #551560-0155 which is located immediately east of the southeast corner of the site identified a Category III wetland as well as a Type N aquatic area. We are in agreement that the Category III wetland (detailed further in this report) exists on the site. However, in several reviews of this wetland no Type N aquatic area was

noted. A portion of the Category III wetland at the intersection of South 312th Street and 32nd Avenue South has a small section of ditch along the existing right-of-way and roadside. However, this has no evidence of stream like form and flow, nor does it extend anywhere. We reviewed the east edge of the category III wetland and there is no channel north of the intersections, nor south or west of the intersection. It is our conclusion that the Type N water previously noted in CADS20-0217 on Parcel #551560-0155 is incorrect.

Wildlife Habitat

A review of the site revealed no evidence of any state or federally listed species. The immature, monotypic alder forest with little structural complexity, as well as the close proximity of highly urbanized areas creates a situation where few species other than human tolerant wildlife would be present or use the site.

Above: Depiction of the site and area around the site to show the amount of disturbance and urbanized areas.

No unique or rare habitat types or features were noted on the site nor any state or federally sited species.

Proposed Project & Impacts

The proposed project is the construction of a 19 lot residential subdivision with associated access road and infrastructure (see attached plan). There is no way to access the site from 32nd Avenue South without crossing a small portion of the Category III wetland and its associated buffer. The road would be built with the minimum width possible as well as the use of a wall along the side with the sidewalk to minimize impacts. Even using these reduction methods, the road would impact 617sf of the Category III wetland as well as 5,841sf of wetland buffer. In addition, 680sf of buffer would be impacted by the proposed stormwater outfall. This outfall has been engineered to maintain the hydrology of the wetland to predevelopment conditions.

Proposed Mitigation

Construction of new public roads in existing right of ways is allowed in Wetlands and buffers per KCC 21A.24.045.C if;

26. Allowed only if:

a. there is not another feasible location with less adverse impact on the critical area and its buffer;

Response: There is no other feasible location for access to this site. The S. 312 Street alignment is in this location and there is no other access point to the plat.

b. the corridor is not located over habitat used for salmonid rearing or spawning or by a species listed as endangered or threatened by the state or federal government unless the department determines that there is no other feasible crossing site.

Response: There is no fish bearing stream or habitat used by any listed species in the proposed access location.

c. the corridor width is minimized to the maximum extent practical;

Response: The width of the corridor has been minimized by use of retaining walls to minimize impacts.

d. the construction occurs during approved periods for instream work;

Response: NA, there is no stream.

e. *the corridor will not change or diminish the overall aquatic area flow peaks, duration or volume or the flood storage capacity; and*

Response: NA, there is no stream or flood plain.

f. no new public right-of-way is established within a severe channel migration hazard area.

Response: NA, there is no severe migration hazard in this area.

To compensate for the impact to 617sf of Category III wetland, we are proposing to enhance the existing wetland at an 8:1 ratio as required by Code KCCC 21A.24.340B.2. This will enhance 4,936sf of wetland by under planting the existing monotypic alder forest with an understory of conifers including Douglas fir, western red cedar and sitka spruce.

Category and type of wetland	Wetland reestablishment or creation	Wetland rehabilitation	1:1 Wetland reestablishment or wetland creation (R/C) and wetland enhancement (E)	Wetland enhancement only
Category IV	1.5:1	3:1	1:1 R/C and 2:1 E	6:1
Category III	2:1	4:1	1:1 R/C and 2:1 E	8:1
Category II estuarine	Case-by-case	4:1 rehabilitation of an estuarine wetland	Case-by-case	Case-by-case
All other Category II	3:1	8:1	1:1 R/C and 4:1 E	12:1
Category I forested	6:1	12:1	1:1 R/C and 10:1 E	Case-by-case
All other Category I	4:1	8:1	1:1 R/C and 6:1 E	Case-by-case
Category I wetlands of high conservation value	Not allowed	6:1 rehabilitation of a wetland of high conservation value	Case-by-case	Case-by-case
Category I coastal lagoon	Not allowed	6:1 rehabilitation of a coastal lagoon	Case-by-case	Case-by-case
Category I bog	Not allowed	6:1 rehabilitation of a bog	Case-by-case	Case-by-case
Category I estuarine	Case-by-case	6:1 rehabilitation of an estuarine wetland	Case-by-case	Case-by-case

To compensate for the 5,841sf of buffer impact, KCCC 21A.24.340B.1. indicates a ratio of 1:1 mitigation would be required. We are

compensating for this impact with averaging of 4,938sf as well as enhancement of 903sf which is a 1:1 compensation.

The standard 80' buffer for the Category III wetland under a High impact land use is also proposed to be reduced to the moderate land intensity buffer of 60' per KCC 21A.24.325.C.6;

6. The buffer widths required for proposed land uses with high intensity impacts to wetlands can be reduced to those required for moderate intensity impacts under the following conditions:

a. For wetlands that score moderate or high for habitat, which means six points or higher, the width of the buffer can be reduced if both of the following criteria are met:

Response: NA, the wetland scored a low habitat score of 5 points.

b. For wetlands that score low for habitat, which means less than six points, the buffer width can be reduced to that required for moderate intensity impacts by applying measures to minimize impacts of the proposed land uses, as follows:

Disturbance	Measures to minimize impacts
Lights	Direct lights away from wetland.
Noise	Locate activity that generates noise away from wetland. If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source. For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional ten-foot heavily vegetated buffer strip immediately adjacent to the outer wetland buffer.
Toxic runoff	Route all new untreated runoff away from wetland while ensuring wetland is not dewatered. Establish covenants limiting use of pesticides within 150 feet of wetland. Apply integrated pest management.
Stormwater runoff	Retrofit stormwater detention and treatment for roads and existing adjacent development. Prevent channelized flow from lawns that directly enters the buffer. Use low impact intensity development techniques identified in the King County Surface Water Design Manual.
Change in water regime	Infiltrate or treat, detain and disperse into buffer new runoff from impervious surfaces and new lawns.
Pets and human disturbance	Use privacy fencing or plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion. Place wetland and its buffer in a separate tract or protect with a conservation easement.
Dust	Use best management practices to control dust.

Response:

Lights – All lighting in the plat will be directed away from the wetland as required.

Noise – No noise generating impacts area proposed along the buffer edge.

Toxic Runoff – No untreated water will be discharges to the wetland. Only treated runoff will be directed to the wetland from the stormwater outfall.

Stormwater runoff – All stormwater on the site will be treated and released to the wetland in a controlled manner to maintain hydrology to the feature.

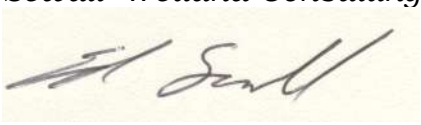
Change in water regime – No change in the water regime of the wetland is anticipated. Water from the site will be treated and dispersed back to the wetland to maintain hydrology.

Pets and human disturbance – Privacy fencing has been placed at the dge of the buffer behind the proposed lots to discourage disturbance.

Dust – BMPs for dust management will be used during construction to prevent any impact from airborne material.

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

Sincerely,
Sewall Wetland Consulting, Inc.



Ed Sewall
Senior Wetlands Ecologist PWS #212

Attached: Site Plan
Data Sheets
Rating form and associated exhibits

REFERENCES

King County Municipal Code

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.

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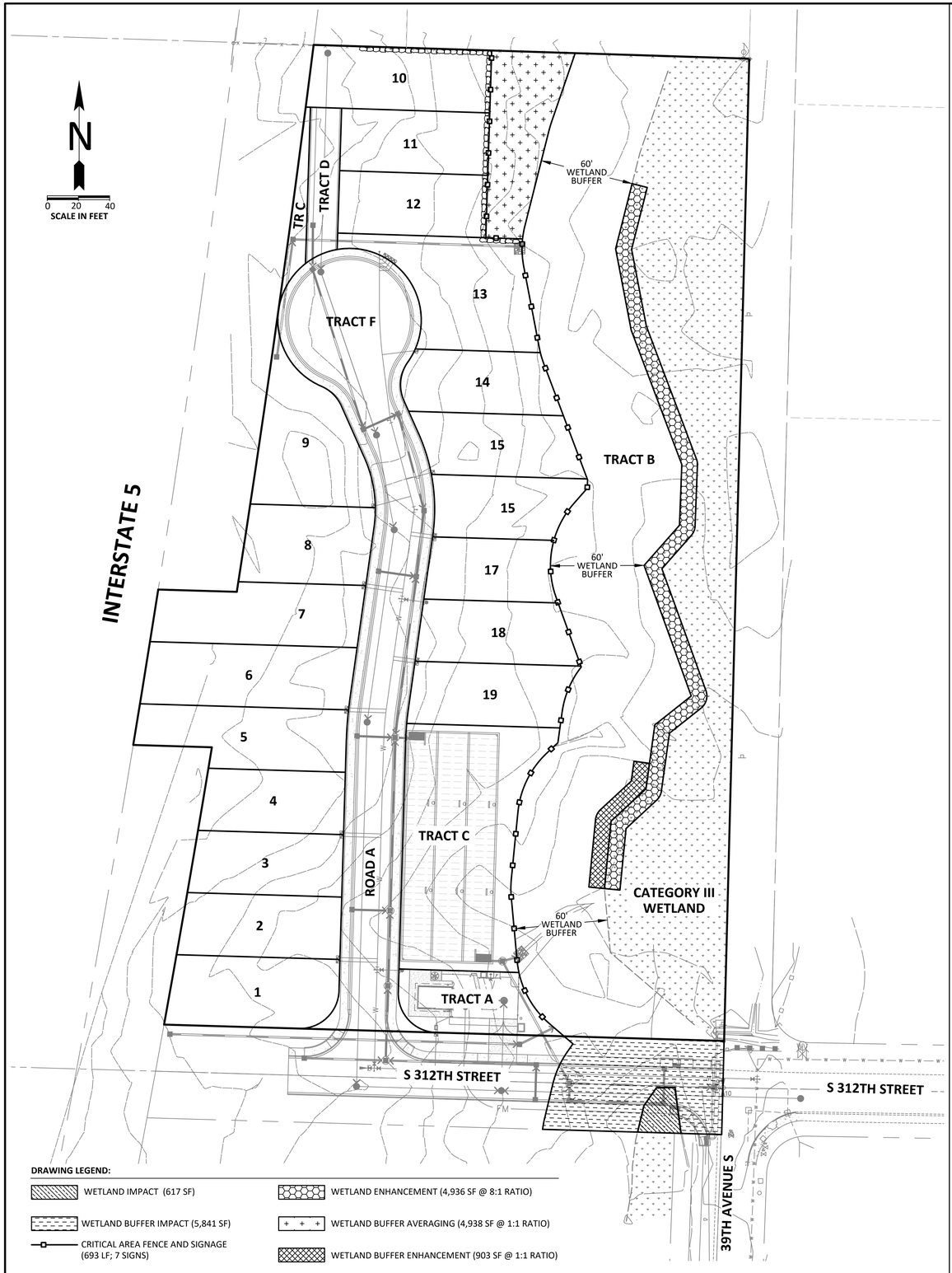
Reed, P., Jr. 1988. National List of Plant Species that Occur in Wetlands: Northwest (Region 9). 1988. U. S. Fish and Wildlife Service, Inland Freshwater Ecology Section, St. Petersburg, Florida.

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



DRAWING LEGEND:

- WETLAND IMPACT (617 SF)
- WETLAND BUFFER IMPACT (5,841 SF)
- CRITICAL AREA FENCE AND SIGNAGE (693 LF; 7 SIGNS)
- WETLAND ENHANCEMENT (4,936 SF @ 8:1 RATIO)
- WETLAND BUFFER AVERAGING (4,938 SF @ 1:1 RATIO)
- WETLAND BUFFER ENHANCEMENT (903 SF @ 1:1 RATIO)

WETLAND IMPACT AND MITIGATION SITE PLAN

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1

GENERAL CONSTRUCTION NOTES:

1. WORK SHALL CONFORM TO ALL KING COUNTY CODES, ORDINANCES, AND REGULATIONS.
2. BEFORE THE START OF ANY CONSTRUCTION, A PRE-CONSTRUCTION MEETING MUST BE HELD BETWEEN KING COUNTY, THE OWNER, AND THE PLAN DESIGNER.
3. A COPY OF THESE APPROVED DRAWINGS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
4. SITE CONDITIONS MAY VARY BASED ON SEASON AND/OR TIME OF YEAR. ACCOMMODATE REALIZED AND ANTICIPATED SITE CONDITIONS WHEN COMPLETING THE WORK SHOWN ON THESE DRAWINGS.
5. THE CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF THE WORK SHOWN ON THESE DRAWINGS. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE TRAFFIC CONTROL IN ACCORDANCE WITH ANY AND ALL PEND OREILLE COUNTY STANDARDS.

RECOMMENDED CONSTRUCTION SEQUENCE:

1. FLAG WORK AREA LIMITS.
2. REQUEST AND ATTEND A PRE-CONSTRUCTION MEETING WITH OWNER.
3. INSTALL NATIVE PLANTS AND MULCH.
4. INSTALL TEMPORARY IRRIGATION SYSTEM.
5. CLEAN-UP AND DEMOBILIZE FROM SITE.
6. REQUEST FROM AND ATTEND INSPECTION WITH OWNER.

OWNER SHALL COMPLETE THREE (3) YEARS OF MAINTENANCE AND MONITORING.

PLANT INSTALLATION NOTES:

1. PLANT MATERIAL QUALITY AND LOCATIONS SHALL BE INSPECTED BY PLAN DESIGNER OR OWNER PRIOR TO INSTALLATION.
2. PLANT LOCATIONS SHOWN ARE APPROXIMATE. ADJUST PLANT LOCATIONS TO ACCOMMODATE SITE CONDITIONS, TO PRESERVE AND PROTECT EXISTING NATIVE VEGETATION, AND/OR PER PLAN DESIGNER AT TIME OF INSTALLATION.
3. FOLLOWING PLANT INSTALLATION, PLACE MULCH AT THE BASE OF EACH INSTALLED PLANT.

PLANT MATERIAL SPECIFICATIONS:

1. PLANTS SHALL BE DERIVED FROM STOCK ACCLIMATED TO WESTERN WASHINGTON ENVIRONMENTAL CONDITIONS,
2. PLANTS SHALL BE NATIVE TO THE PACIFIC NORTHWEST. PLANTS SHALL BE PROPAGATED FROM NATIVE STOCK. SALVAGED PLANTS ARE ACCEPTABLE.
3. PLANTS SHALL BE NORMAL IN PATTERN OF GROWTH, HEALTHY, WELL-BRANCHED AND HAVE ALL LEADERS AND BUDS INTACT. TREES SHALL NOT HAVE SUNSCALDS, DISFIGURING KNOTS, FRESH CUTS OF LIMBS, DAMAGED LEADERS, AND/OR DEFORMED TRUNKS.
4. CONTAINERIZED PLANT STOCK SHALL BE GROWN IN A CONTAINER LONG ENOUGH TO DEVELOP A ROOT SYSTEM THAT REACHES THE EDGES OF THE CONTAINER IN WHICH IT HAS GROWN. TREES AND SHRUBS SHALL BE WELL ROOTED AND SHALL HAVE SUFFICIENT ROOT MASS TO HOLD TOGETHER THE SOIL, IN WHICH PLANT IS GROWING, WHEN REMOVED FROM THE POT.

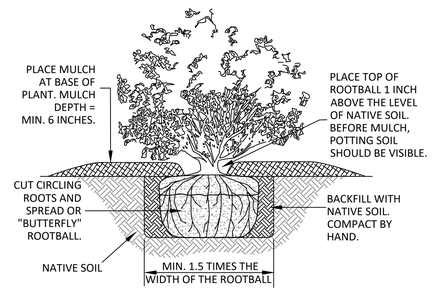
PLANT SCHEDULE - WETLAND:

COMMON NAME	SCIENTIFIC NAME	QUANTITY	SIZE/FORM	SPACING
SITKA SPRUCE	PICEA SITCHENSIS	30	2 GALLON CONTAINER	9' ON-CENTER
WESTERN REDCEDAR	THUJA PLICATA	31	2 GALLON CONTAINER	9' ON-CENTER
		TOTAL = 61		

PLANT SCHEDULE - WETLAND BUFFER:

COMMON NAME	SCIENTIFIC NAME	QUANTITY	SIZE/FORM	SPACING
DOUGLAS-FIR	PSEUDOTSUGA MENZIESII	12	2 GALLON CONTAINER	9' ON-CENTER
		TOTAL = 12		

PLANT INSTALLATION DETAIL:



MULCH SPECIFICATION:

MULCH SHALL BE COMMERCIALLY AVAILABLE "MEDIUM MULCH", ARBORIST CHIPS, OR APPROVED EQUAL. MULCH SHALL NOT CONTAIN RESIN, TANNIN, OR OTHER COMPOUNDS IN QUANTITIES THAT WOULD BE DETRIMENTAL TO PLANT LIFE. MULCH SHALL NOT BE DERIVED FROM STUMP GRINDINGS AND SHALL NOT CONTAIN SOIL. HOG FUEL OR EQUAL IS NOT ACCEPTABLE.

TEMPORARY IRRIGATION:

TEMPORARY IRRIGATION SHALL BE PROVIDED FOR TWO (2) GROWING SEASONS FOLLOWING PLANT INSTALLATION. IRRIGATION SHALL PROVIDE A MINIMUM RAINFALL EQUIVALENT OF 1 INCH PER WEEK FROM JUNE 15 THROUGH SEPTEMBER 15. IRRIGATION SHALL BE APPLIED IN A MANNER THAT MAINTAINS PLANT HEALTH, PREVENTS WILTING, AND PROMOTES DEEP PLANT ROOT SYSTEMS.

MONITORING PLAN:

THE THREE (3) YEAR MONITORING PLAN OUTLINED BELOW WILL ENSURE AND DOCUMENT THAT THE PERFORMANCE STANDARDS ESTABLISHED FOR THIS PLAN HAVE BEEN MET. THE PLAT DEVELOPER IS RESPONSIBLE FOR SUCCESSFUL COMPLETION OF THE WORK DESCRIBED ON THIS PLAN. IF THE PROPERTY IS SOLD OR PROPERTY OWNERSHIP IS OTHERWISE TRANSFERRED, RESPONSIBILITY FOR ANY REMAINING WORK SHALL BE TRANSFERRED TO THE NEW OWNER AND RECORDED WITH KING COUNTY.

PLAN GOALS, OBJECTIVES, AND PERFORMANCE STANDARDS

PLAN GOALS, MONITORING SCHEDULE, AND PERFORMANCE STANDARDS ARE OUTLINED BELOW. THE GOALS OF THIS PLAN ARE CONSIDERED ACHIEVED WHEN THE PERFORMANCE STANDARDS ARE SATISFIED.

GOAL/OBJECTIVE #1 - ENHANCED WETLAND AND WETLAND BUFFER

PERFORMANCE STANDARD #1 - PLANT SURVIVAL
YEAR 1 - 100% SURVIVAL
YEAR 2 THROUGH YEAR 3 - 85% SURVIVAL.

THE GOAL/OBJECTIVE OF THIS PLAN ARE CONSIDERED ACHIEVED WHEN THE PERFORMANCE STANDARDS ARE SATISFIED. THE PERFORMANCE STANDARDS CAN BE ACHIEVED EITHER THROUGH PLANT ESTABLISHMENT OR THROUGH PLANT REPLACEMENT.

AS-BUILT

FOLLOWING COMPLETION OF THE WORK SHOWN ON THIS PLAN, A QUALIFIED PROFESSIONAL SHALL PREPARE AN AS-BUILT OF THE COMPLETED WORK. THE AS-BUILT SHALL SUMMARIZE THE COMPLETED WORK AS WELL AS ANY DEVIATIONS FROM THE APPROVED VERSION OF THIS PLAN. THE AS-BUILT SHALL BE SUBMITTED TO KING COUNTY COUNTY NO LATER THAN 30 DAYS FROM THE DATE THAT THE WORK SHOWN ON THIS PLAN HAS BEEN COMPLETED.

ANNUAL MONITORING (10 YEARS)

ANNUAL MONITORING SHALL BE COMPLETED FOR A PERIOD OF THREE (3) YEARS. ANNUAL MONITORING SHALL BE COMPLETED BY A QUALIFIED PROFESSIONAL AND SHALL COMPRISE A SITE INVESTIGATION IN AUGUST OR SEPTEMBER AND REPORTING TO KING COUNTY NO LATER THAN 30 DAYS FOLLOWING EACH MONITORING. THE PURPOSE OF THE SITE INVESTIGATION IS TO EVALUATE CONDITIONS WITHIN THE PLANTING AREAS PER THE CURRENT YEAR'S PERFORMANCE STANDARDS. MONITORING SHALL INCLUDE A DIRECT COUNT INVENTORY AND ASSESSMENT OF ALL INSTALLED PLANTS. THE RATIONALE FOR POOR CONDITIONS, IF PRESENT, WILL BE DETERMINED TO THE EXTENT FEASIBLE. IN ADDITION TO VEGETATION SAMPLING, PHOTOGRAPHS OF THE ENHANCEMENT AREAS SHALL BE TAKEN DURING EACH ANNUAL MONITORING FROM PERMANENT PHOTO POINTS.

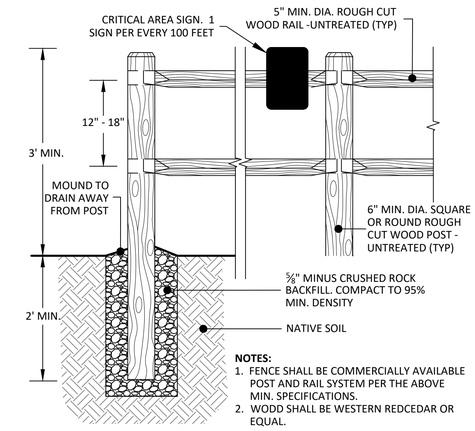
MAINTENANCE PLAN:

INSTALLED PLANTS SHALL BE MAINTAINED AT REGULAR INTERVALS DURING THE MONITORING PERIOD TO PROMOTE THE SUCCESSFUL ESTABLISHMENT AND VIGOROUS GROWTH OF THE INSTALLED PLANT STOCK. GENERAL MAINTENANCE SHALL INCLUDE: 1) RE-APPLYING BARK MULCH TO MAINTAIN A 6" MINIMUM APPLIED THICKNESS - YEAR 1 ONLY; 2) THE PRUNING OF INSTALLED PLANTS TO REMOVE DEAD WOOD AND PROMOTE VIGOROUS PLANT GROWTH AND PROPER FORM; 3) THE REPLACEMENT OF PLANTS THAT APPEAR TO BE IN DISTRESS AND/OR DISEASED; AND/OR 4) THE REMOVAL OF TRASH, LITTER, AND/OR OTHER NON-DECOMPOSING DEBRIS. GENERAL MAINTENANCE WORK SHALL OCCUR MONTHLY DURING THE GROWING SEASON AND/OR AT A FREQUENCY OTHERWISE NECESSARY TO ENSURE THE SUCCESSFUL ESTABLISHMENT AND VIGOROUS GROWTH OF THE INSTALLED PLANTS.

CONTINGENCY PLAN:

SHOULD ANY MONITORING ASSESSMENT REVEAL THAT THE PERFORMANCE STANDARDS FOR THE RESPECTIVE YEAR ARE NOT SATISFIED, THE PERMITTEE SHALL WORK WITH KING COUNTY TO DEVELOP A CONTINGENCY PLAN TO ADDRESS THE DEFICIENCY(IES). CONTINGENCY PLANS CAN INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING ACTIONS: 1) ADDITIONAL PLANT INSTALLATION; 2)EROSION CONTROL; 3) HERBIVORY PROTECTION; 4) MODIFICATION TO THE IRRIGATION REGIME; AND/OR 5) PLANT SUBSTITUTIONS OF TYPE, SIZE, QUANTITY, AND LOCATION. SUCH CONTINGENCY PLAN SHALL BE SUBMITTED TO KING COUNTY WITHIN 30 DAYS OF WHEN DEFICIENCIES ARE DISCOVERED. UNLESS OTHERWISE APPROVED BY KING COUNTY, ACTIONS SPECIFIED ON AN APPROVED CONTINGENCY PLAN MUST BE COMPLETED WITHIN 60 DAYS. IF THE FAILURE IS SUBSTANTIAL, KING COUNTY MAY EXTEND THE COMPLIANCE MONITORING PERIOD FOR THE WORK.

CRITICAL AREA FENCE:



NOTES:
1. FENCE SHALL BE COMMERCIALLY AVAILABLE POST AND RAIL SYSTEM PER THE ABOVE MIN. SPECIFICATIONS.
2. WOOD SHALL BE WESTERN REDCEDAR OR EQUAL.

CRITICAL AREA SIGNAGE:

1. SIGN CONTENT SHOWN IS REPRESENTATIVE IN NATURE. FINAL SIGN CONTENT, COLOR, AND MATERIAL SHALL CONFORM TO **KING COUNTY** STANDARDS.
2. SIGNS SHALL BE POSTED AT THE OUTER LIMITS OF THE CRITICAL AREA (WETLAND OR STREAM) BUFFER FACING AWAY FROM THE CRITICAL AREA.
3. SIGNS SHALL BE POSTED EVERY **100 LF** ALONG THE BUFFER LIMITS.
4. ATTACH SIGN TO FENCE USING 5/16" DIA. GALVANIZED LAG BOLT.

Sewall Wetland Consulting, Inc.
PO Box 880 - Fall City, Washington 98024 Phone: 253-859-0515

PROJECT: WETLAND MITIGATION PLAN - MIDWAY PROPERTY -

ADDRESS: PORTION OF SECTION 09, TOWNSHIP 21 N, RANGE 04 E., W.M. KNG COUNTY, WASHINGTON

NO.	DATE	NOTES
1.	05/16/2024	ADDED FENCING & SIGNAGE

811 Know what's below. Call before you dig.

UTILITY LOCATIONS AND CHARACTERISTICS SHOWN ON THIS DRAWING, IF ANY, ARE BASED ON THE FIELD LOCATION OF THE APPARENT SURFACE EVIDENCE OF EXISTING STRUCTURES. THE UNDERGROUND ROUTING AND CONDITION OF BURIED UTILITIES HAS NOT BEEN VERIFIED OR CONFIRMED. ADDITIONAL UTILITY LOCATION AND MAPPING MAY BE REQUIRED. FIELD LOCATE, VERIFY DEPTH OF, AND ADEQUATELY PROTECT ALL UTILITIES PRIOR TO THE START OF WORK.

DATE: 03/27/2024
JOB NUMBER: 22-196

SITE PLAN, NOTES, & DETAILS

SHEET: 1 OF 1

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

Project/Site: M. Downy City/County: King Co Sampling Date: 11-16-22

Applicant/Owner: State: WA Sampling Point: DP #1

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

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

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: Alderwood 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 ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Thuja plicata	50		FAC
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Gaultheria shallon	60		FACU
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species 50	x 3 = 150
FACU species 60	x 4 = 240
UPL species ____	x 5 = ____
Column Totals: 110 (A)	390 (B)

Prevalence Index = B/A = 3.54

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: DP# 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
2	2.5 F							
14	10YR 3/3						GSL	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

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

Project/Site: Midway City/County: King Co Sampling Date: 11-16-27

Applicant/Owner: State: WA Sampling Point: DP#2

Investigator(s): JD Ernst Section, Township, Range:

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

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: Alderwood 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. Alnus rubra	50		FAC
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1. Rubus spectabilis	40		FAC
2. Rubus ursinus	30		FAC
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ___)			
1. Carex obnupta	20		OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (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[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? ✓ Yes ___ No ___

Remarks:

SOIL

Sampling Point: D1#7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
16	10YR 2/2		C M				gsv	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 0"

Wetland Hydrology Present? Yes ✓ **No** _____

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

Remarks:

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

Project/Site: Midway City/County: King Co Sampling Date: 11-14-22

Applicant/Owner: State: WA Sampling Point: DP#3

Investigator(s): JD Smith Section, Township, Range:

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

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: Alderwood 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. Alnus rubra	40		FAC
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1. Rubus spectabilis	50		FAC
2. Sambucus racemosa	30		FACU
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks:

SOIL

Sampling Point: DP#7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
16	10YR 3/2						SiL	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

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

Project/Site: Midway City/County: King Co Sampling Date: 11-16-22

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

Investigator(s): JH Sum Section, Township, Range:

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

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

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

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

Hydrophytic Vegetation Present? Yes ✓ No ____

Hydric Soil Present? Yes ✓ No ____

Wetland Hydrology Present? Yes ✓ No ____

Is the Sampled Area within a Wetland? Yes ✓ No ____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	60		FAC
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Rubus spectabilis	60		FAC
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (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[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: DP #4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
16	10YR 2/2			None			gsL	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches) ~4"

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Midway - Wetland A Date of site visit: 11-16-22

Rated by Ed Sewell Trained by Ecology? ✓ Yes ___ No Date of training ____

HGM Class used for rating Depressional Wetland has multiple HGM classes? ___ Y ✓ N

NOTE: Form is not complete without the figures requested *(figures can be combined).*

Source of base aerial photo/map ____

OVERALL WETLAND CATEGORY ____ (based on functions___ or special characteristics___)

1. Category of wetland based on FUNCTIONS

___ **Category I** – Total score = 23 - 27

✓ **Category II** – Total score = 20 - 22

___ **Category III** – Total score = 16 - 19

___ **Category IV** – Total score = 9 - 15

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

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	✓

Wetland name or number A

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

Wetland name or number A

HGM Classification of Wetlands in Western Washington

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

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

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

NO – go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

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

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

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

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

NO – go to 3 **YES** – The wetland class is **Flats**

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

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

NO – go to 4 **YES** – The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

NO – go to 5 **YES** – The wetland class is **Slope**

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

5. Does the entire wetland unit **meet all** of the following criteria?
   - The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
   - The overbank flooding occurs at least once every 2 years.

Wetland name or number A

NO – go to 6 **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

DEPRESSIONAL AND FLATS WETLANDS

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

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

D 1.1. Characteristics of surface water outflows from the wetland:		
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).	points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	points = 2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 1	2
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.	points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic *(use NRCS definitions)*.	Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):		
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > ⅓ of area	points = 3	
Wetland has persistent, ungrazed plants > $^{1}/_{10}$ of area	points = 1	5
Wetland has persistent, ungrazed plants < $^{1}/_{10}$ of area	points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:		
This is the area that is ponded for at least 2 months. See description in manual.		
Area seasonally ponded is > ½ total area of wetland	points = 4	
Area seasonally ponded is > ¼ total area of wetland	points = 2	4
Area seasonally ponded is < ¼ total area of wetland	points = 0	
~~Total for D 1~~	~~Add the points in the boxes above~~	11

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

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

D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	0
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	1
~~D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?~~ Source _____	Yes = 1 No = 0	0
Total for D 2	Add the points in the boxes above	2

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

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

D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality *(answer YES if there is a TMDL for the basin in which the unit is found)*?	Yes = 2 No = 0	2
Total for D 3	Add the points in the boxes above	4

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

Wetland name or number A

DEPRESSIONAL AND FLATS WETLANDS

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

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

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

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

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

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

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

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

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

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

Wetland name or number A

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

___ Aquatic bed	4 structures or more: points = 4
___ Emergent	3 structures: points = 2
___ Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points = 1
✓ Forested (areas where trees have > 30% cover)	1 structure: points = 0

If the unit has a Forested class, check if:

✓ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon → 1

H 1.2. Hydroperiods

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

___ Permanently flooded or inundated	4 or more types present: points = 3
✓ Seasonally flooded or inundated	3 types present: points = 2
___ Occasionally flooded or inundated	2 types present: points = 1
___ Saturated only	1 type present: points = 0
___ Permanently flowing stream or river in, or adjacent to, the wetland	
___ Seasonally flowing stream in, or adjacent to, the wetland	
___ ~~Lake Fringe wetland~~	~~2 points~~
___ **Freshwater tidal wetland**	**2 points**

→ 0

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.

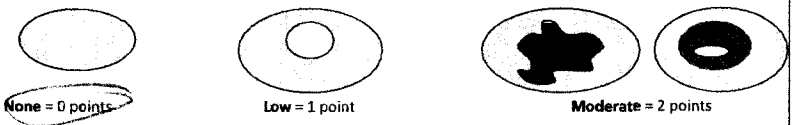
~~*Different patches of the same species can be combined to meet the size threshold and you do not have to name the species.* ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***~~

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

→ 1

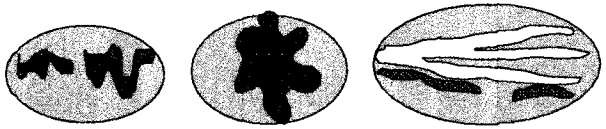
H 1.4. Interspersion of habitats

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



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

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



→ 0

Wetland name or number A

H 1.5. Special habitat features:

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

- ✓ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).
- ✓ Standing snags (dbh > 4 in) within the wetland
- ___ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)
- ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet weathered where wood is exposed)*
- ___ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)*
- ✓ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)

Total for H 1	Add the points in the boxes above	3

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

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

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

Calculate: 3 % undisturbed habitat 4 + [(% moderate and low intensity land uses)/2] 2 = 5 %

If total accessible habitat is:

> 1/3 (33.3%) of 1 km Polygon	points = 3
20-33% of 1 km Polygon	points = 2
10-19% of 1 km Polygon	points = 1
< 10% of 1 km Polygon	points = 0

→ 0

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

Calculate: 20 % undisturbed habitat 20 + [(% moderate and low intensity land uses)/2] 10 = 30 %

Undisturbed habitat > 50% of Polygon	points = 3
Undisturbed habitat 10-50% and in 1-3 patches	points = 2
Undisturbed habitat 10-50% and > 3 patches	points = 1
Undisturbed habitat < 10% of 1 km Polygon	points = 0

→ 1

H 2.3. Land use intensity in 1 km Polygon: If

> 50% of 1 km Polygon is high intensity land use	points = (- 2)
≤ 50% of 1 km Polygon is high intensity	~~points = 0~~

→ -2

Total for H 2	Add the points in the boxes above	1

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

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

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

Site meets ANY of the following criteria: points = 2

- — It has 3 or more priority habitats within 100 m (see next page)
- — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)
- — It is mapped as a location for an individual WDFW priority species
- — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources
- — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan

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

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

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

Wetland name or number A

WDFW Priority Habitats

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

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

— **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

— **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).

— **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

— **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).

— **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).

— **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

— **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page).*

— **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

— **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

— **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

— **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

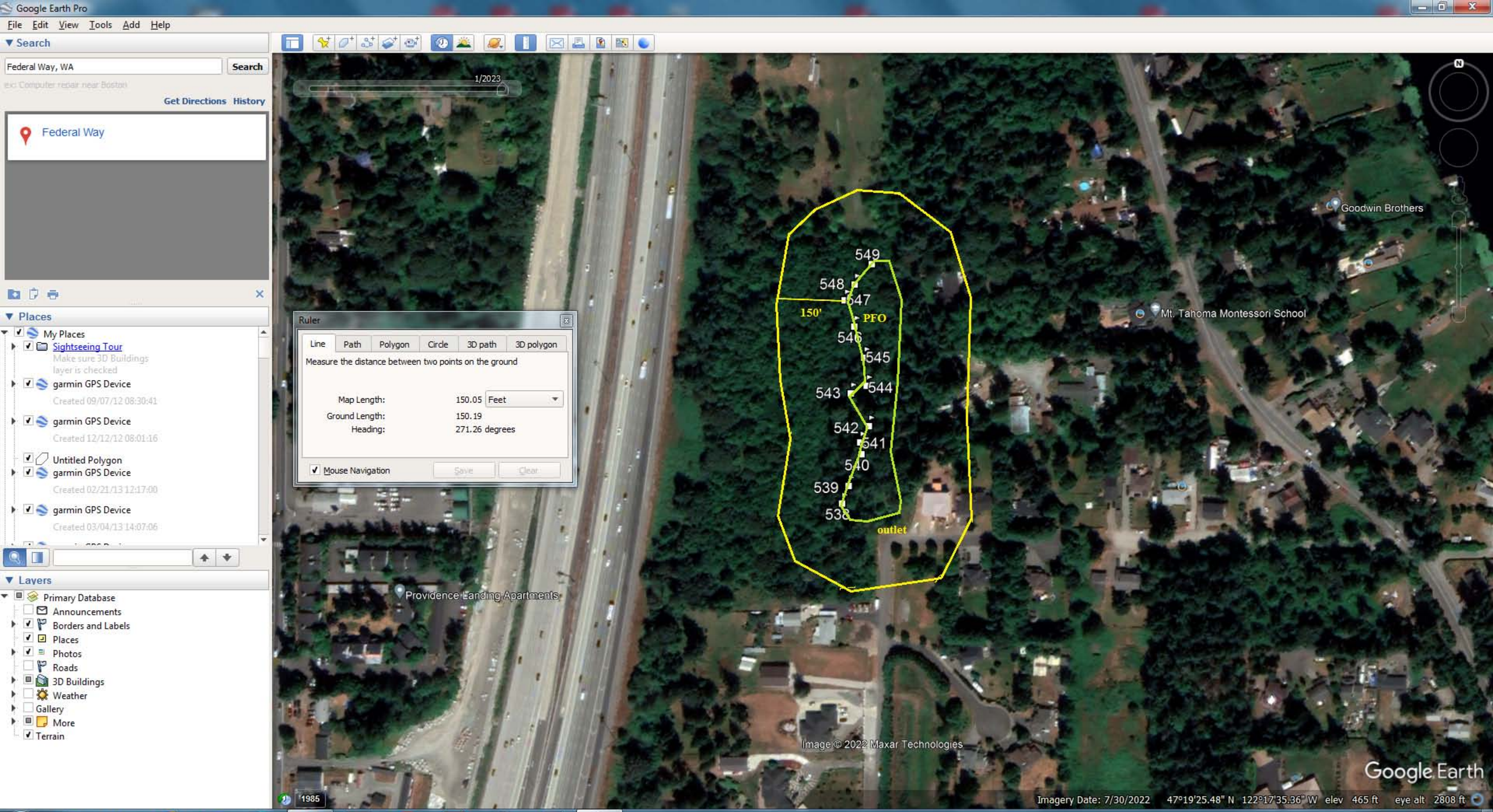
Wetland name or number A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland name or number A

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.*** — **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. — **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). Yes = **Category I** No = **Not a forested wetland for this section**	**Cat. I**
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* Yes – Go to **SC 5.1** No = **Not a wetland in a coastal lagoon**	**Cat. I**
SC 5.1. Does the wetland meet all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2) Yes = **Category I** No = **Category II**	**Cat. II**
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 Yes – Go to **SC 6.1** No = **not an interdunal wetland for rating**	**Cat I**
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = **Category I** No – Go to **SC 6.2**	**Cat. II**
SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = **Category II** No – Go to **SC 6.3**	**Cat. III**
SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = **Category III** No = **Category IV**	**Cat. IV**
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	NA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Federal Way
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garmin GPS Device
garmin GPS Device
Layers
Primary Database
Announcements
Borders and Labels
Places
Photos
Roads
3D Buildings
Weather
Gallery
More
Terrain
1/2023
Ruler
Line
Path
Polygon
Circle
3D path
3D polygon
Measure the distance between two points on the ground
Map Length: 150.05 Feet
Ground Length: 150.19
Heading: 271.26 degrees
Mouse Navigation
Save
Clear
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150'
PFO
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outlet
Goodwin Brothers
Mt. Tahoma Montessori School
Providence Landing Apartments
Image © 2022 Maxar Technologies
Google Earth
1985
Imagery Date: 7/30/2022 47°19'25.48" N 122°17'35.36" W elev 465 ft eye alt 2808 ft
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king county imap - Search | wadoe 303d - Search | Assessment of state waters 303d | Water Quality Atlas - Map

https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&BBox=-14338616,5395963,-12562831,650...

DEPARTMENT OF ECOLOGY State of Washington

Water Quality Atlas Map

Legend | Filter | Zoom | **Tools**

Home | Add/Remove Map Data | My Maps | Print | Share | About

Basic

Drawing

Other

Keyboard Identify | **Measure Distance** | Measure Area | Image Service

Usage:

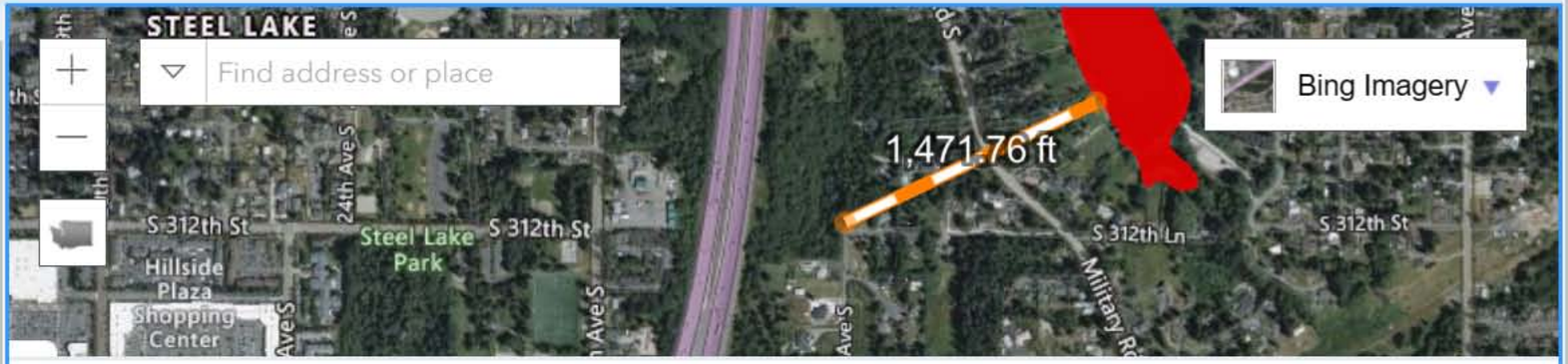
Click on map to add measure points. Double-click to finsh.

Unit

Feet

Distance

1,471.76 ft



Assessed Water/Sediment | Filter Applied | Clear filters

Zoom to selection | Table to CSV

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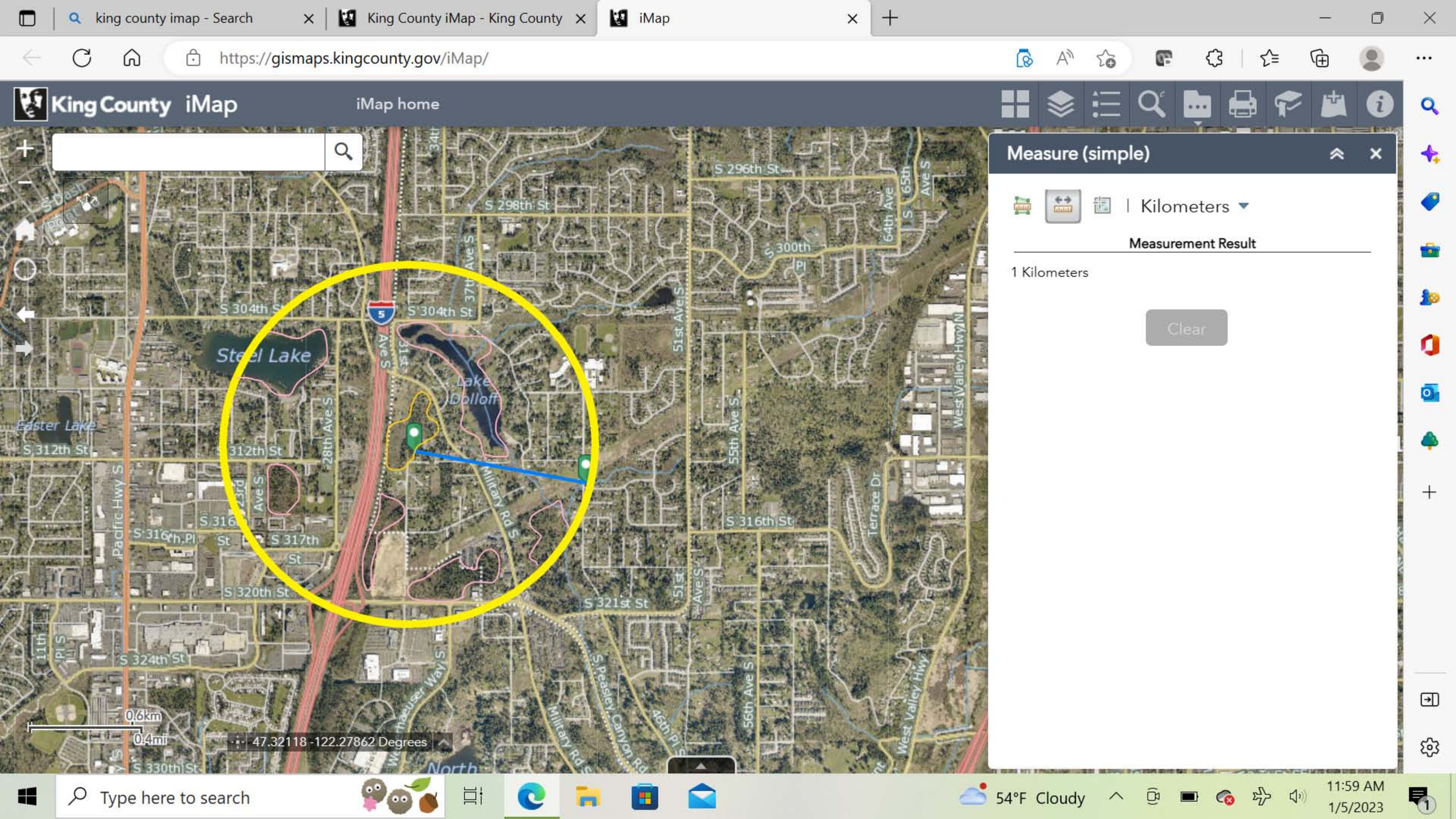
	3726	17030003000236_001_001	5	Water	Temperature	View
	3727	17030001000538_001_001	5	Water	Temperature	View

Show 5 entries | Showing 1 to 5 of 5,739 entries | First | Previous | Next | Last

Type here to search | INX News Bearish | 12:04 PM 1/5/2023


Lake
Steel
Lake
Park
Lake
Dolloff
SITE
Federal Way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King County iMap
iMap home
Measure (simple)
Kilometers
Measurement Result
1 Kilometers
Clear
Steel Lake
Lake Dolloff
Easter Lake
S 304th St
S 312th St
S 316th St
S 317th St
S 320th St
S 321st St
S 324th St
S 330th St
S 296th St
S 298th St
S 300th Pl
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West Valley Hwy
Terrace Dr
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1/5/2023