

March 05, 2024

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5928 77th Avenue SE, Stream Delineation and Wetland Assessment Report

DCG/Watershed Reference Number: 2402.0436.00

Summary

This report has been prepared to present the findings of a wetland and watercourse delineation study located at 5928 77th Avenue SE in Mercer Island, Washington (parcel #2424049037). In addition to the information and findings presented in this report, the following documents are enclosed:

- Site Photos
- Delineation Sketch
- Wetland Determination Data Forms
- Wetland Rating Forms and Figures

One jurisdictional watercourse/stream (Stream A) was identified along the northeast parcel boundary, flowing northwest into an on-site piped segment. One jurisdictional wetland (Wetland A) adjacent to the stream was visually confirmed and estimated from the subject property. The critical area buffer associated with Stream A is more encumbering than the critical area buffer of the off-site wetland (see Table 1). The critical area buffer and associated building setback of Stream A appears to encumber the entire property.

Table 1. Summary of wetlands, streams, and required buffers per Mercer Island Municipal Code.

Feature Name	Category/Type	Habitat Score	Buffer (ft)	Setback (ft)
Wetland A	Category IV	4	40 feet	10 feet
Stream A	Type F	-	120 feet	10 feet
Piped Stream A	Piped	-	-	45 feet

Study Area

The study area is defined as the property located at 5928 77th Avenue SE (parcel #2424049037) and is approximately 0.36 acres in size (Figure 1). Adjacent public or private property within 200 feet was screened from the edge of the study area parcel or nearest publicly accessible land; no private property was accessed without permission.

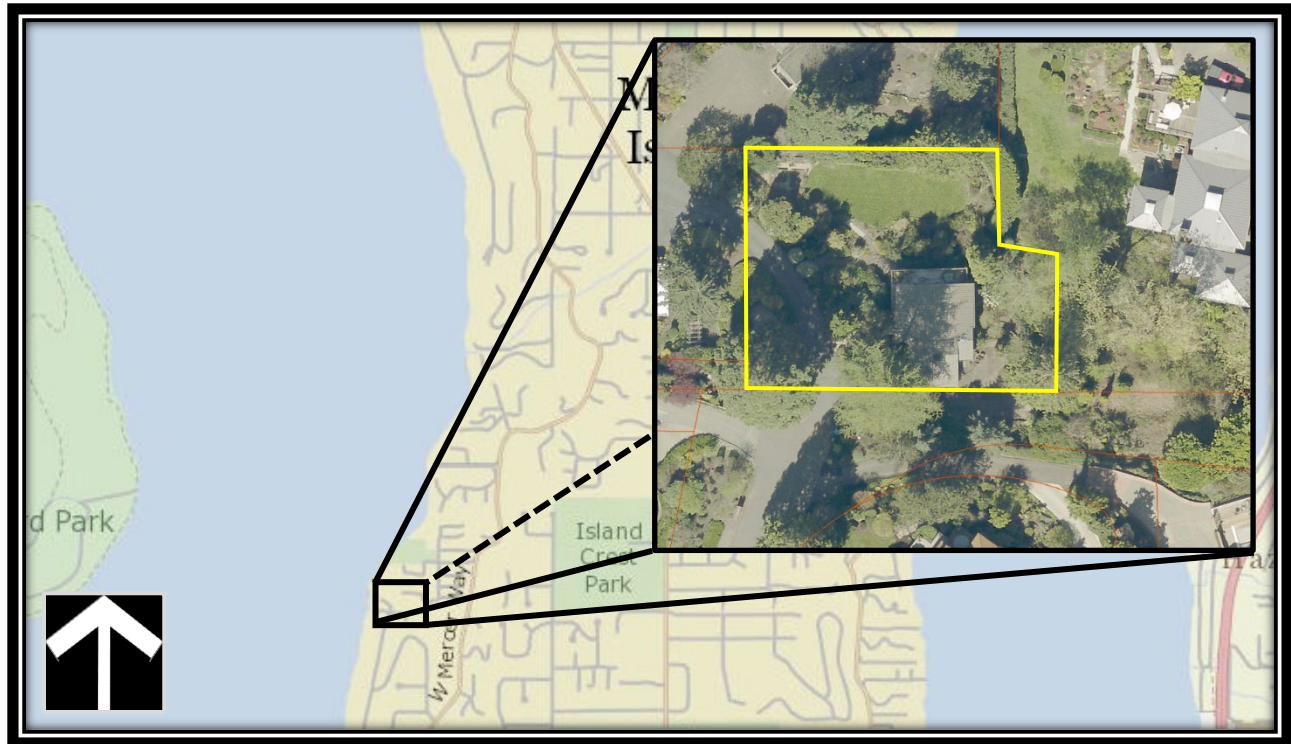


Figure 1. Study area vicinity map, study area outlined in yellow (source: King County iMap, 2021).

Methods

Field investigations for the delineation study were conducted on February 28, 2024, by ecologists Sage Yuasa.

The study area was evaluated for wetlands using methodology from the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0* (U.S. Army Corps of Engineers 2010). The presence or absence of wetlands was determined based on an examination of vegetation, soils, and hydrology. Wetlands were classified using the Washington State Department of Ecology's *Wetland Rating System for Western Washington*: (Hruby 2014).

Characterization of weather conditions for precipitation in the Wetland Determination Data Forms were determined using the WETS table methodology (USDA, NRCS 2015). The “Seattle Tacoma Intl AP” station from 1991-2020 was used as a source for precipitation data (<http://agacis.rcc-acis.org/>). The WETS table methodology uses climate data from the three months prior to the site visit month to determine if normal conditions are present in the study area region.

The study area was evaluated for streams based on the presence or absence of an ordinary high water mark (OHWM) as defined by Section 404 of the Clean Water Act, the Washington Administrative Code (WAC) 220-660-030, and the Revised Code of Washington (RCW) 90.58.030 and guidance documents including *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Anderson 2016) and *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (Mersel and Lichvar 2014).

Public-domain information on the subject properties was reviewed for this delineation study. Resources and review findings are presented in Table 2 of the “Environmental Setting” section of this letter.

Environmental Setting

The subject property is in the Mercer Island drainage basin of the Cedar – Sammamish watershed (WRIA 8); Section 24 of Township 24 North, Range 04 of the Public Land Survey System. The surrounding land use intensity is dominated by high-intensity residential.

The property is developed with a single family residence, shed, paved driveway, vegetable garden, maintained lawn, and garden vegetated with ornamental species (Photos 1 and 2). The property is located on the southern flank of a forested ravine with a mapped watercourse flowing along the northeast parcel boundary and continuing under the property via a 24-inch concrete piped stream segment (see Watercourse section). The watercourse flows into Lake Washington approximately 300 feet to the west. The forested ravine is dominated by a canopy of big-leaf maple, red alder, bitter cherry, western red cedar, and Douglas-fir. The understory is comprised of osoberry, beaked hazelnut, snowberry, Portugal laurel, Himalayan blackberry, western swordfern, and English ivy (Photo 3). A slope wetland was visually identified on the neighboring property to the northeast (parcel #6156000040) abutting the right bank of Stream A (see Wetland section). No wetlands were identified on the subject property.

Public-domain information reviewed for the site is summarized below (Table 2).



Table 2. Summary of online mapping and inventory resources.

Resource	Summary
USDA NRCS: Web Soil Survey	<i>Kitsap silt loam, 2 to 8 percent slopes mapped throughout subject property.</i>
USFWS: NWI Wetland Mapper	<i>Riverine habitat (R4SBC) mapped within subject property. Freshwater forested/shrub wetland (PSSC) and freshwater emergent wetland (PEM1C) mapped approximately 175-feet west of the subject property.</i>
WDFW & NWIFC: Statewide Washington Integrated Fish Distribution	<i>A Type-N water is mapped in the northeast portion of the subject property.</i>
WA-DNR: Forest Practices Application Mapping Tool	<i>Type N stream mapped in the northeast corner of the subject property. Water type break mapped at Lake Washington.</i>
King County iMap	<i>Erosion hazard area mapped throughout the subject property. No wetlands or streams mapped on the subject property.</i>
City of Mercer Island GIS Portal	<i>Piped stream mapped in the northern portion of the subject property. A Type Np stream mapped in the northeast portion of the subject property. A Type Ns stream is mapped in the eastern portion of the subject property. Stormwater from catch basin 29-124 is mapped flowing into the mapped Type Ns stream. Protected slope areas mapped in portions of the subject property.</i>
WETS Climatic Condition	<i>Wetter than normal.</i>

Wetlands

One wetland (Wetland A) was visible off-site to the northeast. Wetland A is summarized below in Table 3. No areas of the subject property contain the requisite vegetation, soil, and hydrology indicators to qualify as wetland.

Table 3. Wetland A assessment summary.

 WETLAND A – Assessment Summary										
Location:	Located off-site on the neighboring property to the northeast (parcel #615600040)									
WRIA / Sub-basin:	Cedar-Sammamish River watershed (WRIA 8) / Mercer Island drainage basin									
	2014 Western WA Ecology Rating:	Category IV								
	Buffer Width and Buffer Setback:	40-foot standard buffer and 10 foot setback								
	Wetland Size:	Approx. 2,000 sq. ft.								
	Cowardin Classification(s):	Palustrine Emergent								
	HGM Classification(s):	Slope								
	Wetland Data Sheet(s):	n/a; off-site								
	Upland Data Sheet (s):	n/a; off-site								
	Flag Color:	n/a; off-site								
	Flag Numbers:	n/a; off-site								
Vegetation	Tree stratum:	n/a								
	Shrub stratum:	n/a								
	Herb stratum:	<i>Juncus effusus, Ranunculus repens, Athyrium filix-femina</i>								
Soils	Soil survey:	Kitsap silt loam, 8 to 15 percent slopes.								
	Field data:	n/a; off-site								
Hydrology	Source:	High Water Table								
	Field data:	n/a; off-site								
Wetland Functions										
	Improving Water Quality			Hydrologic			Habitat			
Site Potential	H	M	<u>L</u>	H	M	<u>L</u>	H	M	<u>L</u>	
Landscape Potential	H	<u>M</u>	L	H	<u>M</u>	L	H	M	<u>L</u>	
Value	H	M	<u>L</u>	H	M	<u>L</u>	H	<u>M</u>	L	TOTAL
Score Based on Ratings	4			4			5			13

Watercourses

Watercourse A is located within the Lake Washington – Sammamish River basin (HUC 171100120400). The channel originates off-site to the southeast in a forested ravine within three open space tracts (Parcel #409480TRCT, #192280TRCT, and #414720TRCT). Open channel flow proceeds northwest for a short distance along the northeast property boundary (Photo 8) before entering a 24-inch concrete pipe (Photo 9). The pipe extends onto the parcel to the west and beneath a network of driveways. The pipe outfall is on private properties and was not observed during the fieldwork. The Mercer Island GIS Map Portal map depicts the stream as piped for approximately 300 feet and outlets to Lake Washington. Stream A is approximately four feet wide and flows at a gradient of five percent per King County mapping accessor. Gradients between the on-site open-channel section and Lake Washington are 8% per King County mapping accessor.

Stormwater Features

One stormwater conveyance channel was identified in the eastern portion of the subject property, north of the paved driveway (see Delineation Sketch). The channel is mapped as a Type Ns watercourse on City of Mercer Island GIS Portal (Photo 4). However, there is no natural watercourse channel upstream and all water appears to come from the stormwater system on 77th Avenue NE, which flows onto the site via a 12-inch metal corrugated culvert (Photo 5) connected to catch basin 29-124 (Photo 6). The outfall consists of riprap at the base of the culvert and transitions to a narrow, incised channel densely vegetated with English ivy before flowing into Stream A (Photo 7). The City of Mercer Island definition of a watercourse (see local regulations) does not include *drainage ditches or stormwater runoff devices unless they are used by fish or to convey waters that were naturally occurring prior to construction*. While the ditch does have a connection to a Type F waterbody, Stream A, the width and gradient preclude suitable fish habitat.

Local Regulations

Wetlands

Wetlands in the City of Mercer Island are regulated by Mercer Island Municipal Code (MIMC) Chapter 19.07 – Environment. Wetlands in the City of Mercer Island are classified using the *2014 Update to the Western Washington Wetland Rating System* (Publication #14-06-029) (Rating System). According to the MIMC, wetlands are classified as one of four categories based on the Rating System. Wetland buffers in the City of Mercer Island are established based on a combination of wetland category and habitat score per MIMC 19.07.190(C)(1). The off-site wetland, Wetland A, is estimated as a Category IV wetland with a habitat score of five points. The City of Mercer Island requires a standard buffer of 40-feet for Wetland A (see Table 1). The on-site stream, Stream A, is more encumbering than the off-site wetland.

Watercourses

The City of Mercer Island regulates watercourses (streams) under MIMC 19.07.180 – *Watercourses*. A watercourse is defined as *a course or route, formed by nature, and generally consisting of a channel with a bed, banks, or sides throughout substantially all its length, along which surface waters, with some regularity (annually in the rainy season), naturally and normally flow in draining from higher to lower lands* per MIMC 19.16.010. Watercourses on Mercer Island are classified as Type S, Type F, Type Np, Type Ns, or piped. Type F watercourses include *all waters, other than Type S waters, which are within the bankfull widths of defined channels and periodically inundated areas of their associated wetlands, or within lakes, ponds, or impoundments having a surface area of one-half acre or greater at seasonal low water and which in any case contain fish habitat*. Per the MIMC definitions section (19.16.010) fish habitat is: *Habitat which is used by any fish at any life stage at any time of the year, including potential habitat likely to be used by fish which could be recovered by restoration or management and includes off-channel habitat*. According to WAC 222-16-031, streams wider than two feet with a gradient flatter than 16 percent are presumed to contain fish habitat regardless of downstream culverts or other artificial fish passage barriers. Furthermore, downstream culverts that are not fish passable could be restored by retrofitting to allow fish passage. Typically, whenever fish barrier culverts need repair or replacement, state and federal laws and regulations require such culverts be upgraded to meet minimum fish passage requirements.

Therefore, Watercourse A is classified as a Type F watercourse, with piped segments classified as Piped. Type F streams require a standard 120-foot buffer per MIMC 19.07.180(C)(1). Piped watercourses segments do not require a buffer. However, a 45-foot setback, offset from the centerline of the pipe is required per MIMC 19.07.180(C)(6). Although the observed piped

segment appears to be inconsistent with the mapped location, its precise location could not be determined because the outfall could not be observed, and it is otherwise buried too deeply to feasibly locate. A surveyor or utility location service would be needed to accurately determine and map the pipe location.

Building Setbacks

Buildings and other structures shall be set back a minimum of ten feet from the edges of a wetland buffer per MIMC 19.07.180(C)(7) and ten feet from the edges of a wetland buffer per MIMC 19.07.190(C)(7).

Per MIMC 19.07.180.C.8 and MIMC 19.07.190.C.8, *“the following may be allowed in the critical area setback, provided no structures nor building overhangs may be closer than five feet from the edge of a watercourse and wetland buffer:*

- a. Landscaping;*
- b. Uncovered decks less than 30 inches above existing or finished grade, whichever is lower;*
- c. Building overhangs if such overhangs do not extend more than 18 inches into the setback area;*
- d. Hardscape and driveways; provided, that such improvements may be subject to requirements in chapter 15.09, storm water master program;*
- e. Split-rail fences;*
- f. Trails, consistent with the requirements of this chapter; and*
- g. Subgrade components of foundations; provided, that any temporary impacts to building setbacks shall be restored to their previous condition or better.”*

Modifications

The City of Mercer Island allows additions to or reconstruction of an existing established structure or building within a critical area and/or buffer constructed on or before January 1, 2005, provided the following criteria outlined in MIMC 19.07.130 are met:

- 1. The seasonal limitations on land clearing, grading, filling, and foundation work described in MIMC 19.07.160(F2) – Geologically hazardous areas, shall apply.*
- 2. Additions shall be allowed if all of the following criteria are met:*

- a. *The structure is enlarged not more than a cumulative of 200 square feet larger than its footprint as of January 1, 2005;*
 - b. *If the existing, legally established structure is located within a wetland or watercourse buffer, the addition may be no closer to the wetland or watercourse than a distance equal to 75 percent of the applicable standard buffer and must also be no closer to the watercourse or wetland than the existing structure;*
 - c. *A critical area study approved by the city demonstrates impacts have been avoided and minimized and mitigated consistent with MIMC 19.07.100, mitigation sequencing;*
 - d. *If the modification or addition is proposed within a geologically hazardous area or associated buffer, a qualified professional provides a statement of risk with MIMC 19.07.160(B)(3).*
3. *Reconstruction of legally established nonconforming structures shall meet the standards in MIMC 19.01.050. The code official may require a critical area study and mitigation plan addressing temporary impacts to critical areas and buffers.*
 4. *Demolition. Removal of structures in watercourses and wetland buffers and geologically hazardous areas, provided:*
 - a. *Site disturbance is limited to the existing access and footprint;*
 - b. *There is no site disturbance within or to wetlands and watercourses;*
 - c. *All soils are stabilized, and the area is revegetated with appropriate native vegetation;*
 - d. *Necessary building permits are obtained.*

State and Federal Regulations

Federal Agencies

Most wetlands and streams are regulated by the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act. Any proposed filling or other direct impacts to Waters of the U.S., including wetlands (except isolated wetlands), would require preconstruction notification and permit authorization from the Corps. Wetland A is not isolated; a Jurisdictional Determination from the Corps would be required to confirm the wetland's jurisdictional status. Unavoidable impacts to jurisdictional wetlands are typically required to be compensated through implementation of an approved mitigation plan. If activities requiring a Corps permit are proposed, a Joint Aquatic Resource Permit Application (JARPA) could be submitted to obtain authorization.

Federally permitted actions that could affect endangered species may also require a biological assessment study and consultation with the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service. Compliance with the Endangered Species Act must be demonstrated for activities within jurisdictional wetlands and the 100-year floodplain. Application for Corps permits may also require an individual 401 Water Quality Certification and Coastal Zone Management Consistency determination from Ecology and a cultural resource study in accordance with Section 106 of the National Historic Preservation Act.

Washington Department of Ecology (Ecology)

Like the Corps, Ecology is charged with reviewing, conditioning, and approving or denying certain federally permitted actions that result in discharges to state waters under Section 401 of the Clean Water Act. However, Ecology review under the Clean Water Act would only become necessary if a Section 404 permit from the Corps was issued. Ecology also regulates wetlands, including isolated wetlands, under the Washington Water Pollution Control Act, but only if direct wetland impacts are proposed. Therefore, authorization from Ecology would not be needed if filling activities are avoided.

A JARPA may also be submitted to Ecology to obtain a Section 401 Water Quality Certification and Coastal Zone Management Consistency Determination if filling is proposed. Ecology approvals are either issued concurrently with the Corps approval or within 90 days following the Corps approval.

In general, neither the Corps nor Ecology regulates wetland and stream buffers, unless direct impacts are proposed. When direct impacts are proposed, buffers are applied based on Corps and Ecology joint regulatory guidance.

Washington Department of Fish and Wildlife (WDFW)

Chapter 77.55 of the RCW (the Hydraulic Code) gives WDFW the authority to review, condition, and approve or deny “any construction activity that will use, divert, obstruct, or change the bed or flow of state waters.” This provision includes any in-water work, the crossing or bridging of any state waters and can sometimes include stormwater discharge to state waters. WDFW will issue a Hydraulic Project Approval (HPA) if a project meets regulatory requirements.

WDFW can also restrict activities to a particular timeframe through the conditions of approval on an HPA. Work is typically restricted to late summer and early fall, however, WDFW has in the past allowed crossings that don’t involve in-stream work to occur at any time during the year.

Disclaimer

The information contained in this letter is based on the application of technical guidelines currently accepted as the best available science and in conjunction with the manuals and criteria referenced above. All discussions, conclusions and recommendations reflect the best professional judgment of the author(s) and are based upon information available at the time the study was conducted. All work was completed within the constraints of budget, scope, and timing. The findings of this report are subject to verification and agreement by the appropriate local, state, and federal regulatory authorities. No other warranty, expressed or implied, is made.

Please call if you have any questions or if we can provide you with any additional information.

Sincerely,

A handwritten signature in black ink that reads "Sage Yuasa". The signature is written in a cursive, flowing style.

Sage Yuasa
Ecologist / ISA Certified Arborist

Enclosures

References

- Anderson, P.S. et al. 2016. Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State. (Publication #16-06-029). Olympia, WA: Shorelands and Environmental Assistance Program, Washington Department of Ecology.
- Department of Ecology (Ecology). 2018. July 2018 Modifications for Habitat Score Ranges. Modified from Wetland Guidance for CAO Updates, Western Washington Version. (Publication #16-06-001). Accessed 8/16/18:
<https://fortress.wa.gov/ecy/publications/parts/1606001part1.pdf>.
- Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- Hruby, T. 2014. Washington State Wetland Rating System for Western Washington: 2014 Update. (Publication #14-06-029). Olympia, WA: Washington Department of Ecology.
- Mersel, M.K. and Lichvar, R.W. 2014. A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States. ERDC/CRREL TR-14-13.
- U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). ed. J. S. Wakely, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2015. National Engineering Handbook, Part 650 Engineering Field Handbook, Chapter 19 Hydrology Tools for Wetland Identification and Analysis. ed. R. A. Weber. 210-VI-NEH, Amend. 75. Washington, DC.

Site Photos



Photo 1. Single family residence, maintained yard, and ornamental vegetation.



Photo 2. Shed located at the end of paved driveway.

Site Photos



Photo 3. Southwest view of forested ravine from subject property.

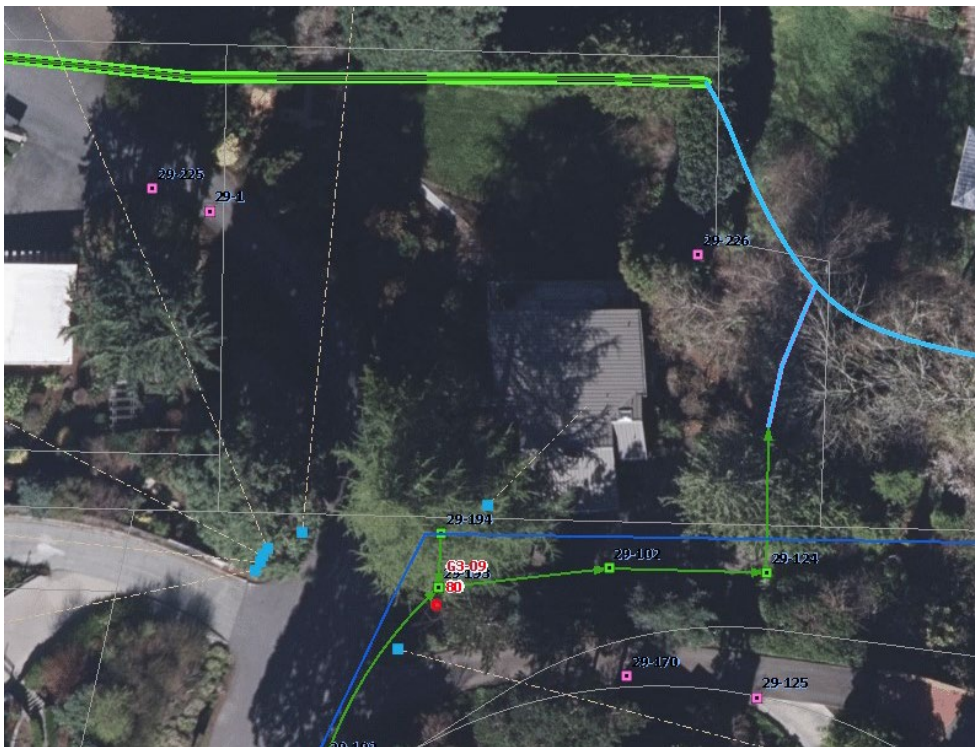


Photo 4. Mercer Island mapped storm water utilities and streams.

Site Photos



Photo 5. 12-inch stormwater pipe outlets to conveyance channel.



Photo 6. Stormwater catch basin 29-124 with flows toward conveyance channel to the north (arrows for direction of flow).

Site Photos



Photo 7. Stormwater conveyance channel confluence with Stream A.



Photo 8. Northeast view of Stream A flowing along property boundary.

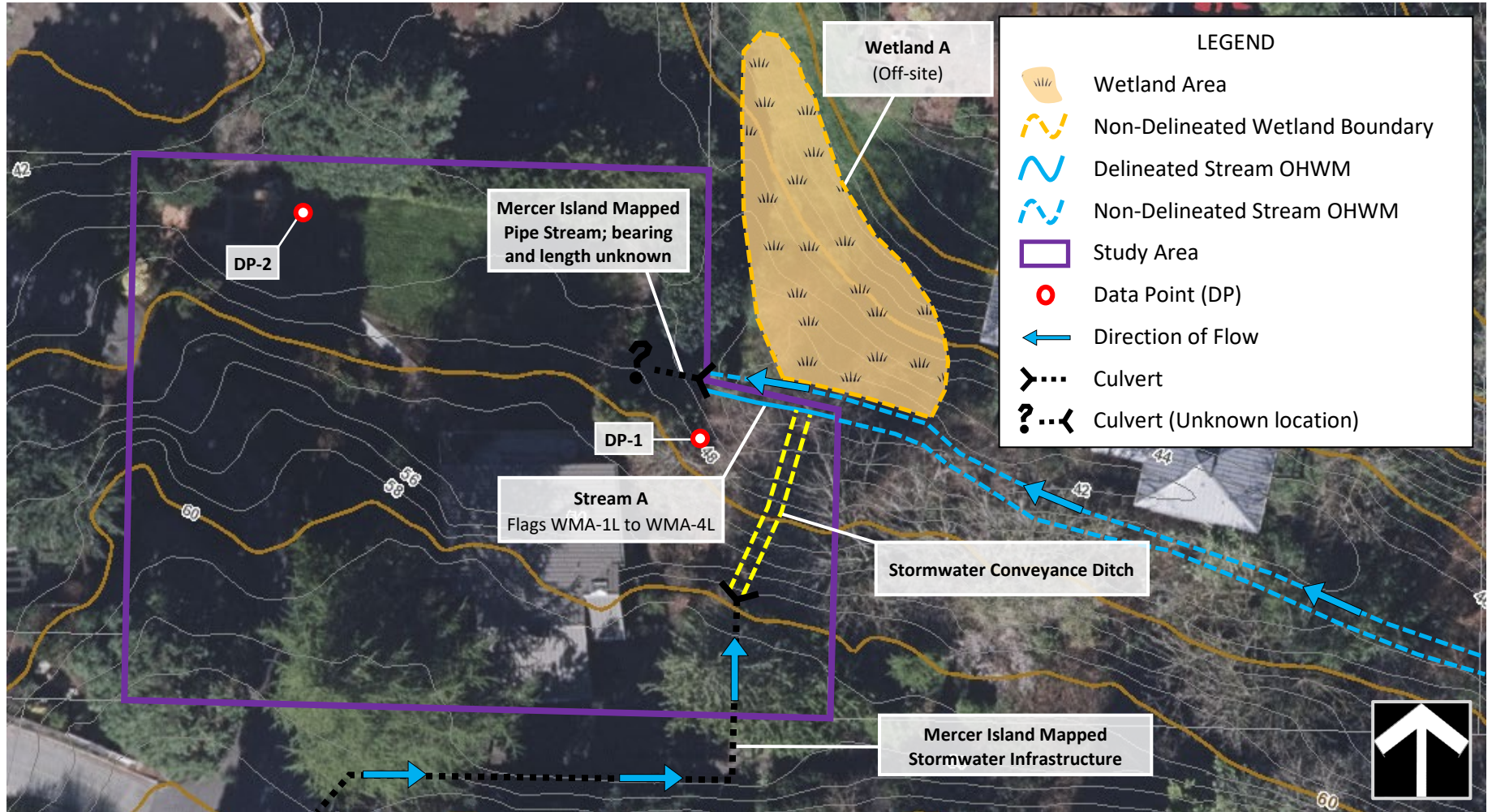
Site Photos



Photo 9. Stream A flows into 24-inch concrete culvert, a segment of piped stream flowing northwest toward Lake Washington.

Stream Delineation and Wetland Assessment Sketch – 5928 77th Avenue SE

Site Address: 5928 77th Avenue SE, Mercer Island, WA Jurisdiction: City of Mercer Island
 Parcel Number: 2424049037 Prepared for: Kathryn and Tim Bauman
 Site Visit Date: February 28, 2024 DCG/W Ref. No.: 2402.0436.00



Note: Field sketch only. Features depicted are approximate and not to scale. Stream boundaries are marked with blue- and black-striped flags. Data points are marked with yellow- and black-striped flags. All observations were made from within the study area; adjoining private properties were not entered. Mercer Island GIS Portal was used to determine location of existing stormwater infrastructure. Piped streams require setbacks in the City of Mercer Island, locate pipe on the parcel to determine required setbacks.

Project/Site: 5928 77th Avenue SE (parcel #2424049037) City/County: Mercer Island Sampling date: 02-28-2024
 Applicant/Owner: Kathryn and Tim Bauman State: WA Sampling Point: DP-1
 Investigator(s): S. Yuasa Section, Township, Range: S24, T24N, R4E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): None Slope (%): 15%
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kitsap silt loam, 2 to 8 percent slopes NWI classification: None

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 on the site? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Wetter than normal per WETS methodology. Located on slope above left bank of Stream A.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 5-m diameter)				
1. _____				Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Prunus lusitanica</u>	10	Y	NL	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: (A) <u> </u> (B) <u> </u> Prevalence Index = B/A = <u> </u>
2. <u>Rhododendron macrophyllum</u>	15	Y	FACU	
3. _____				
4. _____				
5. _____				
<u>25</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Hedera helix</u>	20	Y	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 – Dominance Test is > 50% <input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>20</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum: <u>80</u>				
Remarks:				

Project/Site: 5928 77th Avenue SE (parcel #2424049037) City/County: Mercer Island Sampling date: 02-28-2024
 Applicant/Owner: Kathryn and Tim Bauman State: WA Sampling Point: DP-2
 Investigator(s): S. Yuasa Section, Township, Range: S24, T24N, R4E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): None Slope (%): 2%
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kitsap silt loam, 2 to 8 percent slopes NWI classification: None

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 on the site? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soils Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: Wetter than normal per WETS methodology. Located at low point of maintained lawn.					

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 5-m diameter)				
1. <u>Thuja plicata</u>	40	Y	FAC	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>67%</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>40</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Mahonia aquifolium</u>	30	Y	FACU	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: (A) <u> </u> (B) <u> </u> Prevalence Index = B/A = <u> </u>
2. _____				
3. _____				
4. _____				
5. _____				
<u>30</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Poa sp.</u>	100	Y	FAC*	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is > 50% <input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Fragaria sp.</u>	10	N	NL	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>110</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum: _____				
Remarks: *Presumed FAC.				

Wetland name or number: A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A

Date of site visit: 2/29/2024

Rated by: Sage Yuasa

Trained by Ecology? Y N

Date of training: March 2021

HGM Class used for rating: Slope

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: WATOR Tool, DOE Water Quality Atlas

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

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H M <u>L</u>	H M <u>L</u>	H M L	
Landscape Potential	H <u>M</u> L	H <u>M</u> L	H M L	
Value	H M <u>L</u>	H M <u>L</u>	H M L	TOTAL
Score Based on Ratings	4	4		

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: A

Maps and figures required to answer questions correctly for Western Washington

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	2
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	3
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	3
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	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	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	5
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	6

Wetland name or number: Wetland 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.*

SLOPE WETLANDS

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

S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of the average slope of the wetland: <i>(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)</i>		
<input type="checkbox"/> Slope is 1% or less	points = 3	0
<input type="checkbox"/> Slope is > 1%-2%	points = 2	
<input type="checkbox"/> Slope is > 2%-5%	points = 1	
<input checked="" type="checkbox"/> Slope is greater than 5%	points = 0	
S 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic <i>(use NRCS definitions)</i> : Yes = 3 <input type="checkbox"/> No = 0 <input checked="" type="checkbox"/>		0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. <i>Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i>		
<input type="checkbox"/> Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6	3
<input checked="" type="checkbox"/> Dense, uncut, herbaceous plants > ½ of area	points = 3	
<input type="checkbox"/> Dense, woody, plants > ½ of area	points = 2	
<input type="checkbox"/> Dense, uncut, herbaceous plants > ¼ of area	points = 1	
<input type="checkbox"/> Does not meet any of the criteria above for plants	points = 0	
Total for S 1	Add the points in the boxes above	3

Rating of Site Potential If score is: 12 = H 6-11 = M 0-5 = L

Record the rating on the first page

S 2.0. Does the landscape have the potential to support the water quality function of the site?		
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?	<input checked="" type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	1
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources _____	<input type="checkbox"/> Yes = 1 <input checked="" type="checkbox"/> No = 0	0
Total for S 2	Add the points in the boxes above	1

Rating of Landscape Potential If score is: 1-2 = M 0 = L

Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?		
S 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?	<input type="checkbox"/> Yes = 1 <input checked="" type="checkbox"/> No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i>	<input type="checkbox"/> Yes = 1 <input checked="" type="checkbox"/> No = 0	0
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i>	<input type="checkbox"/> Yes = 2 <input checked="" type="checkbox"/> No = 0	0
Total for S 3	Add the points in the boxes above	0

Rating of Value If score is: 2-4 = H 1 = M 0 = L

Record the rating on the first page

Wetland name or number: Wetland A

SLOPE WETLANDS

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

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

S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. *Stems of plants should be thick enough (usually >1/8_s in), or dense enough, to remain erect during surface flows.*

Dense, uncut, **rigid** plants cover > 90% of the area of the wetland points = 1

All other conditions points = 0

0

Rating of Site Potential If score is: 1 = M 0 = L

Record the rating on the first page

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

S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0

1

Rating of Landscape Potential If score is: 1 = M 0 = L

Record the rating on the first page

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

S 6.1. Distance to the nearest areas downstream that have flooding problems:

The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2

Surface flooding problems are in a sub-basin farther down-gradient points = 1

No flooding problems anywhere downstream points = 0

0

S 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 S 6 Add the points in the boxes above

0

Rating of Value If score is: 2-4 = H 1 = M 0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

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

0

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 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 ft².

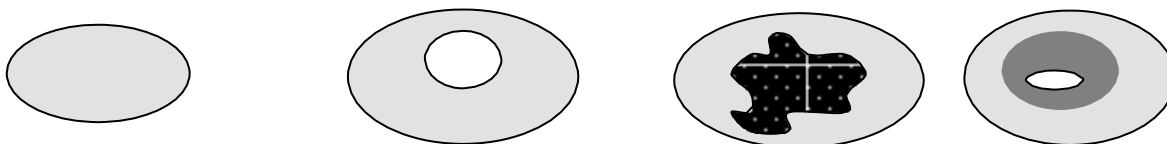
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

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

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

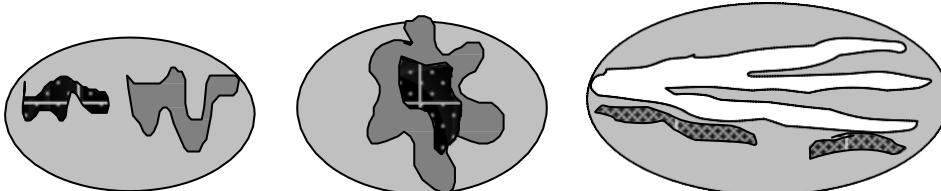
Low = 1 point

Moderate = 2 points

0

All three diagrams in this row are

HIGH = 3points



Wetland name or number: Wetland A

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

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?		
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate: % undisturbed habitat + [(% moderate and low intensity land uses)/2] = 0% + (0%/2) = 0%</i></p> <p>If total accessible habitat is:</p> <p><input type="checkbox"/> > 1/3 (33.3%) of 1 km Polygon points = 3</p> <p><input type="checkbox"/> 20-33% of 1 km Polygon points = 2</p> <p><input type="checkbox"/> 10-19% of 1 km Polygon points = 1</p> <p><input checked="" type="checkbox"/> < 10% of 1 km Polygon points = 0</p>		0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate: % undisturbed habitat + [(% moderate and low intensity land uses)/2] = 0% + (48%/2) = 24%</i></p> <p><input type="checkbox"/> Undisturbed habitat > 50% of Polygon points = 3</p> <p><input checked="" type="checkbox"/> Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p><input type="checkbox"/> Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p><input type="checkbox"/> Undisturbed habitat < 10% of 1 km Polygon points = 0</p>		2
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p><input checked="" type="checkbox"/> > 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p><input type="checkbox"/> ≤ 50% of 1 km Polygon is high intensity points = 0</p>		-2
Total for H 2	Add the points in the boxes above	0

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

H 3.0. Is the habitat provided by the site valuable to society?		
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p> <p>Site meets ANY of the following criteria: points = 2</p> <p><input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</p> <p><input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p><input type="checkbox"/> It is mapped as a location for an individual WDFW priority species</p> <p><input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p><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</p> <p><input type="checkbox"/> Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1</p> <p><input type="checkbox"/> Site does not meet any of the criteria above points = 0</p>		2

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

Wetland name or number: Wetland 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.

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>SC 1.0. Estuarine wetlands</p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal, <input type="checkbox"/> Vegetated, and <input type="checkbox"/> With a salinity greater than 0.5 ppt <input type="checkbox"/>Yes –Go to SC 1.1 <input checked="" type="checkbox"/>No= Not an estuarine wetland</p>	
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? <input type="checkbox"/>Yes = Category I <input type="checkbox"/>No - Go to SC 1.2</p>	Cat. I
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) <input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. <input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <input type="checkbox"/>Yes = Category I <input type="checkbox"/>No= Category II</p>	Cat. I Cat. II
<p>SC 2.0. Wetlands of High Conservation Value (WHCV)</p> <p>SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? <input checked="" type="checkbox"/>Yes – Go to SC 2.2 <input type="checkbox"/>No – Go to SC 2.3</p> <p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? http://www.dnr.wa.gov/NHPwetlandviewer <input type="checkbox"/>Yes = Category I <input checked="" type="checkbox"/>No = Not a WHCV</p> <p>SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://file.dnr.wa.gov/publications/amp_nh_wetlands_trs.pdf <input type="checkbox"/>Yes – Contact WNHP/WDNR and go to SC 2.4 <input type="checkbox"/>No = Not a WHCV</p> <p>SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? <input type="checkbox"/>Yes = Category I <input type="checkbox"/>No = Not a WHCV</p>	Cat. I
<p>SC 3.0. Bogs</p> <p>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></p> <p>SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? <input type="checkbox"/>Yes – Go to SC 3.3 <input checked="" type="checkbox"/>No – Go to SC 3.2</p> <p>SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? <input type="checkbox"/>Yes – Go to SC 3.3 <input checked="" type="checkbox"/>No = Is not a bog</p> <p>SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? <input type="checkbox"/>Yes = Is a Category I bog <input type="checkbox"/>No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.</p> <p>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? <input type="checkbox"/>Yes = Is a Category I bog <input type="checkbox"/>No = Is not a bog</p>	Cat. I

^AWetland name or number: Wetland A

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Wetland name or number: Wetland A

Figure 1 – Cowardin classes

2014 Ecology Wetland Rating Form Figures

PARCEL #2424049037

Wetland D (Slope)	1
Figure 1. Cowardin plant classes – H1.1, H1.4.....	1
Figure 2. Hydroperiods and 150-foot area – H1.2, S2.1, S5.1	2
Figure 3. Plant cover of dense and rigid trees, shrubs, and herbaceous plants – S1.3, S4.1	3
Figure 4. Undisturbed habitat and moderate-low intensity land uses within 1 km from wetland edge including polygon for accessible habitat – H2.1, H2.2, H2.3.....	4
Figure 5. Screen-capture of 303(d) listed waters in basin – S3.1, S3.2	5
Figure 6. Screen-capture of TMDL list for WRIA in which unit is found – S3.3	6

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WETLAND A (SLOPE)



Figure 1. Cowardin plant classes – H1.1, H1.4

Features depicted are not to scale. Sketches are based on available data and best professional judgment.



Figure 2. Hydroperiods and 150-foot area – H1.2, S2.1, S5.1

Features depicted are not to scale. Sketches are based on available data and best professional judgment.



Figure 3. Plant cover of dense and rigid trees, shrubs, and herbaceous plants – S1.3, S4.1

Features depicted are not to scale. Sketches are based on available data and best professional judgment.

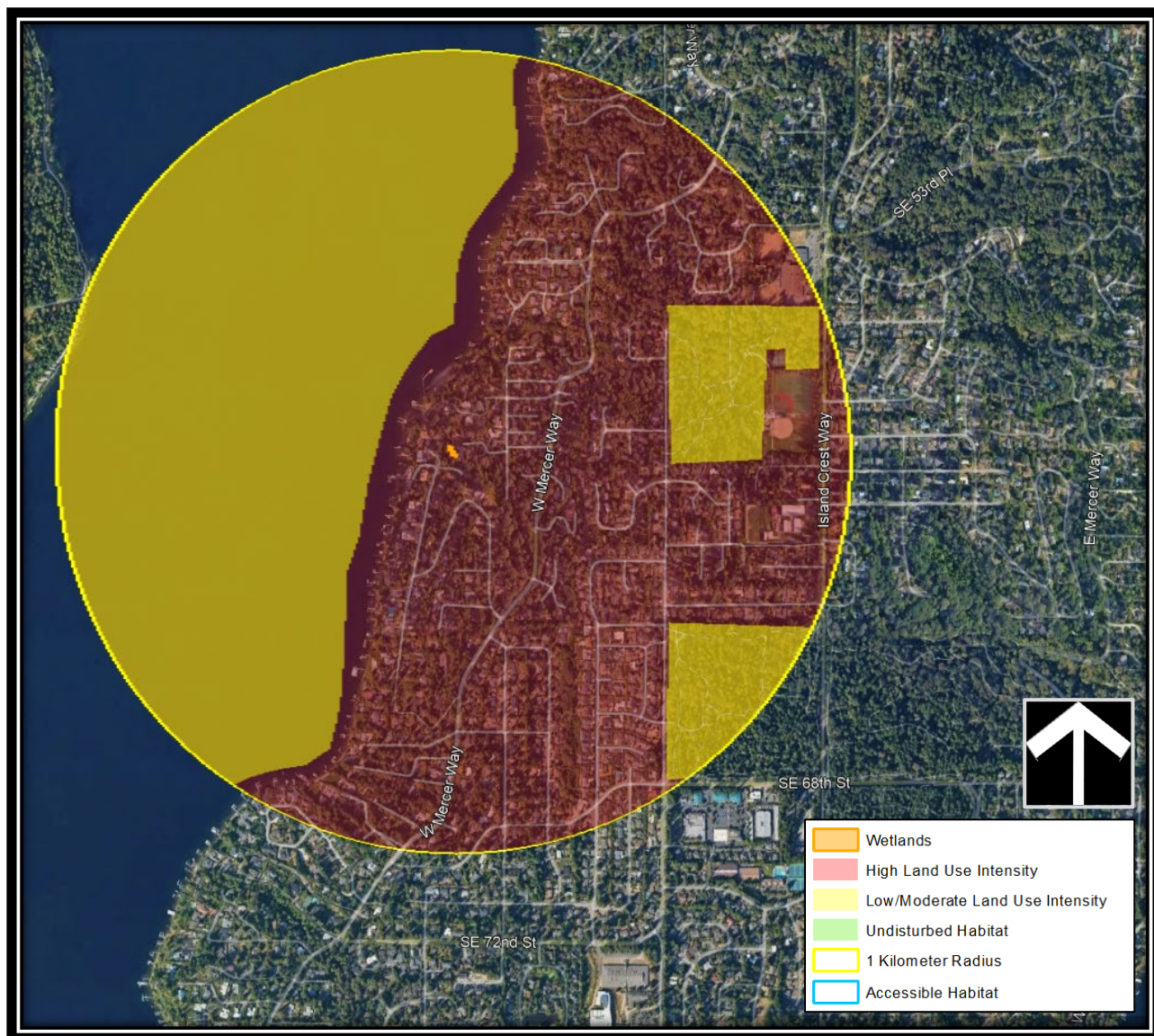


Figure 4. Undisturbed habitat and moderate-low intensity land uses within 1 km from wetland edge including polygon for accessible habitat – H2.1, H2.2, H2.3

Features depicted are not to scale. Sketches are based on available data and best professional judgment.

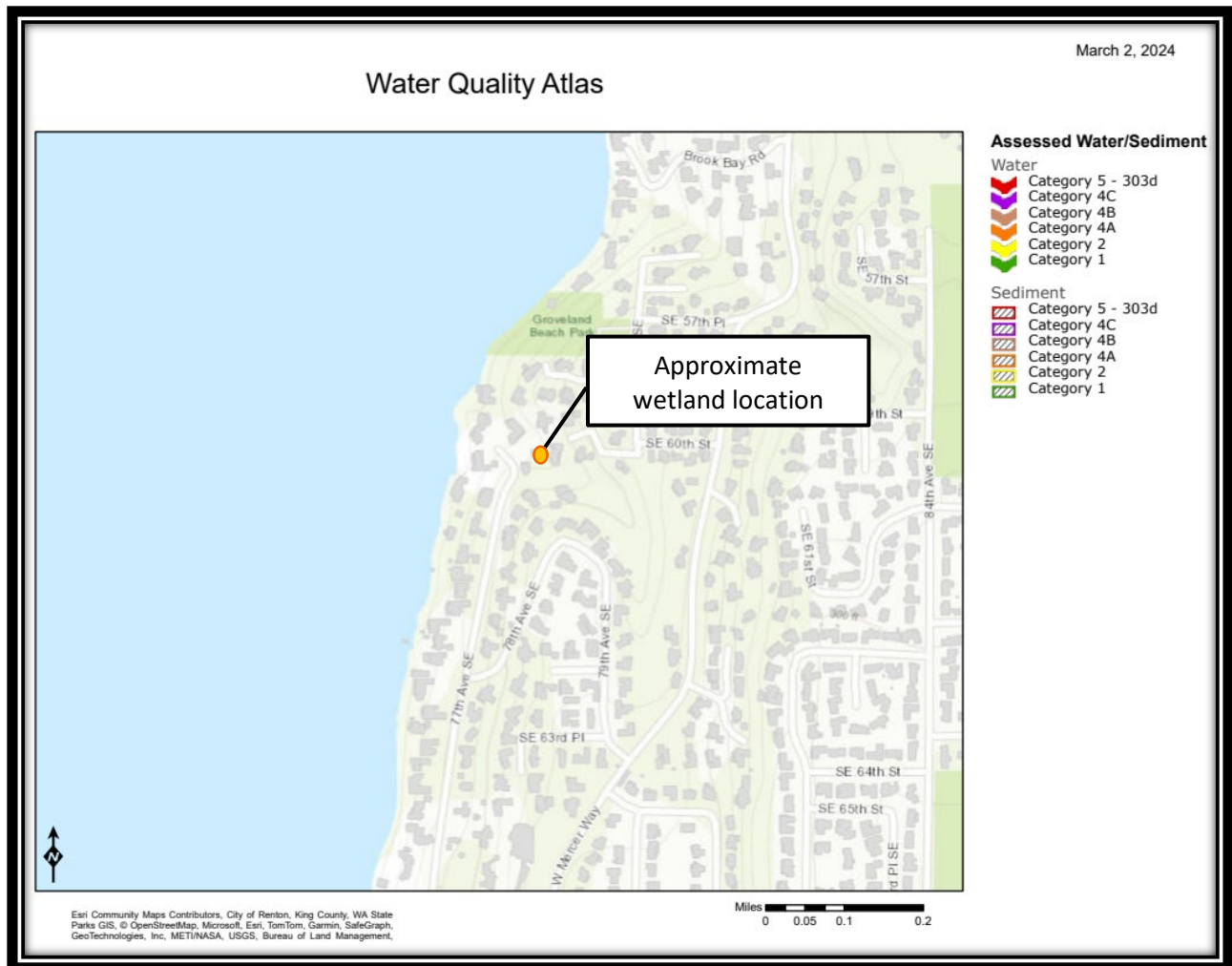


Figure 5. Screen-capture of 303(d) listed waters in basin – S3.1, S3.2

Features depicted are not to scale. Sketches are based on available data and best professional judgment.

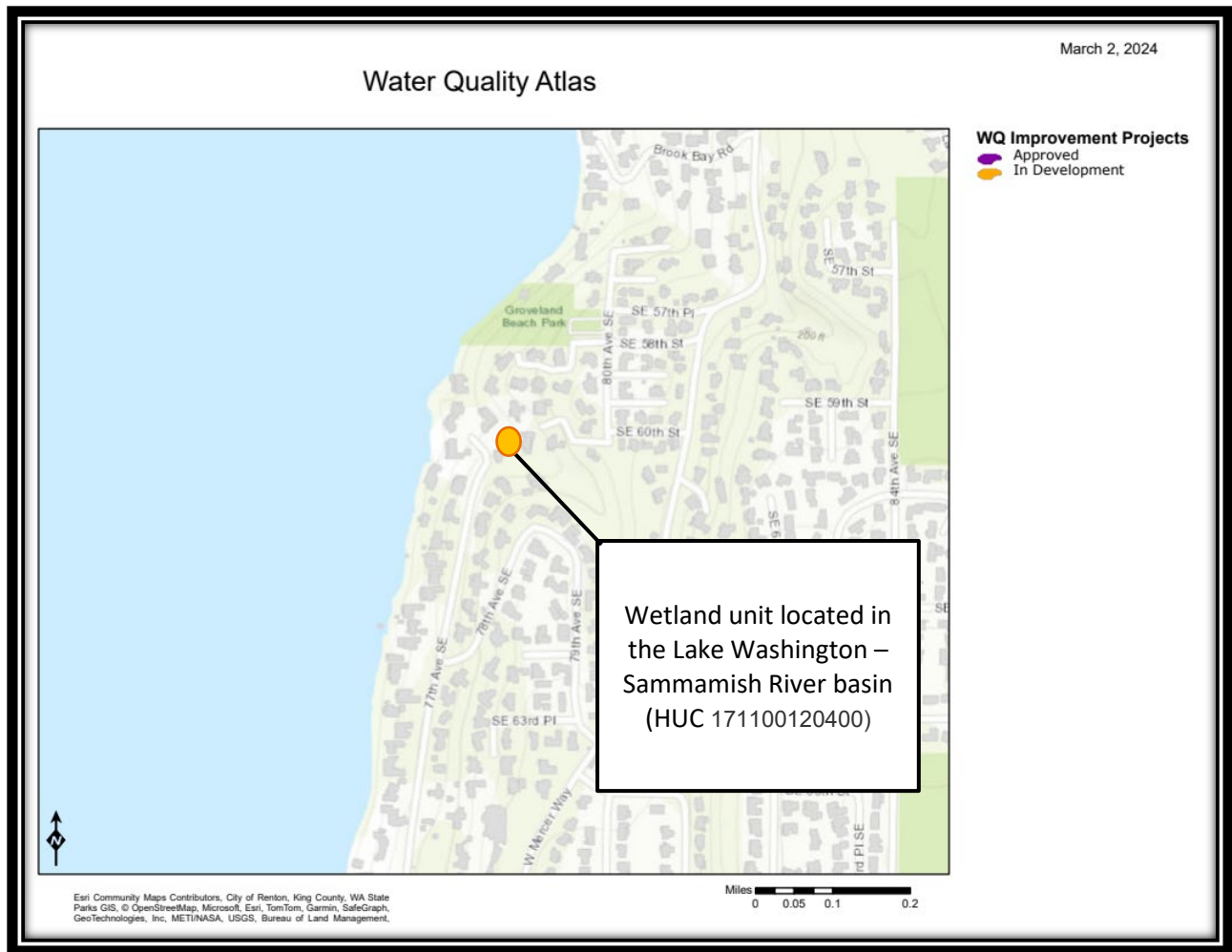


Figure 6. Map of TMDL for WRIA in which unit is found – S3.3

Features depicted are not to scale. Sketches are based on available data and best professional judgment.