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REVISED CRITICAL AREAS REPORT
New Middle School
CITY OF LYNNWOOD, WASHINGTON



Submitted To: Edmonds School District
20420 68th Avenue West
Lynnwood, WA 98036
Attn: Mr. Will Thomsen

Subject: REVISED CRITICAL AREAS REPORT, NEW MIDDLE SCHOOL, CITY OF
LYNNWOOD, WASHINGTON

Shannon & Wilson prepared this report and participated in this project as a consultant to the Edmonds School District. Our scopes of services were specified in the proposals dated July 15, 2024, and September 25, 2025, and are authorized in Agreement signed July 16, 2024, Contract Modification #2 signed October 1, 2025, and Purchase Order 2002400227. This report presents the findings of our critical areas review and addresses the City of Lynnwood-regulated wetlands, streams, and fish and wildlife priority habitats identified within the project site and was prepared by the undersigned.

We appreciate the opportunity to be of service to you on this project. If you have questions concerning this report, or we may be of further service, please contact us.

Sincerely,

SHANNON & WILSON

Sarah Corbin, PWS, MSES
Associate, Senior Biologist/Permitting Specialist

SCC:KLW/scc

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ACRONYMS

City	City of Lynnwood
Corps	U.S. Army Corps of Engineers
County	Snohomish County
CWA	Clean Water Act
Ecology	Washington State Department of Ecology
FEMA	Federal Emergency Management Agency
HGM	Hydrogeomorphic
HPA	Hydraulic Project Approval
IPaC	Information for Planning and Consultation
LMC	Lynnwood Municipal Code
NMFS	National Marine Fisheries Service
NOAA	U.S. National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
NWIFC	Northwest Indian Fisheries Commission
OHWM	ordinary high water mark
PDS	Planning & Development Services
PHS	Priority Habitats and Species
RCW	Revised Code of Washington
ROW	right of way
SEPA	State Environmental Policy Act
sf	square feet
SWIFD	Statewide Washington Integrated Fish Distribution
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources

1 INTRODUCTION

Shannon & Wilson was contracted by the Edmonds School District to conduct a wetland delineation and complete a critical areas report for the New Middle School project (Project site) at 20000 28th Avenue West, Lynnwood, Washington (Township 27N, Range 4E, Section 22) (Project site). The Project site consists of Snohomish County parcel no. 00372601101602 and City of Lynnwood (City) right-of-way (ROW) (Figure 1). When this report was finalized in November 2024, the Project site parcel was in unincorporated Snohomish County (County) and the report was written in compliance with both City and County regulations. However, on September 8, 2025, the City Council approved an ordinance to annex the entirety of the Project site. This Revised Critical Areas Report reflects this change in Project site jurisdiction and the application of City code and regulations in areas previously regulated by the County.

The Project proposes to build a new school on the Project site, which will include an ingress/egress that connects to Alderwood Mall Parkway at the north end of the site. The Alderwood Mall Parkway connection will occur within City ROW.

This report is compliant with Lynnwood Municipal Code (LMC) Chapter 17.10 Environmentally Critical Areas (City of Lynnwood, 2025b). The report presents the findings of our critical areas review and addresses the City of Lynnwood-regulated wetlands, streams, and fish and wildlife priority habitats identified on and within 300 feet of the Project site (study area). Project-related impacts to critical areas and proposed mitigation can be found in the Project's Buffer Mitigation Plan (Shannon & Wilson, 2025).

2 PROJECT SITE SETTING

The Project site is in the incorporated City limits, and is in the Lake Washington drainage basin, in Water Resource Inventory Area 8, Cedar-Sammamish. The surrounding area is predominantly residential with single-family homes to the west, south, and east; the Project site is just over 1,000 feet east of Interstate 5. A commercial area associated with State Route 524 is located approximately 700 feet to the north. Heritage Park, which includes three undeveloped City-owned properties, is adjacent to the Project site's northwest corner (Figure 1).

The western half of the Project site is comprised of a track and athletic fields (Exhibit 2-1). On the eastern half of the Project site, the school building and associated parking lot are in the southeast corner of the parcel, with another athletic field in the northeast corner

(Exhibit 2-2). The Project site’s existing driveway is accessed off 28th Avenue West, in the middle of its eastern parcel boundary (Exhibit 2-2).



Exhibit 2-1: Track and Athletic Fields on Western Half of Project Site.



Exhibit 2-2: Existing School Entrance (Left) and Athletic Field in Northeast Corner of Project Site (Right).

3 BACKGROUND INFORMATION REVIEW

Background information pertaining to the study area was collected and reviewed prior to the Project site visit. These information sources are summarized in Exhibit 3-1.

Exhibit 3-1: Background Information Review Findings

Information	Key Findings
Snohomish County Wetland Inventory (Snohomish County, 2016)	The County’s wetland inventory map identifies a wetland complex associated with Golde Creek in the northeast portion of the study area.
Snohomish County Planning & Development Services (PDS) Map Portal, critical areas theme (Snohomish County, 2025).	<p>The County’s interactive critical area-themed map, which includes data from a remote sensing-based wetland model, the PDS wetland inventory, and hydric soils, also shows Golde Creek and associated wetlands flowing through the northeast corner of the study area. The stream and wetlands overlap with the Project site near the school entrance. The wetland and stream system continues under 28th Avenue West and spreads into a larger wetland system. Golde Creek is labeled Fish Habitat and hydric soils underlay the Golde Creek corridor. Golde Creek is labeled as “Chinook Salmon Distribution” and “Steelhead Trout Distribution.”</p> <p>An isolated wetland is identified west of the Project site, within the study area, on the undeveloped City-owned parcels associated with Heritage Park.</p>
City Environmentally Critical Areas Inventory Maps (City of Lynnwood, 2025a)	<p>The City’s Streams map shows Golde Creek in a similar alignment as the County resources and labels it as a Type F stream.</p> <p>The City’s Wetlands map documents the wetland associated with Golde Creek and shows a wetland finger that starts in the undeveloped City-owned parcels to the west of the Project site and continues along the Project site’s northern boundary before connecting with Golde Creek.</p>
U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) (USFWS, 2024a)	The USFWS NWI shows an intermittent riverine wetland system crossing the northeast corner of the Project site, along the Golde Creek alignment.
U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey interactive mapping system (USDA NRCS, 2024)	The USDA NRCS maps Urban land under the Project site athletic fields and school, a non-hydric soil. The entrance driveway is mapped as Alderwood-Urban land complex, 2 to 8% slopes, which is also not rated as a hydric soil; however, the Alderwood-Urban map unit contains minor components of 5% Norma undrained, 5% Terric medisaprists undrained, and 5% Mckenna, all of which are hydric soils found in topographic depressions.
Washington State Department of Natural Resources (WDNR) Natural Heritage Program Data Explorer, Rare Plant and Ecosystem Locations (WDNR, 2025)	The data explorer does not map any known or historical rare plants or rare and high-quality ecosystems on the Project site.
Northwest Indian Fisheries Commission (NWIFC) Statewide Washington Integrated Fish Distribution (SWIFD) Web Map (NWIFC, 2025)	SWIFD identifies Golde Creek as a Type F stream and gradient accessible to coho (<i>Oncorhynchus kisutch</i>), Chinook (<i>O. tshawytscha</i>), and sockeye salmon (<i>O. nerka</i>), and steelhead trout (<i>O. mykiss</i>). The closest documented salmonid presence is in Swamp Creek, approximately 0.9 miles downstream from the Project site.
WDFW Priority Habitats and Species (PHS) on the Web (WDFW, 2025a)	PHS on the Web does not map priority habitats or priority species in the study area.

Information	Key Findings
WDFW Washington State Fish Passage (WDFW, 2025b)	WDFW identifies three Golde Creek culverts in the study area, one under 28 th Avenue West (fish passable), one under 199 th Place SW (total fish blockage), and one under Alderwood Mall Parkway (fish passable).
USFWS Information for Planning and Consultation (IPaC) Online Mapper (USFWS, 2025a) and USFWS Critical Habitat Online Mapper (USFWS, 2025b)	The USFWS Critical Habitat mapper and IPaC mapper do not map critical habitats in the study area. According to the IPaC mapper, the following species may potentially be affected by activities in the study area: North American wolverine (<i>Gulo gulo luscus</i>), marbled murrelet (<i>Brachyramphus marmoratus</i>), yellow-billed cuckoo (<i>Coccyzus americanus</i>), northwestern pond turtle (<i>Actinemys marmorata</i>), bull trout (<i>Salvelinus confluentus</i>), and monarch butterfly (<i>Danaus plexippus</i>).
National Marine Fisheries Service (NMFS) Endangered Species Act Critical Habitat Mapper, West Coast (NMFS, 2025)	The NMFS Critical Habitat mapper does not map any critical habitat in the study area.
Washington State Department of Ecology (Ecology) 303(d) Water Quality Atlas (Ecology, 2024)	Golde Creek is a 303(d) listed water for Benthic Macroinvertebrates Bioassessments (Listing ID 70242).

In addition to the above resources, monthly totals and departures from normal precipitation data were collected from the Seattle Sand Point Weather Forecast Office station (U.S. National Oceanic and Atmospheric Administration [NOAA], 2024) for the three months preceding the August 2024 delineation site visits. According to the Seattle station data, monthly precipitation totals demonstrated normal conditions for the three-month period preceding the site visits. The precipitation data can be found in Exhibit 3-2.

Exhibit 3-2: Three-Month Precipitation Analysis for August 2024 Site Visits

Month	30% Chance Will Have		Observed Precipitation (inches)	Condition (Dry, Normal, Wet)	Condition Value ¹	Weighted Value	Product (Condition Value x Weighted Value)
	Less Than	More Than					
May	1.44	2.62	2.95	Wet	3	1	3
June	1.03	1.98	1.5	Normal	2	2	4
July	0.23	0.78	0.25	Normal	2	3	6
						Sum	13²

NOTES:

Source: NOAA Regional Climate Centers, Weather Station: Seattle Sand Point Weather Forecast Office, Period of Record: 1993-2023 (NOAA Regional Climate Centers, 2024).

Table methodology adapted from NRCS Engineering Field Handbook, Chapter 19 (U.S. Department of Agriculture Natural Resources Conservation Service [USDA NRCS], 2017)

1 Condition Value: Dry = 1, Normal = 2, Wet = 3

2 If sum is 6-9, then period has been drier than normal; if sum is 10-14, then period has been normal; and if sum is 15-18, then period has been wetter than normal.

4 METHODOLOGY

4.1 Wetlands

Shannon & Wilson wetland biologists conducted the delineation fieldwork on August 1 and 7, 2024. We identified wetlands using methods described in the *Corps of Engineers Wetlands Delineation Manual* (U.S. Army Corps of Engineers [Corps], 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 Engineer Research and Development Center, 2010). Appendix A includes a description of the delineation methodology. We determined wetland areas using the triple-parameter approach, which considers vegetation types, soil conditions, and hydrologic conditions. Areas were considered wetland if they displayed the following wetland indicators: (a) dominant plant species that are considered hydrophytic by the accepted classification indicators, (b) soils that are considered hydric under the federal definition, and (c) indications of wetland hydrology based on federal definition.

We classified the wetlands according to the Cowardin system, as described in *Classification of Wetlands and Deepwater Habitats of the United States* (Federal Geographic Data Committee, 2013). Wetlands were also characterized using the Hydrogeomorphic (HGM) Classification system (Brinson, 1993).

We delineated off-site portions of wetlands in the study area that were also located on City-owned property where the wetland boundary would project onto the Project site. We approximated the remaining wetland areas within off site portions of the study area using field observations from the Project site and public right-of-way, aerial photography, and light detection and ranging (lidar).

We characterized data plots within wetland and upland plant community types to help describe the general conditions at the site. The data is provided in Appendix B. Wetland boundaries were flagged with pink “wetland boundary” flagging and wetland data plots were identified with orange flagging. Bush, Roed & Hitchings, Inc. surveyed the flags.

Using Washington State Department of Ecology’s (Ecology’s) *Washington State Wetland Rating System for Western Washington* (Hruby and Yahnke, 2023), we rated the delineated wetlands (Appendix C).

4.2 Ordinary High Water Mark

We delineated the ordinary high water mark (OHWM) of Golde Creek in the Project site and on segments of the stream located on City property where the buffer would encumber the Project site. We delineated the OHWM using methods described in the Corps’ *National*

Ordinary High Water Mark Field Delineation Manual for Rivers and Streams Interim Version (U.S. Army Engineer Research and Development Center, 2022)¹ and *Ecology's Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Anderson et al., 2016).

OHWL boundaries were flagged with blue- and white-striped flagging. Bush, Roed & Hitchings, Inc. surveyed the flags.

5 RESULTS

5.1 Wetlands

We identified and delineated portions of four wetlands, Wetlands A through D (Figure 2). A description of each wetland follows. Vegetation is described below by common name, with the scientific name and wetland indicator status in parentheses. Soils are described with the associated Munsell® Color Charts color in parentheses.

5.1.1 Wetland A

Wetland A is associated with a segment of Golde Creek that crosses the Project site and study area near the school's entrance (Figure 2). The wetland flanks both sides of the stream along a narrow riparian corridor that starts south of 200th Street SW (Exhibit 5-1). Portions of the wetland extend upgradient from the Golde Creek's OHWL. The wetland is surrounded by the school and residential developments and receives multiple stormwater point discharges. A variety of habitat features were observed in the wetland, including standing snags, large, downed woody debris, and overhanging vegetation that replicates undercut banks (Exhibit 5-1). Wetland A outlets under 28th Avenue West through a 9.5-foot-wide, arched structural plate steel culvert (WDFW, 2025b).

¹ Although the final version of this manual was published in January 2025, it was not available at the time of the delineation site visit.



Exhibit 5-1: Example of Wetland A Vegetation Structure and Habitat Features.

Wetland A contains both riverine and depressional HGM components and, following Ecology’s guidance, was rated as a depressional wetland. The wetland’s rating unit is defined by the presence of a perched culvert under 199th Place SW at the wetland’s upstream end, and the wetland’s outlet culvert at its downstream extent. Flow through the wetland and culverts is unidirectional. The wetland was rated using Ecology’s *Washington State Wetland Rating System for Western Washington* (Hruby and Yahnke, 2023) and is a Category III wetland (Appendix C).

A summary of the wetland data is provided in Exhibit 5-2.

Exhibit 5-2: Wetland A Summary

Wetland A – Information Summary		
	Location Within Study Area	Central/Eastern Portion, North of School Entrance
	Standard Buffer Width	165 feet ^{1,2}
	Ecology Rating	Category III Water Quality Score: 7 Hydrologic Score: 6 Habitat score: 6
	Wetland Size	Approximately 0.45 acre, 0.25 acre on the Project site
	Cowardin Classification	Palustrine Forested, Scrub-Shrub, and Emergent
	HGM Classification	Depressional

Wetland A – Information Summary	
	Wetland Data Sheet(s) DP-1
Dominant Vegetation	Dominant trees include Pacific willow (<i>Salix lasiandra</i> , facultative wetland [FACW]), and dominant shrubs include Pacific willow and Himalayan blackberry (<i>Rubus armeniacus</i> , facultative [FAC]). Dominant herbaceous plants include creeping buttercup (<i>Ranunculus repens</i> , FAC), bird's foot trefoil (<i>Lotus corniculatus</i> , FAC), and reed canarygrass (<i>Phalaris arundinacea</i> , FACW).
Soils	The soil profile was examined to a depth of 26 inches below ground surface (bgs). The top layer was 6 inches of very dark brown (10YR 2/2) silty clay, underlain by a dark greenish gray (10Y 4/1) sandy clay loam extending to 26 inches bgs, with 7% strong brown (7.5YR4/6) redoximorphic concentrations in pore linings and the matrix from 6 to 12 inches bgs. Gravels were present in the lowest 10 inches of the soil pit. The Loamy Gleyed Matrix (F2) and Depleted Matrix (F3) hydric soil indicators were met.
Hydrology/Hydroperiods	The dominant hydrology sources appear to be Golde Creek and groundwater. Saturation was observed at 13 inches bgs and water was observed in the soil pit at 17 inches bgs. The Oxidized Rhizospheres along Living Roots (C3) hydrology indicator was met.
Buffer Conditions	The wetland is surrounded by a residential area, the school driveway and building, and mowed grass associated with the school facility dominated by bentgrass (<i>Agrostis</i> , FAC) and creeping buttercup. On the Project site, the southern portion of the buffer includes an area of mowed grass that is separated from and functionally disconnected from the wetland by the school's paved entrance.

NOTE:

- 1 Part of Wetland A is off site in unincorporated Snohomish County; however, the buffer width is assigned according to LMC 17.10.052 because the Project site is in the City's jurisdiction.
- 2 The standard buffer width is applied with the requirement that the measures outlined in LMC 17.10.052 will be taken to minimize impacts from adjacent land uses.

5.1.2 Wetland B

Wetland B is associated with the segment of Golde Creek immediately upstream from Wetland A. The wetland is located above and below the OHWM of Golde Creek. To the north, a 13-foot metal inlet culvert separates the wetland from the stream/wetland complex on the north side of Alderwood Mall Parkway (Exhibit 5-3, left). During the site visit, surface water flow through the wetland was slow. Wetland B includes a backwater feature that wraps around the north Project site boundary, west of the 13-foot inlet culvert (Exhibit 5-3, right).



Exhibit 5-3: Wetland B Inlet Culvert (Left) and Backwater Feature (Right).

Wetland B is primarily located on City ROW; a small portion (approximately 100 square feet [sf]) overlaps with the northeast corner of the Project site. Beaver activity, including chewed stumps and evidence of debris likely associated with an old beaver dam was observed in the wetland near the Project site. The wetland contains standing snags and large, downed wood that provides habitat for wildlife. Wetland B contains both riverine and depressional HGM components and following Ecology’s guidance, was rated as a depressional wetland. The wetland was rated using Ecology’s *Washington State Wetland Rating System for Western Washington* (Hruby and Yahnke, 2023) and is a Category III wetland (Appendix C). A summary of the wetland data is provided in Exhibit 5-4.

Exhibit 5-4: Wetland B Summary

Wetland B – Information Summary		
	Location Within Study Area	Northeast Corner of Study Area
	Standard Buffer Width	165 feet ^{1,2}
	Ecology Rating	Category III Water Quality Score: 6 Hydrologic Score: 6 Habitat score: 6
	Wetland Size	Approximately 0.23 acre/ 100 sf on Project site
	Cowardin Classification	Palustrine Forested, Scrub-Shrub, Aquatic Bed
	HGM Classification	Depressional
	Wetland Data Sheet(s)	DP-3 and DP-5

Wetland B – Information Summary

Dominant Vegetation	<p>Dominant trees include Pacific willow and red alder (<i>Alnus rubra</i>, FAC).</p> <p>Dominant shrubs include Himalayan blackberry, salmonberry (<i>Rubus spectabilis</i>, FAC), and vine maple (<i>Acer circinatum</i>, FAC).</p> <p>Dominant herbaceous plants include fringed willowherb (<i>Epilobium ciliatum</i>, FACW), American brooklime (<i>Veronica americana</i>, OBL), mannagrass (<i>Glyceria</i> sp., OBL) and field horsetail (<i>Equisetum arvense</i>, FAC).</p>
Soils	<p>Near the water's edge, the wetland soil was a dark greenish gray (10Y 4/1) silty clay extending to 18 inches bgs with 15% color (2.5YR 3/6 and 7.5YR 5/8) redoximorphic concentrations extending to 14 inches bgs and then lessening to 2 % in the remainder of the pit. On a bench slightly elevated above the surface water, the upper 20 inches bgs was a very dark brown to black (10YR 2/2 and 10YR 2/1) muck to mucky clay loam with 5 to 20% dark greenish gray (10Y 4/1) depletions in the matrix and 2 to 5% dark yellowish brown (10YR 4/6) concentrations in the matrix and pore linings from 7 to 20 inches bgs.</p> <p>The wetland soils met the Loamy Mucky Mineral (F1), Redox Dark Surface (F6), Depleted Matrix (F3), and Loamy Gleyed Matrix (F2) hydric soil indicators.</p>
Hydrology/Hydroperiods	<p>The dominant hydrology sources are Golde Creek and a high ground water table. In the soil pits, we observed saturation at 8 inches bgs and 12 inches bgs, and observed ground water at 9 inches bgs and 18 inches bgs. Surface water was present near both soil pits, at a lower elevation.</p> <p>The High Water Table (A2), Saturation (A3), and Oxidized Rhizospheres along Living Roots (C3) hydrology indicators were met.</p>
Buffer Conditions	<p>The Wetland B buffer within the study area is primarily made up of single-family residences, the Alderwood Mall Parkway corridor, and the school's athletic fields. More naturally vegetated buffer within the study area is limited to slopes covered with Himalayan blackberry, English holly (<i>Ilex aquifolium</i>, Facultative Upland [FACU]), and vine maple, and a few black cottonwoods (<i>Populus balsamifera</i>, FAC).</p>

NOTE:

- 1 Part of Wetland B is off site in unincorporated Snohomish County; however, the buffer width is assigned according to LMC 17.10.052 because the Project site is in the City's jurisdiction.
- 2 The standard buffer width is applied with the requirement that the measures outlined in LMC 17.10.052 will be taken to minimize impacts from adjacent land uses.

5.1.3 Wetland C

Wetland C is a depressional wetland located east of the Project site, almost entirely on City ROW and the City-owned, undeveloped parcels associated with Heritage Park. A small portion of the wetland (approximately 600 sf) overlaps with the Project site along the northern boundary. As described below, Wetland C is a vegetated depressional wetland with an adjacent constructed swale. Wetland C was rated using Ecology's *Washington State Wetland Rating System for Western Washington* (Hruby and Yahnke, 2023) and is a Category III wetland (Appendix C).

5.1.3.1 Depressional Wetland

The depressional Wetland C is C-shaped, with forested, scrub-shrub, emergent, and aquatic bed communities (Exhibit 5-5). Year-round standing water is visible on aerial imagery in

depressions in the wetland. Surface water movement through the wetland generally flows from the southern end around to the north end of the 'C.' The northern boundary of the depressional wetland abuts a concrete wall that supports the fill associated with the Alderwood Mall Parkway road and sidewalk (see photo on right in Exhibit 5-5).



Exhibit 5-5: Diverse Vegetation Strata in Southern Portion of the Wetland (Left) and View of the Wall in the Northern Portion of the Wetland (Right).

The City provided the District with the design set for the 1994 28th Avenue West and 198th Street SW (now Alderwood Mall Parkway) Street Improvements project (Bell Walker Engineers, 1994). Appendix D contains an excerpt of the design sheets. The design sheet excerpt includes a grading plan and planting plan that document that the majority of Wetland C, specifically the southern area, was constructed as compensatory mitigation to offset the Alderwood Mall Parkway construction impacts.

A summary of the depressional Wetland C data is provided in Exhibit 5-6.

Exhibit 5-6: Depressional Wetland C Summary

Depressional Wetland C – Information Summary



Location Within Study Area	West of Project Site
Standard Buffer Width	105 feet ¹
Ecology Rating	Category III Water Quality Score: 7 Hydrologic Score: 7 Habitat score: 5
Depressional Wetland Size	Approximately 2.15 acres/ 0.02 acre on Project site
Cowardin Classification	Palustrine Forested, Scrub-Shrub, Emergent, Aquatic Bed
HGM Classification	Depressional
Wetland Data Sheet(s)	DP-8 and DP-11

Dominant Vegetation	Dominant trees include black cottonwood (<i>Populus balsamifera</i> ssp. <i>trichocarpa</i> , FAC) and Pacific willow. Dominant shrubs include willows (<i>Salix</i> sp., FAC) and Oregon ash (<i>Fraxinus latifolia</i> , FACW). Dominant herbaceous plants include creeping Jenny (<i>Lysimachia nummularia</i> , FACW), lady’s thumb (<i>Persicaria maculosa</i> , FACW), and creeping buttercup.
Soils	The soil generally exhibits an upper layer of black (10YR 2/1) to very dark brown (10YR 2/2) loam to silt loam with strong brown (7.5YR 4/6) concentrations in the matrix and pore lining, underlain by a dark gray (10YR 4/1) to dark grayish brown (10YR 4/2) silt loam with up to 15% strong brown (7.5YR 5/6) and yellowish red (5YR 4/6) redoximorphic concentrations in the matrix and pore linings. Gravels and cobbles were present below 5 inches bgs in the southern portion of the wetland. The Depleted Matrix (F3) and Redox Dark Surface (F6) hydric soil indicators were met.
Hydrology/Hydroperiods	The dominant hydrology sources in the depressional portion of the wetland are direct precipitation, seasonally high groundwater, and stormwater from the developed areas. The Oxidized Rhizospheres along Living Roots (C3) hydrology indicator was met.
Buffer Conditions	To the south, a narrow strip of upland mixed forest separates the wetland from residences. To the west is mowed lawn and patches of trees in Heritage Park. Alderwood Mall Parkway is to the north of Wetland C and the school’s athletic fields are to the east.

NOTE:

¹ The standard buffer width is applied with the requirement that the measures outlined in LMC 17.10.052 will be taken to minimize impacts from adjacent land uses.

5.1.3.2 Constructed Swale

At Wetland C’s northeast extent, there is a constructed grass swale that parallels Alderwood Mall Parkway immediately adjacent to the sidewalk fill slope (Exhibit 5-7). The swale does

not exhibit indications of surface water movement, and the topography suggests that flow from Wetland C to the swale is occasional. The grass swale continues for just over 300 feet before turning into a riprap-lined swale. The riprap continues for approximately 100 feet before dropping into the depression where Wetland B and Golde Creek are located. The soil within the grass swale and the adjacent grass slope was observed to be extremely compacted.



Exhibit 5-7: Grass Swale Connected to Wetland C, Viewing West (Left) and East (Right).

The 1994 design sheet excerpt in Appendix D also contains plan sheet 11, the plan and profile of 198th Street SW (now Alderwood Mall Parkway) (Bell Walker Engineers, 1994). Design sheet 11 shows the proposed cut and fill lines associated with the construction of Alderwood Mall Parkway, including the proposed (now existing) wall along the northern boundary of Wetland C. At the wall's eastern end (where the existing swale starts), the plan sheets show the start of a "cut" and proposed ditch that aligns with the existing swale. Sheet 11 also depicts the existing wetlands in 1994, which documents that the swale was constructed in an upland area.

Not all physical wetland areas that meet the three Corps wetland criteria are also considered "regulated" wetlands under local and state regulations. According to Washington Administrative Code (WAC) 365-190-090(2), the definition of wetlands in Revised Code of Washington (RCW) 36.70A.030(48) must be used by counties/cities to designate wetlands for regulatory purposes. The swale is located within City ROW and in LMC 17.10.030 the City has adopted the RCW 36.70A.030(48) definition of wetlands:

*(48) "Wetland" or "wetlands" means areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. **Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas created to mitigate conversion of wetlands.** [emphasis added <https://app.leg.wa.gov/RCW/default.aspx?cite=36.70A.030>].*

The 1994 plan set documents that the area where the swale was constructed was previously upland. Review of historic aerial photography of the study area supports this (Google Earth Pro, 2024). The Project site's track and field is visible in a 1990 Google Earth photograph; the area where the swale was constructed is immediately north of the track and is in a forested area that is contiguous with currently forested upland areas. The swale was excavated from upland and is functioning as a constructed conveyance. Although the grass swale meets the three Corps wetland criteria, it would likely not be regulated by the City or Ecology based on the City and State definition of "wetland" and the historic manipulation of the area; regulatory agencies would make the final determination.

A summary of the data for the constructed swale adjacent to Wetland C is provided in Exhibit 5-8.

Exhibit 5-8: Constructed Swale Summary

Constructed Swale – Information Summary		
	Location Within Study Area	North of Project Site
	Swale Size	Approximately 1,900 sf/ 1,500 sf on Project site
	Cowardin Classification	Palustrine Emergent
	Wetland Data Sheet(s)	DP-7 and DP-9
	Dominant Vegetation	Swale vegetation is mainly limited to graminoids (mowed) and creeping buttercup, with trailing blackberry (<i>Rubus ursinus</i> , FACU), and Himalayan blackberry creeping into the swale at its eastern end.
Soils	<p>Soil is generally characterized as a very dark brown (10YR 2/2) silt loam with up to 5% strong brown (7.5YR 4/6) redoximorphic concentrations in the matrix and pore linings extending to approximately 10 inches. This is underlain by a lighter depleted layer, including a dark grayish brown (10YR 4/2) and very dark brown (10YR 2/2), and a greenish gray (10Y 5/1) matrix with 5 to 15% yellowish red (5YR 5/6) to strong brown (7.5YR 5/6) concentrations. Cobbles were observed starting at 3 inches and 10 inches bgs. The soil is very compacted.</p> <p>The Depleted Matrix (F3), Redox Dark Surface (F6), and Sandy Redox (S5) hydric soil indicators were met.</p>	
Hydrology/Hydroperiods	<p>The swale receives occasional surface water discharge from Wetland C, along with surface water runoff from the Alderwood Mall Parkway sidewalk fill slope and the fill slope to the south.</p> <p>The Oxidized Rhizospheres along Living Roots (C3) hydrology indicator was met.</p>	

5.1.4 Wetland D

Wetland D is within the Project site, west of the track. The wetland is on a slope and has a shallow ditch at its bottom. The slope portion of the wetland is mainly supported by groundwater and the wetland’s ditch collects surface runoff from the slope and the adjacent track. No hydrologic outlet was observed in the field. Wetland D was rated using Ecology’s *Washington State Wetland Rating System for Western Washington* (Hruby and Yahnke, 2023) and is a Category III wetland (Appendix C). A summary of the wetland data is provided in Exhibit 5-8.

Exhibit 5-9: Wetland D Summary

Wetland D – Information Summary		
	Location Within Study Area	On Project Site, West of Track
	Standard Buffer Width ¹	60 feet
	Ecology Rating	Category III Water Quality Score: 6 Hydrologic Score: 6 Habitat score: 4
	Wetland Size	Approximately 0.05 acre
	Cowardin Classification	Palustrine Forested, Scrub-Shrub, Emergent
	HGM Classification	Depressional
	Wetland Data Sheet(s)	DP-13
	Dominant Vegetation	Dominant trees include red alder. Dominant shrubs include Himalayan blackberry and red-osier dogwood (<i>Cornus sericea</i> , FACW). Dominant herbaceous plants include field horsetail and soft rush (<i>Juncus effusus</i> , FACW).
Soils	The soil profile was examined to a depth of 16 inches. The top layer was 8 inches of very dark grayish brown (10YR 3/2) silt loam with 5% strong brown (7.5YR 4/6) redoximorphic concentrations in the matrix and pore linings. The layer below from 8 to 16 inches was a dark greenish gray (10Y 4/2) sandy loam with 7% strong brown (7.5YR 4/6) concentrations in the matrix. The Depleted Matrix (F3) and Redox Dark Surface (F6) hydric soil indicators were met.	
Hydrology/Hydroperiods	Water was not observed in the soil pit. The Oxidized Rhizospheres along Living Roots (C3) hydrology indicator was observed in the field.	
Buffer Conditions	The track flanks the wetland to the east, mowed grass is to the south, and a forested area dominated by western red cedar (<i>Thuja plicata</i> , FAC) and black cottonwood, with shrubs including Himalayan blackberry and English laurel (<i>Prunus laurocerasus</i>) to the west.	

NOTE:

1 The standard buffer width is applied with the requirement that the measures outlined in LMC 17.10.052 will be taken to minimize impacts from adjacent land uses.

5.2 Golde Creek

Golde Creek originates approximately 1,800 feet upstream from the Project site, in the City of Lynnwood. After leaving the Project site, the stream flows south for 0.42 mile through a residential area before entering Brierwood Park in the City of Brier. Golde Creek joins Scriber Creek at the southern boundary of Brierwood Park, which then joins Swamp Creek and ultimately reaches Lake Washington approximately 5.9 miles downstream of the study

area. Throughout its length, Golde Creek is a 303(d)-listed impaired water for benthic macroinvertebrate bioassessments.

Exhibit 5-10: Golde Creek Information Summary

Golde Creek Information Summary	
	Location Within Study Area Northeast corner of study area and on the Project site near the existing access drive
	Water Type F
	Buffer Width 100 feet
	Connectivity Receives water from wetlands and streams 1,800 feet upstream. Connects to Scriber Creek, then Swamp Creek, then joins Lake Washington approximately 5.9 miles from the study area.
Fish Habitat	Within the Project site, Golde Creek has the potential to provide habitat (gradient accessible) to coho, Chinook, and sockeye salmon, and steelhead trout. Salmonid presence is not documented.
Flow Characteristics	Perennial

NOTE:

- 1 Part of Golde Creek is off site in unincorporated Snohomish County; however, the buffer width is assigned according to LMC 17.10.052 because the Project site is in the City's jurisdiction.

Golde Creek flows from the north to the south through the study area. We delineated the right bank of the stream in the Project site and in City ROW where the stream's buffer would project onto the Project site. Indicators observed during the OHWM delineation include water stains and marks, top of bank, and deposition/erosion features.

5.3 Fish and Wildlife Priority Habitats

The City's LMC 17.10.090 designates six different habitats that qualify as regulated fish and wildlife priority habitats:

- A. *Category I and Category II wetlands;*
- B. *Type F streams;*
- C. *Upland areas if one or more of the following criteria are met:*
 1. *The presence of essential habitat; or*

2. *Areas contiguous with large blocks of distinct habitat extending outside of the city limits or providing a travel corridor to a significant resource; or*
 3. *Areas adjacent to or contiguous with Category I wetlands which enhance the value of those wetlands for wildlife;*
- D. *Areas where endangered, threatened, and sensitive species have a primary association;*
 - E. *Habitats and species of local importance, as determined by the city of Lynnwood;*
 - F. *Natural occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat.*

Golde Creek is a Type F stream that provides habitat for aquatic and riparian-dependent wildlife (e.g., beaver). The stream has the potential to provide habitat to Endangered Species Act-listed fish (e.g., Chinook and steelhead) but is not documented to contain salmonid presence (NWIFC, 2025). Following the City's definition, the Golde Creek corridor meets the criteria for a fish and wildlife priority habitat. No other fish and wildlife priority habitats are present in the study area.

6 REGULATORY REVIEW

Several federal, state, and local regulations apply to development proposals in and/or near wetlands and streams. The portions of Wetlands A and B, and Golde Creek that extend off site are located in unincorporated Snohomish County; however, the buffer widths applied to these critical areas reflect the City's requirements in Chapter 17.10 LMC because the Project site is regulated by the City. The Project will unavoidably impact wetland and stream buffers and will avoid impacts to Golde Creek and regulated wetlands. A summary of applicable regulatory implications based on this is provided below.

6.1 City of Lynnwood

The City regulates the critical areas and associated buffers identified in the study area under Chapter 17.10 LMC Environmentally Critical Areas. Wetlands C and D, and the portions of Wetlands A and B, and Golde Creek on the Project site are located within City limits. Applicable City development standards are discussed below.

6.1.1 Buffers

The City assigns wetland buffer widths based on the wetland category and the habitat function score (LMC 17.10.052). The City also requires implementation of impact minimization measures (e.g., measures to reduce lights, noise, toxic run off). As discussed above in Section 5.1.3.1, the constructed swale adjacent to Wetland C does not appear to

meet the State and City’s definition of a wetland and would therefore not be regulated by the City or assigned a buffer.

The City assigns stream buffer widths based on their classification (Type F, Np, etc.) (LMC 17.10.071). Golde Creek is a Type F stream.

Exhibit 6-1: Summary of Project Site Buffer Widths

Feature	Rating Category / Classification	Habitat Score	Standard Buffer Width (feet)
Wetland A	III	6	165
Wetland B	III	6	165
Wetland C	III	5	105
Wetland D	III	4	60
Golde Creek	F	N/A	100

The City allows for the exclusion of buffer areas that are functionally disconnected from the associated critical area in LMC 17.10.030 by a legal structure or use. Several on-site buffers extend into areas that are functionally disconnected from the critical area by impervious surfaces and/or do not have a vegetated condition that “maintains the functions and/or structural stability of the critical area”: a portion of Wetland A’s buffer is disconnected by the school’s paved driveway entrance, a portion of Wetland D’s buffer is disconnected by the impervious track and contains mainly sand and sparse grass that are in active recreational use, and portions of the Wetlands B and C buffers are disconnected by Alderwood Mall Parkway. These disconnected areas would be excluded from the critical area buffers and are shown as such in Figure 2.

6.1.2 Buffer Modifications

The City allows for buffer impacts if the applicant can demonstrate that:

- A. *There is no feasible and reasonable alternative to making the alteration; and*
- B. *Alteration will preserve, improve, or protect the functions of the wetland system including water quality, stormwater detention capabilities, and fish and wildlife habitat; and*
- C. *The mitigation for such alteration has a high probability of success.*

LMC 17.10.052 outlines additional criteria the Project must comply with, including that the Project must minimize overall buffer alteration to the greatest extent reasonably possible, and that a City-approved mitigation plan must be implemented prior to or concurrent with construction.

The City allows buffer averaging if certain criteria are met. For example, the averaged buffer area cannot be less than the buffer before averaging, and the averaged buffer cannot be less than 75% of the approved buffer width (LMC 17.10.058). The Project site's dimensions and the Project goal to construct a new school with needed school-related facilities greatly limits the Project's ability to average on-site buffers.

If the use of buffer averaging cannot avoid all buffer impacts, buffer reduction combined with enhancement may also be approved for the buffers associated with Category III and IV wetlands (LMC 17.10.059). The width reduction cannot be less than 75% of the standard buffer and the applicant must demonstrate that buffer function will be increased if the buffer is degraded or retained if the native buffer vegetation is intact. Unavoidable buffer impacts must be mitigated for at 1:1 ratio.

6.2 State Regulations

6.2.1 Washington State Department of Ecology

Ecology has been authorized to implement Section 401 of the Clean Water Act (CWA) for Water Quality Certification in Washington for most projects that require Corps permits under CWA Section 404 (see discussion below under Section 6.4, "Federal Regulations"). If the Project does not impact the site wetlands, a CWA Section 401 Water Quality Certification would not be needed.

Ecology also implements the state's Water Pollution Control Act (Chapter 90.48 RCW), which regulates the discharge of pollutants into waters of the state. This means that Ecology may regulate wetlands that do not fall under CWA jurisdiction, provided they meet the State's definition of wetland. Of note, we anticipate that the constructed swale would not meet the state's definition of a wetland because it was constructed in an upland area (see discussion in Section 5.1.3.2). The constructed swale would also not likely be regulated under the CWA, as discussed below in Section 6.3. However, regulatory agencies make the final determination regarding jurisdiction.

Working under the assumption that the Project would not impact regulated wetlands, wetland-related coordination with Ecology would not be required. However, if the Project site wetlands are impacted and are determined to be outside of CWA jurisdiction, then Ecology would assume regulatory authority and would permit the impacts through an Administrative Order process under the state Water Pollution Control Act. This process would require demonstration of wetland avoidance, minimization when impacts cannot be avoided, and compensatory mitigation.

Projects that may disturb more than one acre of land or that might result in a discharge to a waterbody that exceeds water quality standards are also required to obtain coverage under the National Pollutant Discharge Elimination System's (NPDES) Construction Stormwater General Permit. Ecology administers the NPDES program under the state's Water Pollution Control Act and the federal CWA.

6.2.2 State Environmental Policy Act

The State Environmental Policy Act (SEPA) requires that state and local agencies review proposals to identify environmental impacts. A project SEPA checklist is required to evaluate the Project's impacts and to determine the significance of the impacts.

6.2.3 Washington Department of Fish and Wildlife

WDFW issues Hydraulic Project Approval (HPA) permits for construction activities that will use, obstruct, divert, or change the natural flow or bed of state waters. The Project proposes to construct a new outfall in the Golde Creek buffer. We anticipate that WDFW would take jurisdiction of this Project element because it is in the immediate vicinity of Golde Creek, and its installation could impact the creek if appropriate measures are not implemented.

6.3 Federal Regulations

Section 404 of the CWA is managed by the Corps. The Section 404 review process is required for projects involving discharges of dredge or fill material into jurisdictional Waters of the U.S., including certain streams and non-isolated wetlands.

In our opinion, the constructed swale adjacent to Wetland C would meet CWA exclusion (b)(8), which exempts "Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow" from CWA jurisdiction in 40 Code of Federal Regulations Part 120.2.b (Department of Defense, 2023).

Recent U.S. Supreme Court decisions have changed the criteria used to determine if a wetland is subject to the CWA (e.g., whether there is a connection to a Water of the U.S.). Based on these recent changes in federal jurisdiction, it is likely that Wetlands C and D would not be subject to the CWA because they do not have a "continuous surface connection" to a Water of the U.S. Wetlands A and B's position along Golde Creek would constitute a connection and they would be regulated by the CWA. If the Project cannot avoid wetland impacts, then the federal jurisdictional status of the Project site wetlands can only be formally determined by the Corps.

If determined to be Corps-jurisdictional, any proposed impact would require either a Nationwide Permit or an Individual Permit from the Corps. Projects that require or trigger a federal permit from the Corps would also require review under the Endangered Species Act, Magnuson-Stevens Fishery Conservation and Management Act, and National Historic Preservation Act. If no impacts (e.g., dredge or fill activities) are anticipated to jurisdictional Waters of the U.S., state and local regulations may still apply.

7 CLOSURE

The findings and conclusions documented in this report have been prepared for specific application to this Project and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area, and in accordance with the terms and conditions set forth in our agreement. The conclusions and recommendations presented in this report are professional opinions based on interpretation of information currently available to us and are made within the operational scope, budget, and schedule constraints of this Project. No warranty, express or implied, is made. Shannon & Wilson has prepared the enclosed document, "Important Information About Your Wetland Delineation/ Mitigation and/or Stream Classification Report," to assist you and others in understanding the use and limitations of our reports.

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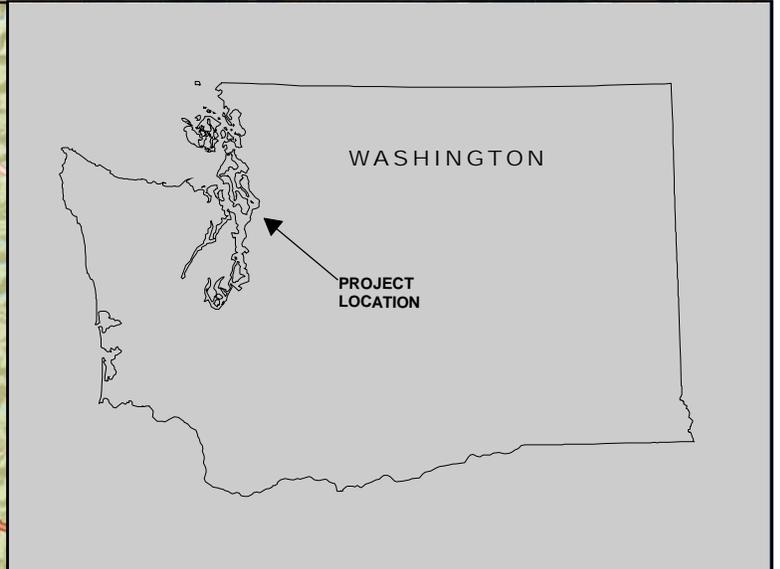
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Note: 1. The City of Lynnwood boundary includes the Project site, as of the approved annexation in September 2025.



October 2025
VICINITY MAP
Figure 1



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LEGEND

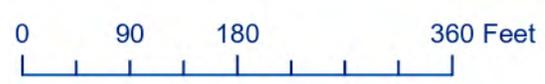
- Golde Creek
- Delineated OHWM
- - - Approximated OHWM
- Delineated Wetland
- Approximated Wetland
- Data Point
- Buffer
- Project Site
- Unincorporated Snohomish County
- Parcels

Notes:

1. Wetland boundaries surveyed by Bush, Roed & Hitchings, Inc.
2. The buffers are shown to reflect LMC 17.10.030, which allows for the exclusion of buffer areas that are functionally disconnected from the associated critical area.
3. Portions of the buffers that do not project onto the Project site are not shown.

October 2025
DELINEATION MAP
Figure 2

113832



Appendix A

Wetland Delineation Methodology

APPENDIX A: WETLAND DELINEATION METHODOLOGY

Appendix A

Wetland Delineation Methodology

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A.1 INTRODUCTION

The triple-parameter approach, as required in the U.S. Army Corps of Engineers' (the Corps') 1987 *Corps of Engineers Wetland Delineation Manual* and the Corps' 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0) was used to identify and delineate the wetlands on the site described in this report. The triple-parameter approach requires that vegetation, soils, and hydrology are each evaluated to determine the presence or absence of wetlands. An area is considered to be a wetland if each of the following is met: (a) dominant hydrophytic vegetation is present in the area, (b) the soils in the area are hydric, and (c) the necessary hydrologic conditions within the area are met.

A determination of wetland presence was made by conducting a Routine Delineation. Corresponding upland and wetland plots were recorded to characterize surface and subsurface conditions and more accurately determine the boundaries of on-site wetlands.

A.2 WETLAND VEGETATION

Hydrophytic plants are plant species specially adapted for saturated and/or anaerobic conditions. These species can be found in areas where there is a significant duration and frequency of inundation, which produces permanently or periodically saturated soils. Hydrophytic species, due to morphological, physiological, and reproductive adaptations, have the ability to grow, effectively compete, reproduce, and thrive in anaerobic soil. Indicators of hydrophytic vegetation are based on the wetland indicator status of plant species on the national wetland plant list (Lichvar and others, 2016). Plants are categorized as Obligate (OBL), Facultative Wetland (FACW), Facultative (FAC), Facultative Upland (FACU), or Upland (UPL). Species in the facultative categories (FACW, FAC, and FACU) are recognized as occurring in both wetlands and non-wetlands to varying degrees. Most wetlands are dominated mainly by species rated as OBL, FACW, or FAC (Exhibit A-1).

Exhibit A-1: Plant Indicator Status

Plant Indicator Status Categories
Obligate Wetland (OBL) – Plants that almost always occur in wetlands.
Facultative Wetland (FACW) – Plants that usually occur in wetlands but may occur in non-wetlands.
Facultative (FAC) – Plants that occur in wetlands or non-wetlands.
Facultative Upland (FACU) – Plants that usually occur in non-wetlands but may occur in wetlands.
Obligate Upland (UPL) – Plants that almost never occur in wetlands.

Source: Lichvar and others, 2016

The approximate percentage of absolute cover for each of the different plant species occurring within the tree, sapling/shrub, woody vine, and herbaceous strata was determined. Trees within a 30-foot radius; sapling/shrubs and woody vines within a 15-foot radius; and herbaceous species within a 5-foot radius of each data point were identified and noted. However, where site conditions merited it, the dimensions of the tree, sapling/shrub, woody vine, and herbaceous strata were modified.

The dominance test is the primary hydrophytic vegetation indicator and it is used in all wetland delineations. Dominant plant species are considered to be those that, when cumulatively totaled in descending order of absolute percent cover, exceed 50% of the total absolute cover for each vegetative stratum. Any additional species individually representing 20% or greater of the total absolute cover for each vegetative strata are also considered dominant. Hydrophytic vegetation is considered to be present when greater than 50% of the dominant plant species within the area had an indicator status of OBL, FACW, or FAC.

If a plant community does not meet the dominance test in areas where hydric soils and wetland hydrology are present, vegetation is reevaluated using the prevalence index, plant morphological adaptations for living in wetlands, and/or abundance of bryophytes (e.g., mosses) adapted to living in wetlands. The prevalence index is a weighted average that takes into account the abundance of all plant species within the sampling area to determine if hydrophytic vegetation is more or less prevalent. Using the prevalence index, all plants within the sampling area are grouped by wetland indicator status and absolute percent cover is summed for each group. Total cover for each indicator status group is weighted by the following multipliers: OBL=1, FACW=2, FAC=3, FACU=4, UPL=5. The prevalence index is calculated by dividing the sum of the weighted totals by the sum of total cover in the sampling area. A prevalence index of 3.0 or less indicates that hydrophytic vegetation is present.

A.3 HYDRIC SOILS

Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (U.S. Department of Agriculture [USDA] Soil Conservation Service [SCS], 1994). Repeated periods of saturation and inundation for more than a few days, in combination with soil microbial activity, causes depletion in oxygen (anaerobic conditions) and results in delayed decomposition of organic matter and reduction of iron, manganese, and sulfur elements. As a result of these processes, most hydric soils develop distinctive characteristics observable in the field during both wet and dry periods (Vasilas and others, 2018). These characteristics may be exhibited as an accumulation of organic matter; bluish-gray, green-gray, or low chroma and high value soil colors; mottling or other concentrations of iron and manganese; and/or hydrogen sulfide odor similar to a rotten egg smell.

The USDA Natural Resources Conservation Service developed official hydric soil indicators as summarized in *Field Indicators of Hydric Soils in the United States* (Vasilas and others, 2018). These indicators were developed to assist in delineation of hydric soils and are based predominantly on hydric soils near the margins of wetlands. Some hydric soils, including soils within the wettest parts of wetlands, may lack any of the approved hydric soil indicators. If a hydric soil indicator is present, the soil is determined to be hydric. If no hydric soil indicator is present, additional site information is used to assess whether the soil meets the definition of hydric soil.

Identification of hydric soils was aided through observation of surface hydrologic characteristics and indicators of wetland hydrology (e.g., drainage patterns). Soil characteristics were observation at several data points, placed both inside and outside the wetland. Holes were dug with a shovel to the depth needed to document an indicator or to confirm the absence of hydric soil indicators. Soil organic content was estimated visually and texturally. Soil colors were examined in the field immediately after sampling. Dry soils were moistened. Soil colors were determined through analysis of the hue, value, and chroma best represented in the Munsell® Soil Color Chart (Munsell Color, 2000).

A.4 WETLAND HYDROLOGY

Wetland hydrology is determined by observable evidence that inundation or soil saturation have occurred during a significant portion of the growing season repeatedly over a period of years so that wet condition have been sufficient to produce wetland vegetation and hydric soils. Wetland hydrology indicators give evidence of a continuing wetland hydrologic regime. Wetland hydrology criteria were considered to be satisfied if it appeared that wetland hydrology was present for at least 5 to 12.5% (12 to 31 days) of the growing

season. The growing season in western Washington is typically considered to be from March 1 to October 31 (244 days). However, the growing season is considered to have begun when: (a) evidence of plant growth has begun on two non-evergreen vascular plants, and (b) the soil reaches a temperature of 41 degrees Fahrenheit at a depth of 12 inches. The Seattle District Corps of Engineers requires 14 consecutive days of inundation or saturation for wetland hydrology to be considered present.

Wetland hydrology was evaluated by direct visual observation of surface inundation or soil saturation in data plots. The area near each data point was examined for indicators of wetland hydrology. Wetland hydrology indicators are categorized as primary or secondary based on their estimated reliability. Wetland hydrology was considered present if there was evidence of one primary indicator or at least two secondary indicators.

Some primary indicators include surface water, a shallow water table or saturated soils observed within 12 inches of the surface, dried watermarks, drift lines, sediment deposits, water-stained leaves, and algal mat/crust. Some secondary indicators include a water table within 12 to 24 inches of the surface during the dry season; drainage patterns; a landscape position in a depression, drainage, or fringe of a water body; and a shallow restrictive layer capable of perching water within 12 inches of the surface.

A.5 DISCLAIMER

This methodology was prepared for reference use only and is not intended to replace the 1987 *Corps Wetland Delineation Manual* or the Corps' 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0).

A.6 REFERENCES

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Appendix B

Wetland Delineation Data Forms

Western Mountains, Valleys, and Coast Region

APPENDIX B: WETLAND DELINEATION DATA FORMS

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

Project/Site: ESD Former Alderwood MS City/County: Snohomish County Sampling Date: 2024-08-01
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-1
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 4
 Subregion (LRR): A 2 Lat: 47.81684428 Long: -122.27144257 Datum: NAD83_2011
 Soil Map Unit Name: 5 - Alderwood-Urban land complex, 2 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix lasiandra</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
4. _____				Prevalence Index worksheet:
	<u>10</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>10 ft r</u>)				OBL species <u>15</u> x 1 = <u>15</u>
1. <u>Rubus armeniacus</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	FACW species <u>35</u> x 2 = <u>70</u>
2. <u>Salix lasiandra</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	FAC species <u>157</u> x 3 = <u>471</u>
3. <u>Alnus rubra</u>	<u>5</u>		<u>FAC</u>	FACU species <u>0</u> x 4 = <u>0</u>
4. _____				UPL species <u>0</u> x 5 = <u>0</u>
5. _____				Column Totals: <u>207</u> (A) <u>556</u> (B)
	<u>40</u>	= Total Cover		Prevalence Index = B/A = <u>2.68</u>
Herb Stratum (Plot size: <u>5 ft r</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - 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.
1. <u>Lotus corniculatus</u>	<u>70</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Ranunculus repens</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. <u>Juncus effusus</u>	<u>10</u>		<u>FACW</u>	
4. <u>Lycopus sp.</u>	<u>10</u>		<u>OBL</u>	
5. <u>Oenanthe sarmentosa</u>	<u>5</u>		<u>OBL</u>	
6. <u>Solanum dulcamara</u>	<u>2</u>		<u>FAC</u>	
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>157</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>10 ft r</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____				
2. _____				
		= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: Large willow snag in vegetation plot.				

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		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 6	10YR 2/2	100					Silty Clay	
6 - 12	10Y 4/1	93	7.5YR 4/6	7	C	PL / M	Sandy Clay Loam	
12 - 26	10Y 4/1	100					Sandy Clay Loam	Gravels from 15 to 26 inches
-								
-								
-								
-								
-								

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

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

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

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

Remarks:

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>17</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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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: ESD Former Alderwood MS City/County: Snohomish County Sampling Date: 2024-08-01
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-2
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7
 Subregion (LRR): A 2 Lat: 47.81675978 Long: -122.27142689 Datum: NAD83_2011
 Soil Map Unit Name: 5 - Alderwood-Urban land complex, 2 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil 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: Upland pit outside of Wetland A. On a road embankment/fill slope. Approximately 2 feet upgradient of (higher than) DP-1.	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>20 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10 ft r</u>)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>120</u> x 3 = <u>360</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>120</u> (A) <u>360</u> (B) Prevalence Index = B/A = <u>3.00</u>
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
<u>Herb Stratum</u> (Plot size: <u>5 ft r</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - 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.
1. <u>Agrostis sp.</u>	<u>90</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Ranunculus repens</u>	<u>15</u>		<u>FAC</u>	
3. <u>Holcus lanatus</u>	<u>5</u>		<u>FAC</u>	
4. <u>Lotus corniculatus</u>	<u>5</u>		<u>FAC</u>	
5. <u>Trifolium repens</u>	<u>5</u>		<u>FAC</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>120</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: <u>10 ft r</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: Dried moss present.				

SOIL

Sampling Point: DP-2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 10	10YR 3/2	100					Loam	highly compacted gravels starting at 5 inches
-								
-								
-								
-								
-								
-								
-								

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

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

- 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 Soils³:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Compacted gravels
 Depth (inches): 10

Hydric Soil Present? Yes No

Remarks:

No hydric soil indicators observed. Soil is highly compacted with gravels starting at 5 inches bgs.

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

Wetland Hydrology Present? Yes No

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

Remarks:

No water or hydrology indicators observed.

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

Project/Site: ESD Former Alderwood MS City/County: Lynnwood/Snohomish Sampling Date: 2024-08-01
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-3
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): A 2 Lat: 47.81842348 Long: -122.27259679 Datum: NAD83_2011
 Soil Map Unit Name: 32 - McKenna gravelly silt loam, 0 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Within Wetland B, on the bank of Golde Creek, near slow moving surface water. Old beaver chews on branches. Snags observed within 300 ft.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix lasiandra</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
4. _____				Prevalence Index worksheet:
	<u>5</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>10 ft r</u>)				OBL species <u>40</u> x 1 = <u>40</u>
1. <u>Rubus armeniacus</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	FACW species <u>67</u> x 2 = <u>134</u>
2. <u>Rubus spectabilis</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	FAC species <u>50</u> x 3 = <u>150</u>
3. _____				FACU species <u>0</u> x 4 = <u>0</u>
4. _____				UPL species <u>0</u> x 5 = <u>0</u>
5. _____				Column Totals: <u>157</u> (A) <u>324</u> (B)
	<u>50</u>	= Total Cover		Prevalence Index = B/A = <u>2.06</u>
Herb Stratum (Plot size: <u>5 ft r</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" 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.
1. <u>Epilobium ciliatum</u>	<u>55</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. <u>Veronica americana</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
3. <u>Callitriche stagnalis</u>	<u>15</u>		<u>OBL</u>	
4. <u>Phalaris arundinacea</u>	<u>7</u>		<u>FACW</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>102</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>10 ft r</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____				
2. _____				
% Bare Ground in Herb Stratum <u>10</u>				
Remarks:				

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

Project/Site: ESD Former Alderwood MS City/County: Snohomish County Sampling Date: 2024-08-01
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-4
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 10
 Subregion (LRR): A 2 Lat: 47.81842353 Long: -122.27260523 Datum: NAD83_2011
 Soil Map Unit Name: 32 - McKenna gravelly silt loam, 0 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil 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: Upland pit outside of Wetland B.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	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>66.66</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>108</u> x 3 = <u>324</u> FACU species <u>2</u> x 4 = <u>8</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>110</u> (A) <u>332</u> (B) Prevalence Index = B/A = <u>3.01</u>
<u>103</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10 ft r</u>)				
1. <u>Rubus armeniacus</u>	<u>100</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Rubus spectabilis</u>	<u>3</u>	_____	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: <u>5 ft r</u>)				
1. <u>Equisetum arvense</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Geranium robertianum</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: <u>10 ft r</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum <u>93</u>				
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		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 10	10YR 4/2	100					Loam	
10 - 18	10YR 3/3	94	7.5YR 5/8	1	C	M	Loam	
10 - 18			10YR 6/2	5	D	M	Loam	
-								
-								
-								
-								
-								

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

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

³Indicators 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 <input checked="" type="checkbox"/>
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Remarks:
No hydric soil indicators observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No water or hydrology indicators observed.

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

Project/Site: ESD Former Alderwood MS City/County: Lynnwood/Snohomish Sampling Date: 2024-08-07
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-5
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR): A 2 Lat: 47.81848301 Long: -122.27296436 Datum: NAD83_2011
 Soil Map Unit Name: 32 - McKenna gravelly silt loam, 0 to 8 percent slopes NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Within the western portion of Wetland B, on the south side of Alderwood Mall Parkway.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Alnus rubra</u>	20	<input checked="" type="checkbox"/>	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)	
2. _____				Total Number of Dominant Species Across All Strata: <u>5</u> (B)	
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)	
4. _____				Prevalence Index worksheet:	
	20	= Total Cover			Total % Cover of: _____ Multiply by: _____
Sapling/Shrub Stratum (Plot size: <u>10 ft r</u>)				OBL species <u>40</u> x 1 = <u>40</u>	
1. <u>Rubus armeniacus</u>	25	<input checked="" type="checkbox"/>	FAC	FACW species <u>40</u> x 2 = <u>80</u>	
2. <u>Acer circinatum</u>	10	<input checked="" type="checkbox"/>	FAC	FAC species <u>70</u> x 3 = <u>210</u>	
3. <u>Rubus spectabilis</u>	5		FAC	FACU species <u>0</u> x 4 = <u>0</u>	
4. _____				UPL species <u>0</u> x 5 = <u>0</u>	
5. _____				Column Totals: <u>150</u> (A) <u>330</u> (B)	
	40	= Total Cover		Prevalence Index = B/A = <u>2.20</u>	
Herb Stratum (Plot size: <u>5 ft r</u>)				Hydrophytic Vegetation Indicators:	
1. <u>Epilobium ciliatum</u>	40	<input checked="" type="checkbox"/>	FACW		<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Glyceria sp.</u>	40	<input checked="" type="checkbox"/>	OBL		<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Solanum dulcamara</u>	10		FAC		<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. _____					<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____					<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹
6. _____					<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____					¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____					
9. _____					
10. _____					
11. _____					
	90	= Total Cover		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Woody Vine Stratum (Plot size: <u>10 ft r</u>)					
1. _____					
2. _____					
% Bare Ground in Herb Stratum <u>10</u>					

Remarks:

SOIL

Sampling Point: DP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 7	10YR 2/2	100					Muck	Greasy, fibers completely decomposed
7 - 14	10YR 2/2		10Y 4/1	20	D	M	Mucky Loam/Clay	
7 - 14			10YR 4/6	5	C	PL / M	Mucky Loam/Clay	
14 - 20	10YR 2/1	98	10YR 4/6	2	C	PL	Mucky Loam/Clay	With small gravels/coarse sand
14 - 20			10Y 4/1	5	D	M	Mucky Loam/Clay	
-								
-								
-								

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

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

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Chunks of undecayed wood material present in all soil layers.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>18</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>12</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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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: ESD Former Alderwood MS City/County: Lynnwood/Snohomish Sampling Date: 2024-08-07
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-6
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 7
 Subregion (LRR): A 2 Lat: 47.81849243 Long: -122.27299855 Datum: NAD83_2011
 Soil Map Unit Name: 5 - Alderwood-Urban land complex, 2 to 8 percent slopes NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil 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: Upland pit outside of Wetland B.	

VEGETATION – Use scientific names of plants.

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status		
<u>Tree Stratum</u> (Plot size: <u>20 ft r</u>)				Dominance Test worksheet:	
1. <u>Populus balsamifera</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)	
2. <u>Acer circinatum</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>4</u> (B)	
3. <u>Ilex aquifolium</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75.00</u> (A/B)	
4. _____				Prevalence Index worksheet:	
	<u>45</u>		= Total Cover		Total % Cover of: _____ Multiply by: _____
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10 ft r</u>)				OBL species <u>0</u> x 1 = <u>0</u>	
1. <u>Rubus armeniacus</u>	<u>100</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	FACW species <u>0</u> x 2 = <u>0</u>	
2. _____				FAC species <u>135</u> x 3 = <u>405</u>	
3. _____				FACU species <u>10</u> x 4 = <u>40</u>	
4. _____				UPL species <u>0</u> x 5 = <u>0</u>	
5. _____				Column Totals: <u>145</u> (A) <u>445</u> (B)	
	<u>100</u>		= Total Cover	Prevalence Index = B/A = <u>3.06</u>	
<u>Herb Stratum</u> (Plot size: <u>10 ft r</u>)				Hydrophytic Vegetation Indicators:	
1. _____		<input checked="" type="checkbox"/>			<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. _____					<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. _____					<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. _____					<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____					<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹
6. _____					<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____					¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____					
9. _____					
10. _____					
11. _____					
			= Total Cover	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<u>Woody Vine Stratum</u> (Plot size: <u>10 ft r</u>)					
1. _____					
2. _____					
			= Total Cover		
% Bare Ground in Herb Stratum <u>100</u>					
Remarks: Soil covered 100% with litter and duff.					

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

Project/Site: ESD Former Alderwood MS City/County: Lynnwood/Snohomish Sampling Date: 2024-08-07
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-7
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Ditch Local relief (concave, convex, none): Concave Slope (%): 5
 Subregion (LRR): A 2 Lat: 47.81857917 Long: -122.27342328 Datum: NAD83_2011
 Soil Map Unit Name: 5 - Alderwood-Urban land complex, 2 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Within constructed swale along Alderwood Mall Parkway.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	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>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10 ft r</u>)				
1. <u>Rubus armeniacus</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>5</u> x 1 = <u>5</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>100</u> x 3 = <u>300</u> FACU species <u>4</u> x 4 = <u>16</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>109</u> (A) <u>321</u> (B) Prevalence Index = B/A = <u>2.94</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: <u>5 ft r</u>)				
1. <u>Ranunculus repens</u>	<u>90</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" 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>Veronica americana</u>	<u>5</u>	_____	<u>OBL</u>	
3. <u>Rubus ursinus</u>	<u>4</u>	_____	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: <u>10 ft r</u>)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
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		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 3	10YR 2/2	100					Silt Loam	
3 - 7	10YR 4/1	93	5YR 4/6	7	C	PL / M	Loamy Sand	With cobbles
7 - 16	10Y 5/1		7.5YR 5/6	5	C	M	Sandy Loam	With cobbles and gravels
-								
-								
-								
-								
-								

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

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

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

Restrictive Layer (if present): Type: <u>Compacted sand and gravel</u> Depth (inches): <u>14</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Compacted layer starts at 14 inches. Within the compaction, redox features appear to be relict with defined boundaries. Chipped away at the compacted soil with a shovel to get to 16 inches.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No water observed.

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

Project/Site: ESD Former Alderwood MS City/County: Lynnwood/Snohomish Sampling Date: 2024-08-07
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-8
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR): A 2 Lat: 47.81846719 Long: -122.27486857 Datum: NAD83_2011
 Soil Map Unit Name: 5 - Alderwood-Urban land complex, 2 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Populus balsamifera ssp. trichocarpa</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)	
2. <u>Alnus rubra</u>	<u>15</u>		<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3. <u>Salix sp.</u>	<u>15</u>		<u>FACW</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)	
4. _____					
			<u>80</u> = Total Cover		
Sapling/Shrub Stratum (Plot size: <u>10 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. <u>Salix sp.</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACW</u>		
2. _____				Total % Cover of: _____ Multiply by: _____	
3. _____				OBL species <u>5</u> x 1 = <u>5</u>	
4. _____				FACW species <u>20</u> x 2 = <u>40</u>	
5. _____				FAC species <u>162</u> x 3 = <u>486</u>	
			<u>5</u> = Total Cover	FACU species <u>0</u> x 4 = <u>0</u>	
				UPL species <u>0</u> x 5 = <u>0</u>	
				Column Totals: <u>187</u> (A) <u>531</u> (B)	
				Prevalence Index = B/A = <u>2.83</u>	
Herb Stratum (Plot size: <u>5 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" 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 _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
1. <u>Ranunculus repens</u>	<u>95</u>	<input checked="" type="checkbox"/>	<u>FAC</u>		
2. <u>Typha latifolia</u>	<u>5</u>		<u>OBL</u>		
3. <u>Equisetum arvense</u>	<u>2</u>		<u>FAC</u>		
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
			<u>102</u> = Total Cover		
Woody Vine Stratum (Plot size: <u>10 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
1. _____					
2. _____					
			_____ = Total Cover		
% Bare Ground in Herb Stratum <u>0</u>					
Remarks:					

SOIL

Sampling Point: DP-8

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 2	10YR 2/1	100					Silt Loam	
2 - 14	10YR 4/1	95	5YR 4/6	5	C	PL / M	Silt Loam	
-								
-								
-								
-								
-								
-								

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

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

- 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 Soils³:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Compacted soil
 Depth (inches): 14

Hydric Soil Present? Yes No

Remarks:

Compacted layer of soil at 14". Unable to dig through with shovel.

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

Wetland Hydrology Present? Yes No

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

Remarks:

Soil dry at the time of sampling.

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

Project/Site: ESD Former Alderwood MS City/County: Lynnwood/Snohomish Sampling Date: 2024-08-07
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-9
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Ditch Local relief (concave, convex, none): Concave Slope (%): 2
 Subregion (LRR): A 2 Lat: 47.81848568 Long: -122.27437834 Datum: NAD83_2011
 Soil Map Unit Name: 5 - Alderwood-Urban land complex, 2 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <p>Within constructed swale along south side of Alderwood Mall Parkway. Very recently mowed.</p>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
= Total Cover					
Sapling/Shrub Stratum (Plot size: <u>10 ft r</u>)					
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____	
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4. _____	_____	_____	_____	FAC species <u>100</u> x 3 = <u>300</u>	
5. _____	_____	_____	_____	FACU species <u>0</u> x 4 = <u>0</u>	
= Total Cover				UPL species <u>0</u> x 5 = <u>0</u>	
Herb Stratum (Plot size: <u>5 ft r</u>)					
1. <u>Unidentified graminoid*</u>	<u>100</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Column Totals: <u>100</u> (A) <u>300</u> (B)	
2. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.00</u>	
3. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
4. _____	_____	_____	_____		<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
5. _____	_____	_____	_____		<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
6. _____	_____	_____	_____		<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
7. _____	_____	_____	_____		<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8. _____	_____	_____	_____		<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹
9. _____	_____	_____	_____		<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
10. _____	_____	_____	_____		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
11. _____	_____	_____	_____		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
= Total Cover					
Woody Vine Stratum (Plot size: <u>10 ft r</u>)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
= Total Cover					
% Bare Ground in Herb Stratum <u>0</u>					
Remarks:					
* The swale is very recently mowed, making grass ID difficult. FAC indicator assumed.					

SOIL

Sampling Point: DP-9

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 4	10YR 2/2	99	7.5YR 4/6	1	C	PL / M	Silt Loam	Sand lenses present
4 - 10	10YR 2/2	97	7.5YR 4/6	5	C	PL / M	Silt Loam	
10 - 17	10YR 4/2	75	5YR 4/6	15	C	PL / M	Clay Loam	With cobbles
10 - 17	10YR 2/2	10					Clay Loam	With cobbles
-								
-								
-								
-								

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

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

- 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 Soils³:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

Soil is very compacted, very difficult to dig through.

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

Wetland Hydrology Present? Yes No

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

Remarks:

Soil dry at the time of sampling.

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

Project/Site: ESD Former Alderwood MS City/County: Lynnwood/Snohomish Sampling Date: 2024-08-07
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-10
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Linear Slope (%): 45
 Subregion (LRR): A 2 Lat: 47.81850248 Long: -122.27438478 Datum: NAD83_2011
 Soil Map Unit Name: 5 - Alderwood-Urban land complex, 2 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydic Soil 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"/>
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks:		

Upland pit upgradient of swale. Very recently mowed.

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>20 ft r</u>)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
= Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10 ft r</u>)				Total % Cover of: _____ Multiply by: _____
1. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>
2. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>
3. _____	_____	_____	_____	FAC species <u>101</u> x 3 = <u>303</u>
4. _____	_____	_____	_____	FACU species <u>22</u> x 4 = <u>88</u>
5. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
= Total Cover				Column Totals: <u>123</u> (A) <u>391</u> (B)
<u>Herb Stratum</u> (Plot size: <u>5 ft r</u>)				Prevalence Index = B/A = <u>3.17</u>
1. <u>Agrostis sp.</u>	<u>80</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - 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.
2. <u>Anthoxanthum odoratum</u>	<u>20</u>	_____	<u>FACU</u>	
3. <u>Schedonorus arundinaceus</u>	<u>20</u>	_____	<u>FAC</u>	
4. <u>Trifolium pratense</u>	<u>2</u>	_____	<u>FACU</u>	
5. <u>Equisetum arvense</u>	<u>1</u>	_____	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>123</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: <u>10 ft r</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks:				

Very recently mowed, grass difficult to ID

SOIL

Sampling Point: DP-10

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 7	10YR 3/2	100					Loam	
7 - 14	10YR 4/2	99	5YR 4/4	1	C	M	Loam	With gravel. See remarks.
-								
-								
-								
-								
-								
-								

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

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

- 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 Soils³:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Extremely compacted second layer continues with an increase of gravels.
 Depth (inches): 14 inches bgs

Hydric Soil Present? Yes No

Remarks:

Soil is very dry and extremely compacted. Very difficult to dig through. In layer 2, concretions are present in addition to the 1% concentrations. No hydric soil indicators observed.

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

Wetland Hydrology Present? Yes No

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

Remarks:

No water or hydrology indicators observed.

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

Project/Site: ESD Former Alderwood MS City/County: Lynnwood/Snohomish Sampling Date: 2024-08-07
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-11
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): A 2 Lat: 47.81790659 Long: -122.27520665 Datum: NAD83_2011
 Soil Map Unit Name: 5 - Alderwood-Urban land complex, 2 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Salix lasiandra</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	<u>20</u>	= Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>10 ft r</u>)																				
1. <u>Fraxinus latifolia</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>155</u></td> <td>x 2 = <u>310</u></td> </tr> <tr> <td>FAC species <u>3</u></td> <td>x 3 = <u>9</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>158</u> (A)</td> <td><u>319</u> (B)</td> </tr> <tr> <td align="center" colspan="2">Prevalence Index = B/A = <u>2.01</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>155</u>	x 2 = <u>310</u>	FAC species <u>3</u>	x 3 = <u>9</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>158</u> (A)	<u>319</u> (B)	Prevalence Index = B/A = <u>2.01</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>155</u>	x 2 = <u>310</u>																			
FAC species <u>3</u>	x 3 = <u>9</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>158</u> (A)	<u>319</u> (B)																			
Prevalence Index = B/A = <u>2.01</u>																				
2. <u>Salix lasiandra</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
	<u>15</u>	= Total Cover																		
Herb Stratum (Plot size: <u>5 ft r</u>)																				
1. <u>Lysimachia nummularia</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" 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>Persicaria maculosa</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FACW</u>																	
3. <u>Ranunculus repens</u>	<u>3</u>	_____	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
	<u>123</u>	= Total Cover																		
Woody Vine Stratum (Plot size: <u>10 ft r</u>)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2. _____	_____	_____	_____																	
	_____	= Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																				
Remarks:																				

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

Project/Site: ESD Former Alderwood MS City/County: Lynnwood/Snohomish Sampling Date: 2024-08-07
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-12
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 20
 Subregion (LRR): A 2 Lat: 47.81759429 Long: -122.27498743 Datum: NAD83_2011
 Soil Map Unit Name: 5 - Alderwood-Urban land complex, 2 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydic Soil 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"/>
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks:		

Upland pit outside of Wetland C. Located on hillslope downgradient of the wetland.

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>20 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Populus balsamifera ssp. trichocarpa</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FAC</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2. <u>Thuja plicata</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)	
3. <u>Alnus rubra</u>	<u>10</u>		<u>FAC</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.00</u> (A/B)	
4. <u>Malus fusca</u>	<u>10</u>		<u>FACW</u>		
	<u>75</u>	= Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. <u>Rubus armeniacus</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FAC</u>		Total % Cover of: <u>0</u> Multiply by: <u>0</u>
2. <u>Rubus ursinus</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	OBL species <u>0</u> x 1 = <u>0</u>	
3. <u>Lonicera involucrata</u>	<u>5</u>		<u>FAC</u>	FACW species <u>13</u> x 2 = <u>26</u>	
4. <u>Malus fusca</u>	<u>3</u>		<u>FACW</u>	FAC species <u>115</u> x 3 = <u>345</u>	
5. _____				FACU species <u>30</u> x 4 = <u>120</u>	
	<u>78</u>	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>	
<u>Herb Stratum</u> (Plot size: <u>5 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Column Totals: <u>158</u> (A) <u>491</u> (B)	
1. <u>Equisetum arvense</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Prevalence Index = B/A = <u>3.10</u>	
2. _____				Hydrophytic Vegetation Indicators:	
3. _____					<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
4. _____					<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
5. _____					<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
6. _____					<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7. _____					<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹
8. _____					<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
9. _____					¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
10. _____					
11. _____					
	<u>5</u>	= Total Cover			
<u>Woody Vine Stratum</u> (Plot size: <u>10 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
1. _____					
2. _____					
		= Total Cover			
% Bare Ground in Herb Stratum <u>95</u>					

Remarks:
5% Oregon ash (Fraxinus latifolia, FACW) was also observed in the tree stratum. Leaf litter covers 100% of the ground.

SOIL

Sampling Point: DP-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 14	10YR 3/2	100					Silt Loam	
14 - 16	10YR 3/2	99	7.5YR 4/6	1	C	M	Silt Loam	
-								
-								
-								
-								
-								
-								

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

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

³Indicators 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 <input checked="" type="checkbox"/>
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Remarks:
Cobbles and gravels throughout the soil profile. No hydric soil indicators observed.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No water or hydrology indicators observed.

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

Project/Site: ESD Former Alderwood MS City/County: Lynnwood/Snohomish Sampling Date: 2024-08-07
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-13
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 15
 Subregion (LRR): A 2 Lat: 47.818621 Long: -122.27475 Datum: NAD83_2011
 Soil Map Unit Name: 5 - Alderwood-Urban land complex, 2 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <p style="font-size: 1.2em; margin-top: 10px;">Within Wetland D. Plot is on a hillslope adjacent to the school track.</p>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Alnus rubra</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	<u>40</u>	= Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>10 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Rubus armeniacus</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>85</u></td> <td>x 2 = <u>170</u></td> </tr> <tr> <td>FAC species <u>160</u></td> <td>x 3 = <u>480</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>245</u> (A)</td> <td><u>650</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.65</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>85</u>	x 2 = <u>170</u>	FAC species <u>160</u>	x 3 = <u>480</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>245</u> (A)	<u>650</u> (B)	Prevalence Index = B/A = <u>2.65</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>85</u>	x 2 = <u>170</u>																			
FAC species <u>160</u>	x 3 = <u>480</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>245</u> (A)	<u>650</u> (B)																			
Prevalence Index = B/A = <u>2.65</u>																				
2. <u>Cornus sericea</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>																	
3. <u>Malus fusca</u>	<u>10</u>	_____	<u>FACW</u>																	
4. <u>Alnus rubra</u>	<u>5</u>	_____	<u>FAC</u>																	
5. _____	_____	_____	_____																	
	<u>95</u>	= Total Cover																		
Herb Stratum (Plot size: <u>5 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Juncus effusus</u>	<u>45</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) <small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small>																
2. <u>Equisetum arvense</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																	
3. <u>Agrostis sp.</u>	<u>20</u>	_____	<u>FAC</u>																	
4. <u>Lotus corniculatus</u>	<u>5</u>	_____	<u>FAC</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
	<u>110</u>	= Total Cover																		
Woody Vine Stratum (Plot size: <u>10 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2. _____	_____	_____	_____																	
	_____	= Total Cover																		
% Bare Ground in Herb Stratum <u>2</u>																				
Remarks:																				

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

Project/Site: ESD Former Alderwood MS City/County: Lynnwood/Snohomish Sampling Date: 2024-08-07
 Applicant/Owner: Edmonds School District State: Washington Sampling Point: DP-14
 Investigator(s): Sarah Corbin (PWS), Olivia Sohn Section, Township, Range: S22 T27N R4E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 5
 Subregion (LRR): A 2 Lat: 47.816873 Long: -122.274949 Datum: NAD83_2011
 Soil Map Unit Name: 5 - Alderwood-Urban land complex, 2 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil 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: Upland pit near Wetland D. Area regularly mowed.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Populus balsamifera ssp. trichocarpa</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)																
2. <u>Alnus rubra</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																	
3. _____																				
4. _____																				
	<u>10</u>	= Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>10 ft r</u>)																				
1. <u>Rubus armeniacus</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>220</u></td> <td>x 3 = <u>660</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>220</u> (A)</td> <td><u>660</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>220</u>	x 3 = <u>660</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>220</u> (A)	<u>660</u> (B)	Prevalence Index = B/A = <u>3.00</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>220</u>	x 3 = <u>660</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>220</u> (A)	<u>660</u> (B)																			
Prevalence Index = B/A = <u>3.00</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
	<u>30</u>	= Total Cover																		
Herb Stratum (Plot size: <u>5 ft r</u>)																				
1. <u>Agrostis sp.</u>	<u>80</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	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>Unknown Graminoids*</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																	
3. <u>Equisetum arvense</u>	<u>25</u>		<u>FAC</u>																	
4. <u>Lotus corniculatus</u>	<u>15</u>		<u>FAC</u>																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
	<u>180</u>	= Total Cover																		
Woody Vine Stratum (Plot size: <u>10 ft r</u>)																				
1. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2. _____																				
	_____	= Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																				
Remarks: * Area mowed, grass ID difficult. Graminoid indicator assumed FAC.																				

SOIL

Sampling Point: DP-14

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 13	10YR 3/2	100					Loam	
13 - 16	10YR 3/2	98	7.5YR 4/6	2	C	PL	Loam	
-								
-								
-								
-								
-								

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

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

- 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 Soils³:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

Soil is extremely compacted. Difficult to dig through. No hydric soil indicators observed.

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

Wetland Hydrology Present? Yes _____ No

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

Remarks:

Soil is dry.

Appendix C

Wetland Rating Form – Western Washington

APPENDIX C: WETLAND RATING FORM – WESTERN WASHINGTON

Wetland name or number: A

RATING SUMMARY - Western Washington

Name of wetland (or ID#): A Date of site visit: 08/01/2024

Rated By: Sarah Corbin (PWS) and Olivia Sohn Trained by Ecology? Yes No Date of Training: 05/15/2014

HGM Class used for rating: Depressional

Wetland has multiple HGM classes? Yes No

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

Source of base aerial photo/map: Bing Imagery (C) 2024 Microsoft Corporation

OVERALL WETLAND CATEGORY: [Category III] (based on functions or special characteristics)

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	M	L	M	
Landscape Potential	M	H	L	
Value	H	M	H	Total
Score Based on Ratings	7	6	6	19

Score for each function based on three ratings

(order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	
Wetland of High Conservation Value	
Bog	
Forested	
Coastal Lagoon	
Interdunal	
None of the above	Not Applicable

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	A-1
Hydroperiods	D 1.4, H 1.2	A-2
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	A-2
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	A-3
Map of the contributing basin	D 4.3, D 5.3	A-4
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	A-5
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	A-6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	A-7

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 What are the characteristics of surface water outflows from the wetland?

Wetland has no surface water outlet.	points = 3	
Wetland has an intermittently flowing, or highly constricted, outlet.	points = 2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 1	
Wetland is a flat depression whose outlet is a permanently flowing ditch.	points = 1	Score: 2

D 1.2 Is the soil 2 in. below the surface a true clay or organic soil?

Mapped as true clay or organic (muck or peat)	points = 4	
Soil texture identified as clay or organic in field	points = 4	
Soil texture identified as clay or organic by laboratory test	points = 4	
None of the above	points = 0	Score: 0

D 1.3 What are the characteristics and distribution of persistent plants?

Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > 50% of area	points = 3	
Wetland has persistent, ungrazed plants > 10% of area	points = 1	
Wetland has persistent, ungrazed plants < 10% of area	points = 0	Score: 5

D 1.4 What are the characteristics of seasonal ponding or inundation in the wetland area?

Area seasonally ponded is > 50% total area of wetland	points = 4	
Area seasonally ponded is equal to or > 25% total area of wetland	points = 2	
Area seasonally ponded is < 25% total area of wetland	points = 0	Score: 2

Total for D 1: **9**

Rating of Site Potential

[] 12-16 = H [X] 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	points = 1	
No	points = 0	Score: 1

D 2.2 Is >10% of the area within 150ft of the wetland in land uses that generate pollutants in surface runoff?

Yes	points = 1	
No	points = 0	Score: 1

D 2.3 Are there septic systems within 250ft of the wetland?

Yes	points = 1	
No	points = 0	Score: 0

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?

Yes	points = 1	
No	points = 0	Score: 0

Wetland name or number: A

D 2.5 What are the other sources of pollutants coming into the wetland?	
Total for D 2:	2

Rating of Landscape Potential 3-4 = H 1-2 = 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	points = 1
No	points = 0 Score: 1
D 3.2 Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	
Yes	points = 1
No	points = 0 Score: 1
D 3.3 Has the site been identified in a watershed or local plan as important for maintaining water quality?	
Yes	points = 2
No	points = 0 Score: 2
Total for D 3:	
4	

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

<u>DEPRESSIONAL AND FLATS WETLANDS</u>	
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 What are the characteristics of surface water outflows from the wetland?	
Wetland has no surface water outlet.	points = 4
Wetland has an intermittently flowing, or highly constricted, outlet.	points = 2
Wetland is a flat depression whose outlet is a permanently flowing ditch.	points = 1
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0 Score: 2
D 4.2 What is the depth of storage during the wet periods?	
Marks of ponding are 3ft or more above the surface or bottom of the outlet.	points = 7
Marks of ponding are between 2ft to <3ft from the surface or bottom of the outlet.	points = 5
Marks of ponding are at least 0.5ft to <2ft from the surface or the bottom of the outlet.	points = 3
The wetland is a "headwater" wetland.	points = 3
The wetland is flat but has small depressions on the surface that trap water.	points = 1
Marks of ponding are less than 0.5ft (6in).	points = 0 Score: 3

Wetland name or number: A

D 4.3 <u>What is the contribution of the wetland to storage in the watershed?</u>		
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	
Entire wetland is in the Flats class	points = 5	Score: 0
Total for D 4:		5

Rating of Site Potential

[] 12-16 = H [] 6-11 = M [X] 0-5 = L

Record the rating on the first page

D 5.0 <u>Does the landscape have the potential to support hydrologic functions of the site?</u>		
D 5.1 <u>Does the wetland unit receive stormwater discharges?</u>		
Yes	points = 1	
No	points = 0	Score: 1
D 5.2 <u>Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?</u>		
Yes	points = 1	
No	points = 0	Score: 1
D 5.3 <u>Is more than 25% of the contributing basin of the wetland covered with intensive human land uses?</u>		
Yes	points = 1	
No	points = 0	Score: 1
Total for D 5:		3

Rating of Landscape Potential

[X] 3 = H [] 1-2 = M [] 0 = L

Record the rating on the first page

D 6.0 <u>Are the hydrologic functions provided by the site valuable to society?</u>		
D 6.1 <u>Is the wetland in a landscape that has flooding problems?</u>		
Flooding occurs in a sub-basin that is immediately down-gradient of the wetland.	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
Flooding from groundwater is an issue in the basin.	points = 1	
The existing or potential outflow from the wetland is so constrained that water cannot reach areas that flood.	points = 0	
There are no problems with flooding downstream of the wetland.	points = 0	Score: 1
D 6.2 <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	Score: 0
Total for D 6:		1

Rating of Value

[] 2-4 = H [X] 1 = M [] 0 = L

Record the rating on the first page

Wetland name or number: A

HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

H 1.0 Does the wetland have the potential to provide habitat for many species?

H 1.1 What is the structure of the plant community?

- Aquatic Bed
- Emergent
- Scrub-shrub
- Forested
- Multiple strata within the Forested class (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)

4 structures or more	points = 4
3 structures	points = 2
2 structures	points = 1
1 structure	points = 0
No structures present	points = 0

Score: 1

H 1.2 What are the hydroperiods that meet the size thresholds in the wetland?

- Permanently flooded or inundated
- Seasonally flooded or inundated
- Occasionally flooded or inundated
- Saturated only
- Permanently flowing stream or river in, or adjacent to, the wetland
- Seasonally flowing stream in, or adjacent to, the wetland
- Lake Fringe wetland
- Freshwater Tidal wetland

4 or more types present	points = 3
3 types present or Lake Fringe / Freshwater Tidal Fringe	points = 2
2 types present	points = 1
1 type present	points = 0
None present	points = 0

Score: 2

H 1.3 What is the richness of the plant species in the wetland?

>19 species	points = 2
5-19 species	points = 1
<5 species	points = 0

Score: 1

Wetland name or number: A

H 1.4 <u>What is the interspersion of habitats?</u>	
High	points = 3
Moderate	points = 2
Low	points = 1
None	points = 0
Score: 2	
H 1.5 <u>What are the special habitat features in the wetland?</u>	
<input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (>4in diameter and 6ft long).	
<input checked="" type="checkbox"/> Standing snags (dbh >4in) within the wetland	
<input checked="" type="checkbox"/> Undercut banks are present for at least 6.6ft (2m) and/or overhanging plants extend at least 3.3ft (1m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33ft (10m)	
<input checked="" type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)	
<input checked="" type="checkbox"/> At least 0.25ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)	
<input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)	
6 habitats selected	points = 6
5 habitats selected	points = 5
4 habitats selected	points = 4
3 habitats selected	points = 3
2 habitats selected	points = 2
1 habitat selected	points = 1
No habitats selected	points = 0
Score: 5	
Total for H 1:	
11	

Rating of Site Potential

[] 15-18 = H [X] 7-14 = M [] 0-6 = L

Record the rating on the first page

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

H 2.1 <u>What is the percentage of accessible habitat within 1km of the wetland?</u>	
>33% of 1km Polygon	points = 3
20-33% of 1km Polygon	points = 2
10-19% of 1km Polygon	points = 1
<10% of 1km Polygon	points = 0
Score: 0	
H 2.2 <u>What is the percentage of total habitat in a 1km polygon around the wetland?</u>	
Total habitat is >50% of the Polygon	points = 3
Total habitat is 10-50% of the Polygon and in 1-3 patches	points = 2
Total habitat is 10-50% of the Polygon and in >3 patches	points = 1
Total habitat is <10% of the Polygon	points = 0
Score: 0	

Wetland name or number: A

H 2.3 What is the land use intensity in the 1km polygon?

50% of the Polygon is high intensity land use
<50% of the Polygon is high intensity land use

points = -2
points = 0

Score: -2

Total for H 2: -2

Rating of Landscape Potential

[] 4-6 = H [] 1-3 = M [X] 0 = 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?

- Aspen Stands
- Biodiversity Areas and Corridors
- Herbaceous Balds
- Old-growth/Mature Forests
- Oregon White Oak
- Riparian
- Westside Prarie
- Fresh Deepwater
- Instream
- Nearshore (Coastal, Open Coast, Puget Sound)
- Caves
- Cliffs
- Snags and Logs
- Talus

The following criteria automatically score 2 points:

- The wetland provides habitat for Threatened or Endangered species
- The wetland is mapped as a location for an individual WDFW priority species
- The wetland is a Wetland of High Conservation Value
- The wetland has been categorized as an important habitat site in a local plan

The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value points = 2

The site has 1 or 2 WDFW priority habitats within 100m points = 1

The site does not meet any of the criteria for societal value points = 0 **Score: 2**

Total for H 3: 2

Rating of Value

[X] 2 = H [] 1 = M [] 0 = L

Record the rating on the first page

Wetland name or number: A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

SC 1.0 Estuarine Wetlands

SC 1.1 Does the wetland meet all of the following criteria for Estuarine wetlands?

- The dominant water regime is tidal
- The wetland is vegetated
- The water salinity is greater than 0.5 ppt

Yes - Go to SC 1.2

No - Not an Estuarine Wetland

**Result: Not an
Estuarine Wetland**

SC 1.2 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 Estuarine Wetland

No - Go to SC 1.3

Result:

SC 1.3 Is the wetland unit at least 1ac 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.
- At least 75% of the landward edge of the wetland has a 100ft 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 Estuarine Wetland

No - Category II Estuarine Wetland

Result:

SC 2.0 Wetlands of High Conservation Value

SC 2.1 Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?

Yes - Category I Wetland of High Conservation Value

No - Go to SC 2.2

Result: Go to SC 2.2

SC 2.2 Does the wetland have a rare plant species, rare plant community, or high-quality common plant community that may qualify the site as a WHCV?

Yes - Category I Wetland of High Conservation Value

No - Not a Wetland of High Conservation Value

Result:

Wetland name or number: A

SC 3.0 Bogs

SC 3.1 Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?

Yes - Go to SC 3.3

No - Go to SC 3.2

Result: Go to SC 3.3

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 - Not a Bog Wetland

Result:

SC 3.3 Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least 30% cover of plant species listed in the table provided in the instructions?

Yes - Category I Bog Wetland

No - Go to SC 3.4

Result: Go to SC 3.4

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 combinations of species) listed in the table found in the instructions provide more than 30% of the cover under the canopy?

Yes - Category I Bog Wetland

No - Not a Bog Wetland

Result: Not a Bog Wetland

SC 4.0 Forested Wetlands

SC 4.1 Does the wetland have at least 1 contiguous acre of forest that meets one of the following criteria?

Old-growth forests

Mature forests

Yes - Category I Forested Wetland

No - Not a Forested Wetland

Result: Not a Forested Wetland

Wetland name or number: A

SC 5.0 Wetlands in Coastal Lagoons

SC 5.1 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 rocks
- The depression 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 open water area (measured near the bottom)
- The lagoon retains some of its surface water at low tide during spring tides

Yes - Go to SC 5.2

No - Not a Coastal Lagoon Wetland

Result: Not a Coastal Lagoon Wetland

SC 5.2 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).
- At least 75% of the landward edge of the wetland has a 100ft buffer of shrub, forest, or un-grazed or un-mowed grassland.
- the wetland is larger than 0.10ac (4350 sqft)

Yes - Category I Coastal Lagoon

No - Category II Coastal Lagoon

Result:

SC 6.0 Interdunal Wetlands

SC 6.1 Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership WBUO)?

Yes - Go to SC 6.2

No - Not an Interdunal Wetland

Result: Not an Interdunal Wetland

SC 6.2 Is the wetland 1ac or larger in size, or a mosaic that is 1ac or larger in size?

Wetland is larger than 1ac in size - Go to SC 6.3

Wetland is a mosaic larger than 1ac is size - Category II Interdunal Wetland

No - Go to SC 6.4

Result:

SC 6.3 Does the wetland score 8 or 9 points for the habitat functions?

Yes - Category I Interdunal Wetland

No - Category II Interdunal Wetland

Result:

SC 6.4 Is the wetland unit between 0.1ac and 1ac, or in a mosaic of wetlands that is between 0.1ac and 1ac in size?

Yes - Category III Interdunal Wetland

No - Category IV Interdunal Wetland

Result:

Wetland name or number: A

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form

**Final Category: Not
Applicable**

Cowardin Classes

-  Forested
-  Scrub-shrub
-  Emergent
-  Aquatic bed
-  Open water



Path: P:\GIS\SEA\112000s\112456_Kamiakin_MS_Nat\Rating\FIGA-1\Cowardin.mxd Author: BRL User: SCC Date: 9/27/2024



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure A-1
Cowardin Classes



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These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure A-2
Hydroperiods



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These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure A-3
Land Use Within 150 Feet

^ Habitat Items

- Relatively undisturbed - accessible
- Low/Moderate intensity - accessible
- Relatively undisturbed - not accessible
- Low/Moderate intensity - not accessible
- High Intensity
- Wetland
- Unmapped wetland buffer (1 km)



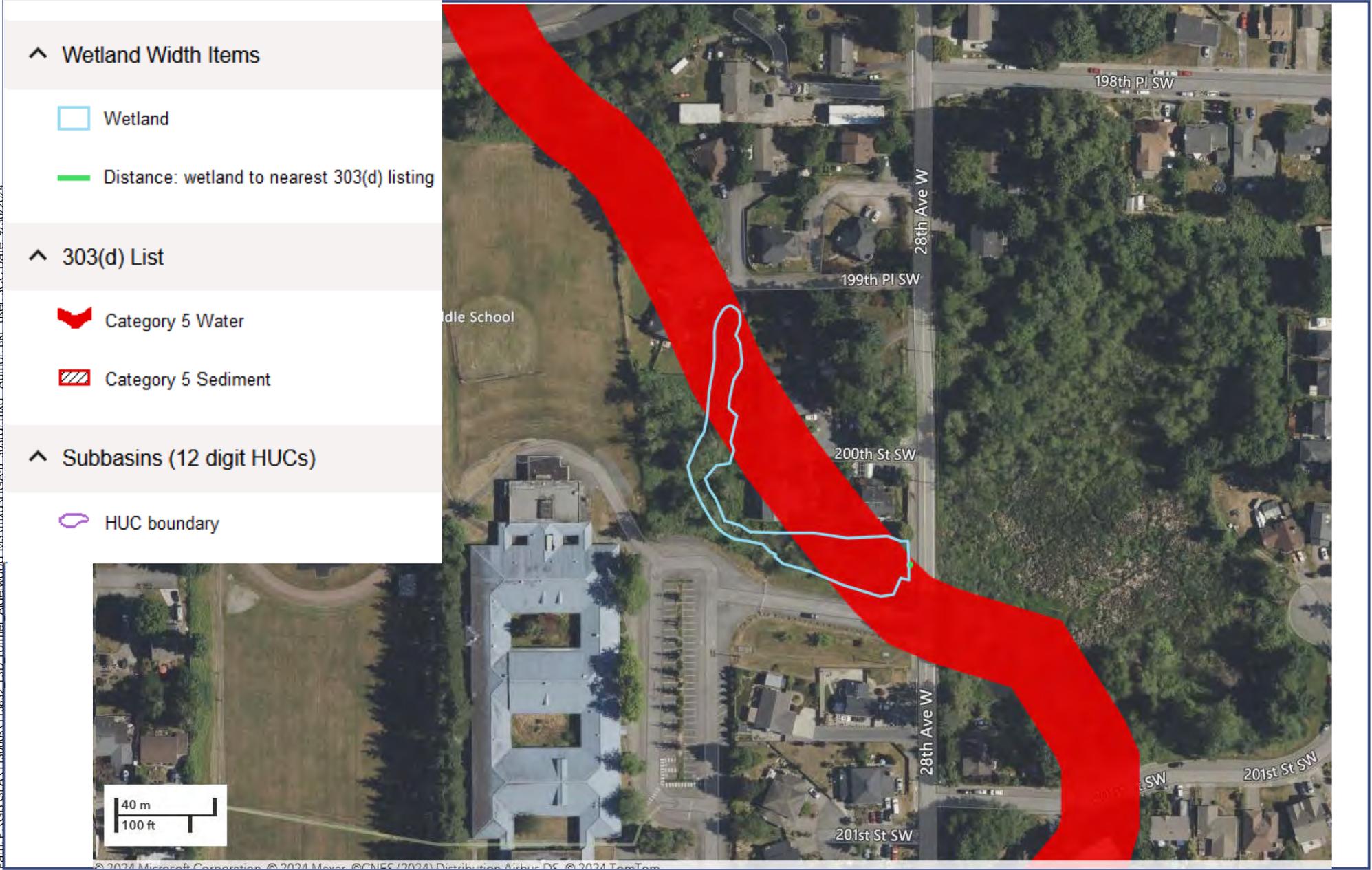
These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure A-5

1KM Habitat and Land Use Intensity

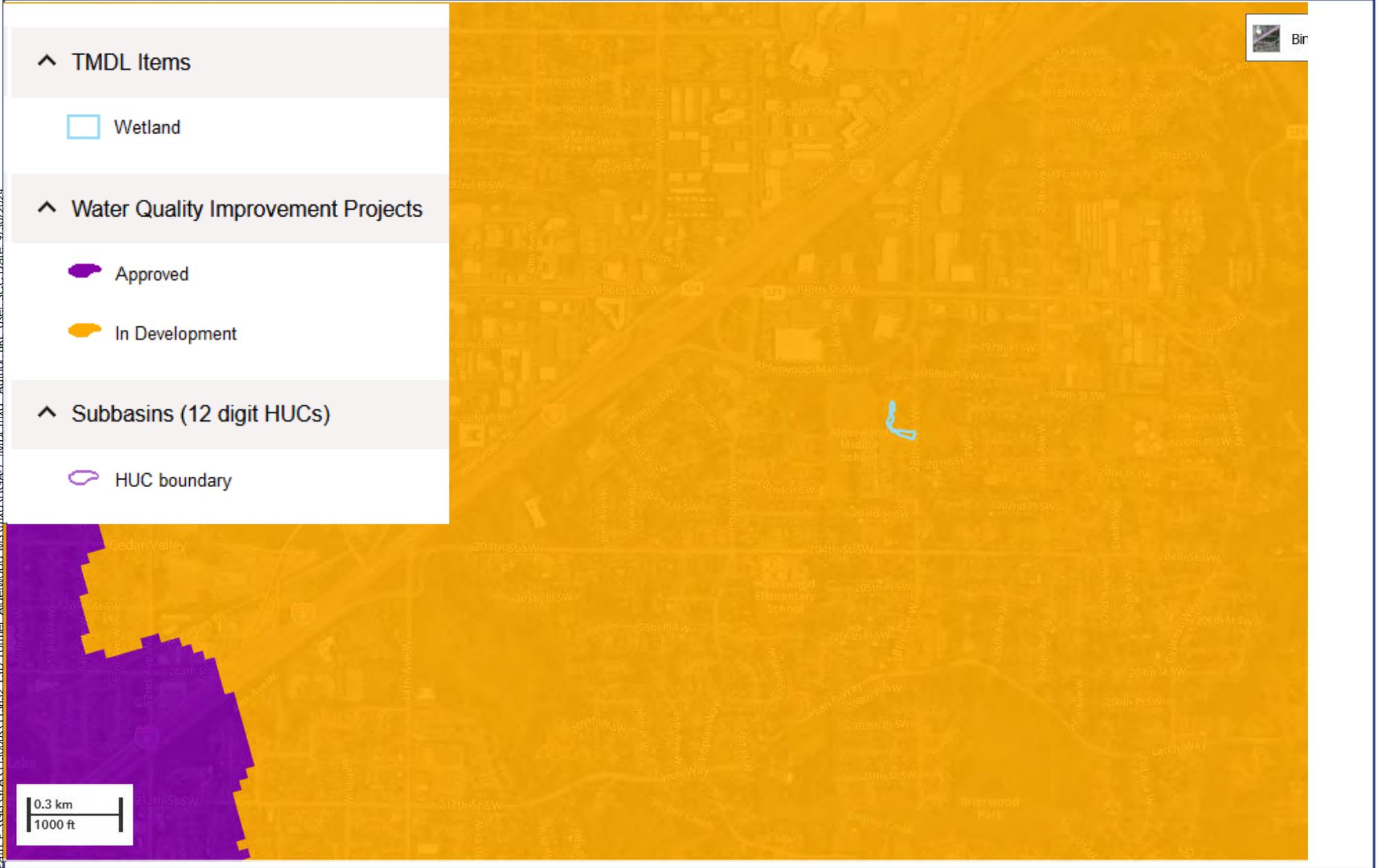
Path: P:\GIS\SEFA\113000s\113832_ESD_Former_Alderwood_MS.mxd\FIG_A-5_1KM\Polycan.mxd_Author: BRL_User_SCC.Date: 9/30/2024

Path: P:\GIS\SEA\113000s\113832_FSD_Former_Alderwood_MS\mxd\VEGA-6_303(d).mxd Author: BR User: SCC Date: 9/30/2024



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure A-6
303(d) Impaired Waters



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N
These figures were generated using the Washington State Department of Ecology
"Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure A-7
Map of Water Quality Improvement Projects (TMDLs)

Wetland name or number: B

RATING SUMMARY - Western Washington

Name of wetland (or ID#): B Date of site visit: 08/01/2024

Rated By: Olivia Sohn Trained by Ecology? Yes No Date of Training: 10/20/2023

HGM Class used for rating: Depressional

Wetland has multiple HGM classes? Yes No

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

Source of base aerial photo/map: Bing Imagery (C) 2024 Microsoft Corporation

OVERALL WETLAND CATEGORY: [Category III] (based on functions or special characteristics)

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	L	L	M	
Landscape Potential	M	H	L	
Value	H	M	H	Total
Score Based on Ratings	6	6	6	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	
Wetland of High Conservation Value	
Bog	
Forested	
Coastal Lagoon	
Interdunal	
None of the above	Not Applicable

Wetland name or number: B

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	B-1
Hydroperiods	D 1.4, H 1.2	B-2
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	B-2
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	B-3
Map of the contributing basin	D 4.3, D 5.3	B-4
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	B-5
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	B-6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	B-7

Wetland name or number: B

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 What are the characteristics of surface water outflows from the wetland?

Wetland has no surface water outlet.	points = 3	
Wetland has an intermittently flowing, or highly constricted, outlet.	points = 2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 1	
Wetland is a flat depression whose outlet is a permanently flowing ditch.	points = 1	Score: 2

D 1.2 Is the soil 2 in. below the surface a true clay or organic soil?

Mapped as true clay or organic (muck or peat)	points = 4	
Soil texture identified as clay or organic in field	points = 4	
Soil texture identified as clay or organic by laboratory test	points = 4	
None of the above	points = 0	Score: 0

D 1.3 What are the characteristics and distribution of persistent plants?

Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > 50% of area	points = 3	
Wetland has persistent, ungrazed plants > 10% of area	points = 1	
Wetland has persistent, ungrazed plants < 10% of area	points = 0	Score: 3

D 1.4 What are the characteristics of seasonal ponding or inundation in the wetland area?

Area seasonally ponded is > 50% total area of wetland	points = 4	
Area seasonally ponded is equal to or > 25% total area of wetland	points = 2	
Area seasonally ponded is < 25% total area of wetland	points = 0	Score: 0

Total for D 1: **5**

Rating of Site Potential

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	points = 1	
No	points = 0	Score: 1

D 2.2 Is >10% of the area within 150ft of the wetland in land uses that generate pollutants in surface runoff?

Yes	points = 1	
No	points = 0	Score: 1

D 2.3 Are there septic systems within 250ft of the wetland?

Yes	points = 1	
No	points = 0	Score: 0

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?

Yes	points = 1	
No	points = 0	Score: 0

Wetland name or number: B

D 2.5 What are the other sources of pollutants coming into the wetland?	
Total for D 2:	2

Rating of Landscape Potential 3-4 = H 1-2 = 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	points = 1
No	points = 0 Score: 1
D 3.2 Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	
Yes	points = 1
No	points = 0 Score: 1
D 3.3 Has the site been identified in a watershed or local plan as important for maintaining water quality?	
Yes	points = 2
No	points = 0 Score: 2
Total for D 3:	4

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

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 What are the characteristics of surface water outflows from the wetland?	
Wetland has no surface water outlet.	points = 4
Wetland has an intermittently flowing, or highly constricted, outlet.	points = 2
Wetland is a flat depression whose outlet is a permanently flowing ditch.	points = 1
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0 Score: 2
D 4.2 What is the depth of storage during the wet periods?	
Marks of ponding are 3ft or more above the surface or bottom of the outlet.	points = 7
Marks of ponding are between 2ft to <3ft from the surface or bottom of the outlet.	points = 5
Marks of ponding are at least 0.5ft to <2ft from the surface or the bottom of the outlet.	points = 3
The wetland is a "headwater" wetland.	points = 3
The wetland is flat but has small depressions on the surface that trap water.	points = 1
Marks of ponding are less than 0.5ft (6in).	points = 0 Score: 3

Wetland name or number: B

D 4.3 <u>What is the contribution of the wetland to storage in the watershed?</u>		
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	
Entire wetland is in the Flats class	points = 5	Score: 0
Total for D 4:		5

Rating of Site Potential

[] 12-16 = H [] 6-11 = M [X] 0-5 = L

Record the rating on the first page

D 5.0 <u>Does the landscape have the potential to support hydrologic functions of the site?</u>		
D 5.1 <u>Does the wetland unit receive stormwater discharges?</u>		
Yes	points = 1	
No	points = 0	Score: 1
D 5.2 <u>Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?</u>		
Yes	points = 1	
No	points = 0	Score: 1
D 5.3 <u>Is more than 25% of the contributing basin of the wetland covered with intensive human land uses?</u>		
Yes	points = 1	
No	points = 0	Score: 1
Total for D 5:		3

Rating of Landscape Potential

[X] 3 = H [] 1-2 = M [] 0 = L

Record the rating on the first page

D 6.0 <u>Are the hydrologic functions provided by the site valuable to society?</u>		
D 6.1 <u>Is the wetland in a landscape that has flooding problems?</u>		
Flooding occurs in a sub-basin that is immediately down-gradient of the wetland.	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
Flooding from groundwater is an issue in the basin.	points = 1	
The existing or potential outflow from the wetland is so constrained that water cannot reach areas that flood.	points = 0	
There are no problems with flooding downstream of the wetland.	points = 0	Score: 1
D 6.2 <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	Score: 0
Total for D 6:		1

Rating of Value

[] 2-4 = H [X] 1 = M [] 0 = L

Record the rating on the first page

Wetland name or number: B

HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

H 1.0 Does the wetland have the potential to provide habitat for many species?

H 1.1 What is the structure of the plant community?

- Aquatic Bed
- Emergent
- Scrub-shrub
- Forested
- Multiple strata within the Forested class (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)

4 structures or more	points = 4
3 structures	points = 2
2 structures	points = 1
1 structure	points = 0
No structures present	points = 0

Score: 2

H 1.2 What are the hydroperiods that meet the size thresholds in the wetland?

- Permanently flooded or inundated
- Seasonally flooded or inundated
- Occasionally flooded or inundated
- Saturated only
- Permanently flowing stream or river in, or adjacent to, the wetland
- Seasonally flowing stream in, or adjacent to, the wetland
- Lake Fringe wetland
- Freshwater Tidal wetland

4 or more types present	points = 3
3 types present or Lake Fringe / Freshwater Tidal Fringe	points = 2
2 types present	points = 1
1 type present	points = 0
None present	points = 0

Score: 3

H 1.3 What is the richness of the plant species in the wetland?

>19 species	points = 2
5-19 species	points = 1
<5 species	points = 0

Score: 1

Wetland name or number: B

H 1.4 What is the interspersion of habitats?

High	points = 3	
Moderate	points = 2	
Low	points = 1	
None	points = 0	Score: 3

H 1.5 What are the special habitat features in the wetland?

- Large, downed, woody debris within the wetland (>4in diameter and 6ft long).
- Standing snags (dbh >4in) within the wetland
- Undercut banks are present for at least 6.6ft (2m) and/or overhanging plants extend at least 3.3ft (1m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33ft (10m)
- 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 0.25ac 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)

6 habitats selected	points = 6	
5 habitats selected	points = 5	
4 habitats selected	points = 4	
3 habitats selected	points = 3	
2 habitats selected	points = 2	
1 habitat selected	points = 1	
No habitats selected	points = 0	Score: 4

Total for H 1: 13

Rating of Site Potential

[] 15-18 = H [X] 7-14 = M [] 0-6 = L

Record the rating on the first page

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

H 2.1 What is the percentage of accessible habitat within 1km of the wetland?

>33% of 1km Polygon	points = 3	
20-33% of 1km Polygon	points = 2	
10-19% of 1km Polygon	points = 1	
<10% of 1km Polygon	points = 0	Score: 0

H 2.2 What is the percentage of total habitat in a 1km polygon around the wetland?

Total habitat is >50% of the Polygon	points = 3	
Total habitat is 10-50% of the Polygon and in 1-3 patches	points = 2	
Total habitat is 10-50% of the Polygon and in >3 patches	points = 1	
Total habitat is <10% of the Polygon	points = 0	Score: 0

Wetland name or number: B

H 2.3 What is the land use intensity in the 1km polygon?

50% of the Polygon is high intensity land use
<50% of the Polygon is high intensity land use

points = -2
points = 0

Score: -2

Total for H 2: -2

Rating of Landscape Potential

[] 4-6 = H [] 1-3 = M [X] 0 = 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?

- Aspen Stands
- Biodiversity Areas and Corridors
- Herbaceous Balds
- Old-growth/Mature Forests
- Oregon White Oak
- Riparian
- Westside Prarie
- Fresh Deepwater
- Instream
- Nearshore (Coastal, Open Coast, Puget Sound)
- Caves
- Cliffs
- Snags and Logs
- Talus

The following criteria automatically score 2 points:

- The wetland provides habitat for Threatened or Endangered species
- The wetland is mapped as a location for an individual WDFW priority species
- The wetland is a Wetland of High Conservation Value
- The wetland has been categorized as an important habitat site in a local plan

The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value

points = 2

The site has 1 or 2 WDFW priority habitats within 100m

points = 1

The site does not meet any of the criteria for societal value

points = 0

Score: 2

Total for H 3: 2

Rating of Value

[X] 2 = H [] 1 = M [] 0 = L

Record the rating on the first page

Wetland name or number: B

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

SC 1.0 Estuarine Wetlands

SC 1.1 Does the wetland meet all of the following criteria for Estuarine wetlands?

- The dominant water regime is tidal
- The wetland is vegetated
- The water salinity is greater than 0.5 ppt

Yes - Go to SC 1.2

No - Not an Estuarine Wetland

**Result: Not an
Estuarine Wetland**

SC 1.2 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 Estuarine Wetland

No - Go to SC 1.3

Result:

SC 1.3 Is the wetland unit at least 1ac 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.
- At least 75% of the landward edge of the wetland has a 100ft 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 Estuarine Wetland

No - Category II Estuarine Wetland

Result:

SC 2.0 Wetlands of High Conservation Value

SC 2.1 Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?

Yes - Category I Wetland of High Conservation Value

No - Go to SC 2.2

Result: Go to SC 2.2

SC 2.2 Does the wetland have a rare plant species, rare plant community, or high-quality common plant community that may qualify the site as a WHCV?

Yes - Category I Wetland of High Conservation Value

No - Not a Wetland of High Conservation Value

**Result: Not a Wetland
of High Conservation
Value**

Wetland name or number: B

SC 3.0 Bogs

SC 3.1 Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?

Yes - Go to SC 3.3

No - Go to SC 3.2

Result: 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 - Not a Bog Wetland

Result: Not a Bog Wetland

SC 3.3 Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least 30% cover of plant species listed in the table provided in the instructions?

Yes - Category I Bog Wetland

No - Go to SC 3.4

Result:

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 combinations of species) listed in the table found in the instructions provide more than 30% of the cover under the canopy?

Yes - Category I Bog Wetland

No - Not a Bog Wetland

Result:

SC 4.0 Forested Wetlands

SC 4.1 Does the wetland have at least 1 contiguous acre of forest that meets one of the following criteria?

Old-growth forests

Mature forests

Yes - Category I Forested Wetland

No - Not a Forested Wetland

Result: Not a Forested Wetland

Wetland name or number: B

SC 5.0 Wetlands in Coastal Lagoons

SC 5.1 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 rocks
- The depression 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 open water area (measured near the bottom)
- The lagoon retains some of its surface water at low tide during spring tides

Yes - Go to SC 5.2

No - Not a Coastal Lagoon Wetland

Result: Not a Coastal Lagoon Wetland

SC 5.2 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).
- At least 75% of the landward edge of the wetland has a 100ft buffer of shrub, forest, or un-grazed or un-mowed grassland.
- the wetland is larger than 0.10ac (4350 sqft)

Yes - Category I Coastal Lagoon

No - Category II Coastal Lagoon

Result:

SC 6.0 Interdunal Wetlands

SC 6.1 Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership WBUO)?

Yes - Go to SC 6.2

No - Not an Interdunal Wetland

Result: Not an Interdunal Wetland

SC 6.2 Is the wetland 1ac or larger in size, or a mosaic that is 1ac or larger in size?

Wetland is larger than 1ac in size - Go to SC 6.3

Wetland is a mosaic larger than 1ac is size - Category II Interdunal Wetland

No - Go to SC 6.4

Result:

SC 6.3 Does the wetland score 8 or 9 points for the habitat functions?

Yes - Category I Interdunal Wetland

No - Category II Interdunal Wetland

Result:

SC 6.4 Is the wetland unit between 0.1ac and 1ac, or in a mosaic of wetlands that is between 0.1ac and 1ac in size?

Yes - Category III Interdunal Wetland

No - Category IV Interdunal Wetland

Result:

Wetland name or number: B

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form

**Final Category: Not
Applicable**

Cowardin Classes

- Forested
- Scrub-shrub
- Emergent
- Aquatic bed

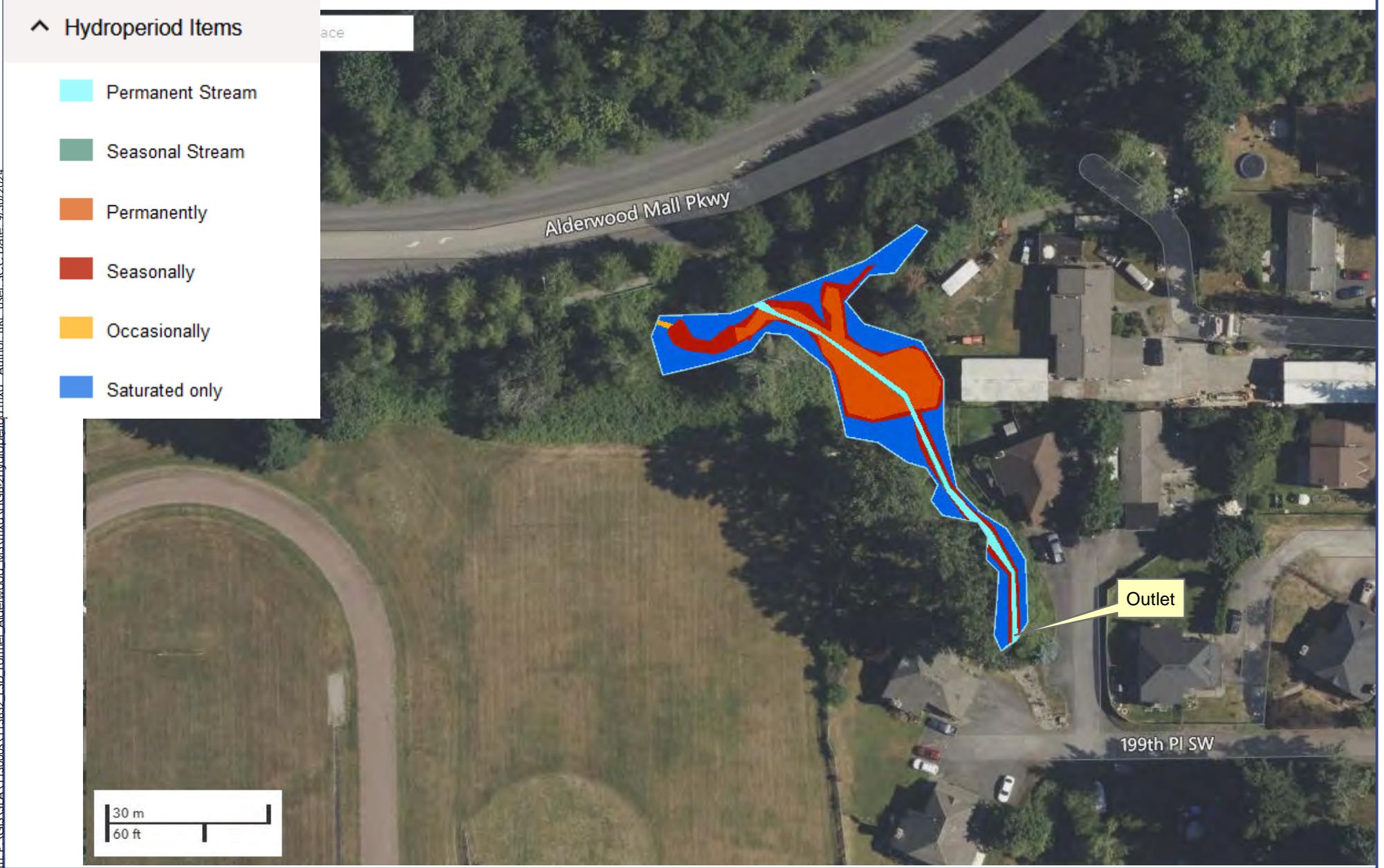


Path: P:\GIS\SEA\113000s\113832_ESD_Former_Alderwood_MS\mxd\VEGB-1\Cowardin.mxd Author: BRL User: SCC Date: 9/30/2024



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure B-1
Cowardin Classes



Path: P:\GIS\SEA\113000s\113832_ESD_Former_Alderwood_MS\mxd\VEGB-2Hydroperiod.mxd_Author:BR...User:SCC.Date: 9/30/2024



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure B-2
Hydroperiods



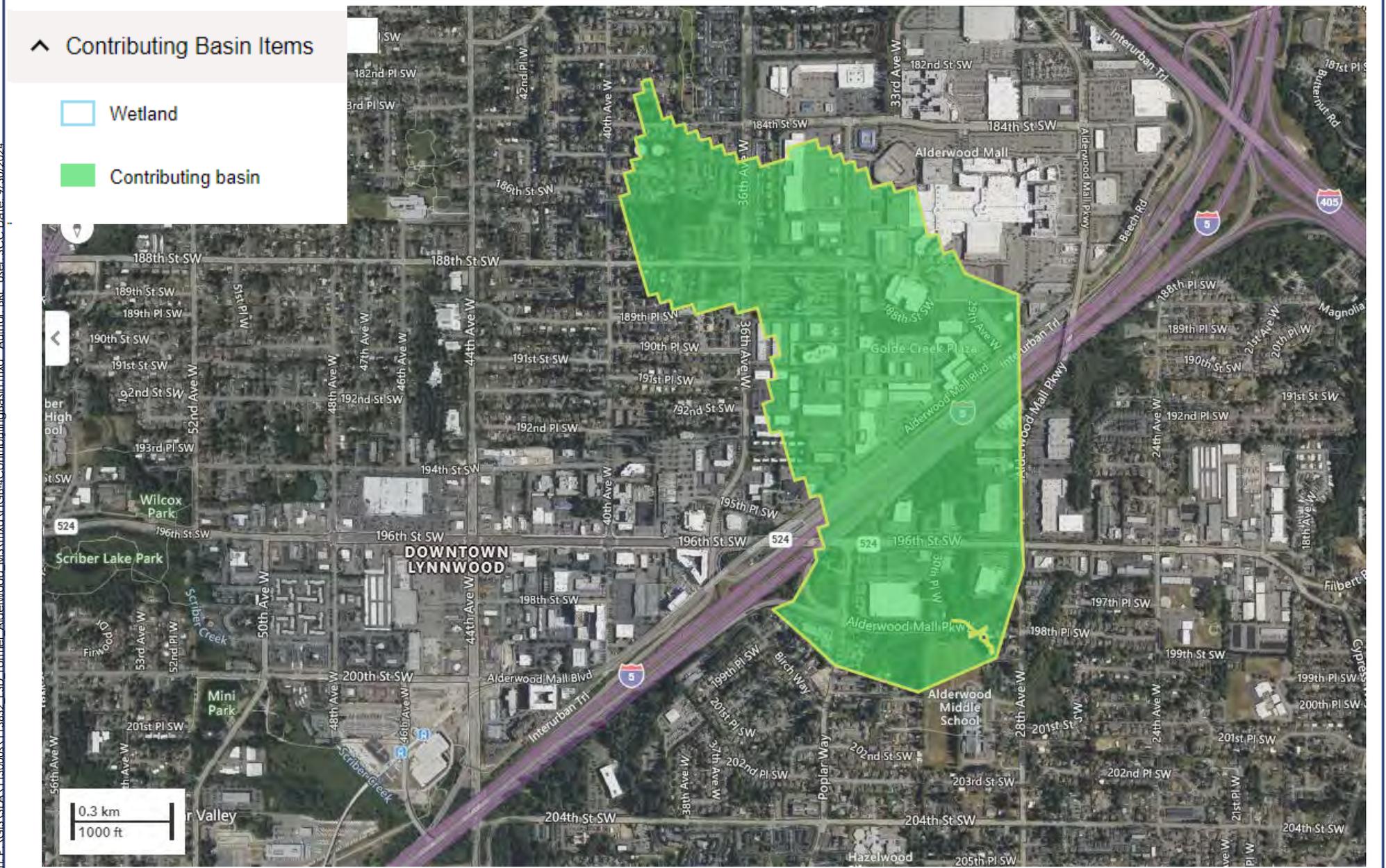
Path: P:\GIS\SEA\113000s\113832_ESD_Former_Alderwood_MS.mxd\VEGB-3_LandUse.mxd_Author: BR User_SCC: Date: 9/30/2024



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure B-3
Land Use Within 150 Feet

Path: P:\GIS\SEA\113000s\113832_ESD_Former_Alderwood_MS.mxd\FIGB-4\ContributingBasin.mxd_Author:BR User:SCC Date: 9/20/2024



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

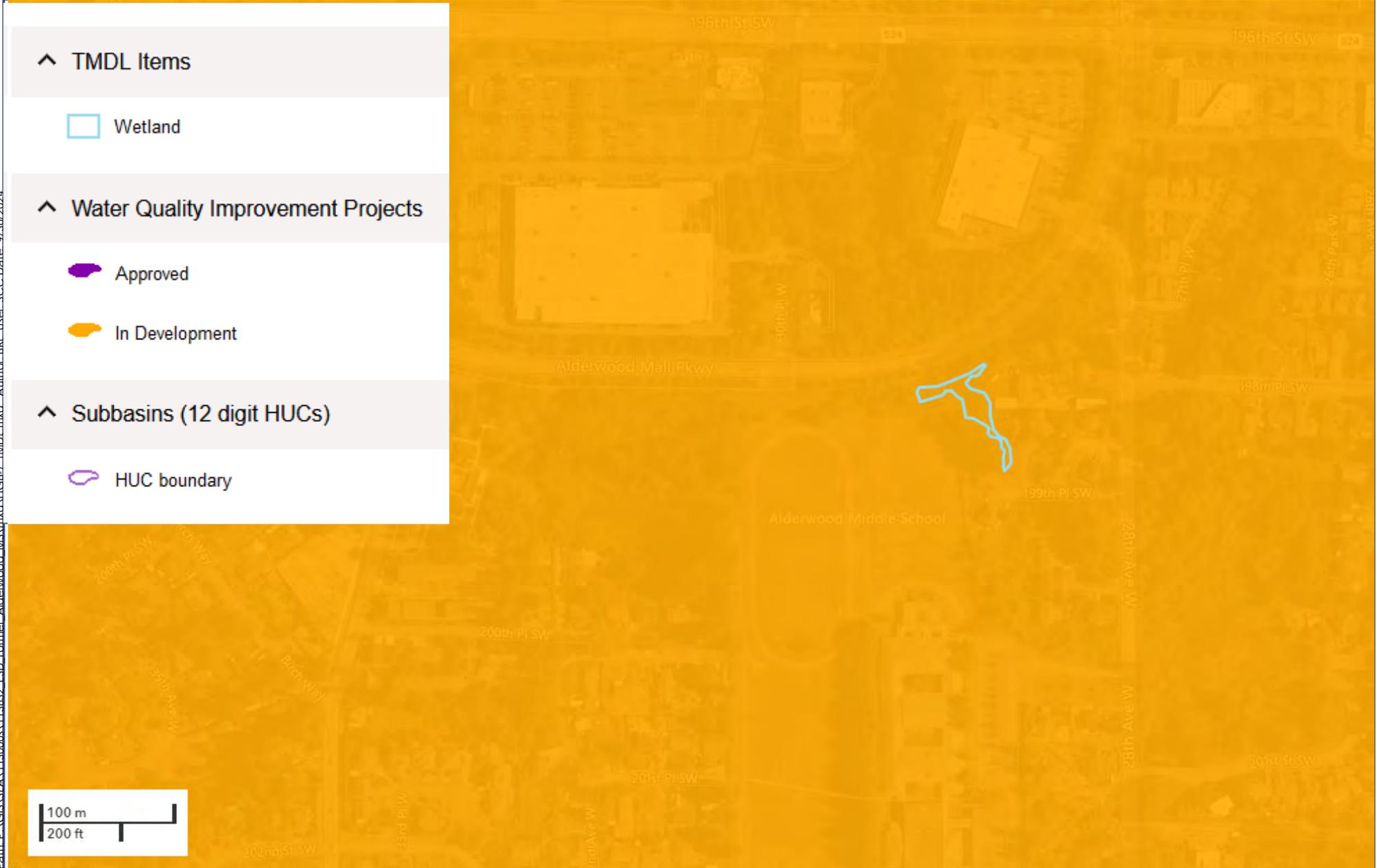
Rating Figure B-4
Contributing Basin

Path: P:\GIS\SEA\113000s\113832_FSD_Former_Alderwood_MS.mxd\VEGB-6_303(d).mxd_Author: BRL_User_SCC_Date: 9/30/2024



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure B-6
303(d) Impaired Waters



Path: P:\GIS\SEA\113000s\113832_ESD_Former_Alderwood_MS.mxd\VEGB-7_TMDL.mxd_Author: BR User_S.CC.Date: 9/30/2024

N
These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure B-7
Map of Water Quality Improvement Projects (TMDLs)

Wetland name or number: C

RATING SUMMARY - Western Washington

Name of wetland (or ID#): C Date of site visit: 08/07/2024

Rated By: Olivia Sohn Trained by Ecology? Yes No Date of Training: 10/20/2023

HGM Class used for rating: Depressional

Wetland has multiple HGM classes? Yes No

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

Source of base aerial photo/map: Bing Imagery (C) 2024 Microsoft Corporation

OVERALL WETLAND CATEGORY: **[Category III]** (based on functions or special characteristics)

1. Category of wetland based on FUNCTIONS

Category I - Total score = 23 - 27

Category II - Total score = 20 - 22

Category III - Total score = 16 - 19

Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	L	M	M	
Landscape Potential	H	H	L	
Value	H	M	M	Total
Score Based on Ratings	7	7	5	19

Score for each function based on three ratings

(order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	
Wetland of High Conservation Value	
Bog	
Forested	
Coastal Lagoon	
Interdunal	
None of the above	Not Applicable

Wetland name or number: C

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	C-1
Hydroperiods	D 1.4, H 1.2	C-2
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	C-2
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	C-3
Map of the contributing basin	D 4.3, D 5.3	C-4
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	C-5
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	C-6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	C-7

Wetland name or number: C

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 What are the characteristics of surface water outflows from the wetland?

Wetland has no surface water outlet.	points = 3	
Wetland has an intermittently flowing, or highly constricted, outlet.	points = 2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 1	
Wetland is a flat depression whose outlet is a permanently flowing ditch.	points = 1	Score: 2

D 1.2 Is the soil 2 in. below the surface a true clay or organic soil?

Mapped as true clay or organic (muck or peat)	points = 4	
Soil texture identified as clay or organic in field	points = 4	
Soil texture identified as clay or organic by laboratory test	points = 4	
None of the above	points = 0	Score: 0

D 1.3 What are the characteristics and distribution of persistent plants?

Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > 50% of area	points = 3	
Wetland has persistent, ungrazed plants > 10% of area	points = 1	
Wetland has persistent, ungrazed plants < 10% of area	points = 0	Score: 3

D 1.4 What are the characteristics of seasonal ponding or inundation in the wetland area?

Area seasonally ponded is > 50% total area of wetland	points = 4	
Area seasonally ponded is equal to or > 25% total area of wetland	points = 2	
Area seasonally ponded is < 25% total area of wetland	points = 0	Score: 0

Total for D 1: 5

Rating of Site Potential

[] 12-16 = H [] 6-11 = M [X] 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	points = 1	
No	points = 0	Score: 1

D 2.2 Is >10% of the area within 150ft of the wetland in land uses that generate pollutants in surface runoff?

Yes	points = 1	
No	points = 0	Score: 1

D 2.3 Are there septic systems within 250ft of the wetland?

Yes	points = 1	
-----	------------	--

No	points = 0	Score: 0
D 2.4 <u>Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?</u>		
Yes	points = 1	
No	points = 0	Score: 1

Wetland name or number: C

D 2.5 What are the other sources of pollutants coming into the wetland?

Waterfowl, dog use at Heritage Park west of the wetland

Total for D 2: **3**

Rating of Landscape Potential

3-4 = H 1-2 = 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 [See figure C-6.](#) points = 1
No points = 0 **Score: 1**

D 3.2 Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?

Yes [See figure C-6.](#) points = 1
No points = 0 **Score: 1**

D 3.3 Has the site been identified in a watershed or local plan as important for maintaining water quality?

Yes points = 2
No points = 0 **Score: 2**

Total for D 3: **4**

Rating of Value

2-4 = H 1 = M 0 = L

Record the rating on the first page

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 What are the characteristics of surface water outflows from the wetland?

Wetland has no surface water outlet. points = 4
Wetland has an intermittently flowing, or highly constricted, outlet. points = 2
Wetland is a flat depression whose outlet is a permanently flowing ditch. points = 1
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0 **Score: 2**

D 4.2 What is the depth of storage during the wet periods?

Marks of ponding are 3ft or more above the surface or bottom of the outlet. points = 7
Marks of ponding are between 2ft to <3ft from the surface or bottom of the outlet. points = 5
Marks of ponding are at least 0.5ft to <2ft from the surface or the bottom of the outlet. points = 3
The wetland is a "headwater" wetland. points = 3
The wetland is flat but has small depressions on the surface that trap water. points = 1
Marks of ponding are less than 0.5ft (6in). points = 0 **Score: 3**

Wetland name or number: C

D 4.3 <u>What is the contribution of the wetland to storage in the watershed?</u>		
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	
Entire wetland is in the Flats class	points = 5	Score: 3
Total for D 4:		8

Rating of Site Potential

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 <u>Does the wetland unit receive stormwater discharges?</u>		
Yes	points = 1	
No	points = 0	Score: 1
D 5.2 <u>Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?</u>		
Yes	points = 1	
No	points = 0	Score: 1
D 5.3 <u>Is more than 25% of the contributing basin of the wetland covered with intensive human land uses?</u>		
Yes	points = 1	
No	points = 0	Score: 1
Total for D 5:		3

Rating of Landscape Potential

3 = H 1-2 = 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 <u>Is the wetland in a landscape that has flooding problems?</u>		
Flooding occurs in a sub-basin that is immediately down-gradient of the wetland.	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
Flooding from groundwater is an issue in the basin.	points = 1	
The existing or potential outflow from the wetland is so constrained that water cannot reach areas that flood.	points = 0	
There are no problems with flooding downstream of the wetland.	points = 0	Score: 1
D 6.2 <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	Score: 0
Total for D 6:		1

Rating of Value

2-4 = H 1 = M 0 = L

Record the rating on the first page

Wetland name or number: C

HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

H 1.0 Does the wetland have the potential to provide habitat for many species?

H 1.1 What is the structure of the plant community?

- Aquatic Bed
- Emergent
- Scrub-shrub
- Forested
- Multiple strata within the Forested class (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)

4 structures or more	points = 4	
3 structures	points = 2	
2 structures	points = 1	
1 structure	points = 0	
No structures present	points = 0	Score: 4

H 1.2 What are the hydroperiods that meet the size thresholds in the wetland?

- Permanently flooded or inundated
- Seasonally flooded or inundated
- Occasionally flooded or inundated
- Saturated only
- Permanently flowing stream or river in, or adjacent to, the wetland
- Seasonally flowing stream in, or adjacent to, the wetland
- Lake Fringe wetland
- Freshwater Tidal wetland

4 or more types present	points = 3	
3 types present or Lake Fringe / Freshwater Tidal Fringe	points = 2	
2 types present	points = 1	
1 type present	points = 0	
None present	points = 0	Score: 3

H 1.3 What is the richness of the plant species in the wetland?

>19 species	points = 2	
5-19 species	points = 1	
<5 species	points = 0	Score: 1

Wetland name or number: C

H 1.4 <u>What is the interspersions of habitats?</u>	
High	points = 3
Moderate	points = 2
Low	points = 1
None	points = 0
Score: 3	
H 1.5 <u>What are the special habitat features in the wetland?</u>	
<input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (>4in diameter and 6ft long).	
<input checked="" type="checkbox"/> Standing snags (dbh >4in) within the wetland	
<input type="checkbox"/> Undercut banks are present for at least 6.6ft (2m) and/or overhanging plants extend at least 3.3ft (1m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33ft (10m)	
<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 (cut shrubs or trees that have not yet weathered where wood is exposed)	
<input type="checkbox"/> At least 0.25ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)	
<input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)	
6 habitats selected	points = 6
5 habitats selected	points = 5
4 habitats selected	points = 4
3 habitats selected	points = 3
2 habitats selected	points = 2
1 habitat selected	points = 1
No habitats selected	points = 0
Score: 2	
Total for H 1:	
13	

Rating of Site Potential

[] 15-18 = H [X] 7-14 = M [] 0-6 = L

Record the rating on the first page

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

H 2.1 <u>What is the percentage of accessible habitat within 1km of the wetland?</u>	
>33% of 1km Polygon	points = 3
20-33% of 1km Polygon	points = 2
10-19% of 1km Polygon	points = 1
<10% of 1km Polygon	points = 0
Score: 0	
H 2.2 <u>What is the percentage of total habitat in a 1km polygon around the wetland?</u>	
Total habitat is >50% of the Polygon	points = 3
Total habitat is 10-50% of the Polygon and in 1-3 patches	points = 2

Total habitat is 10-50% of the Polygon and in >3 patches

points = 1

Total habitat is <10% of the Polygon

points = 0

Score: 0

Wetland name or number: C

H 2.3 <u>What is the land use intensity in the 1km polygon?</u>		
50% of the Polygon is high intensity land use	points = -2	
<50% of the Polygon is high intensity land use	points = 0	Score: -2
Total for H 2:		-2

Rating of Landscape Potential

[] 4-6 = H [] 1-3 = M [X] 0 = L

Record the rating on the first page

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

H 3.1 <u>Does the site provide habitat for species valued in laws, regulations, or policies?</u>		
<input type="checkbox"/> Aspen Stands		
<input type="checkbox"/> Biodiversity Areas and Corridors		
<input type="checkbox"/> Herbaceous Balds		
<input type="checkbox"/> Old-growth/Mature Forests		
<input type="checkbox"/> Oregon White Oak		
<input checked="" type="checkbox"/> Riparian		
<input type="checkbox"/> Westside Prarie		
<input type="checkbox"/> Fresh Deepwater		
<input type="checkbox"/> Instream		
<input type="checkbox"/> Nearshore (Coastal, Open Coast, Puget Sound)		
<input type="checkbox"/> Caves		
<input type="checkbox"/> Cliffs		
<input checked="" type="checkbox"/> Snags and Logs		
<input type="checkbox"/> Talus		
The following criteria automatically score 2 points:		
<input type="checkbox"/> The wetland provides habitat for Threatened or Endangered species		
<input type="checkbox"/> The wetland is mapped as a location for an individual WDFW priority species		
<input type="checkbox"/> The wetland is a Wetland of High Conservation Value		
<input type="checkbox"/> The wetland has been categorized as an important habitat site in a local plan		
The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	Score: 1
Total for H 3:		1

Rating of Value

[] 2 = H [X] 1 = M [] 0 = L

Record the rating on the first page

Wetland name or number: C

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

SC 1.0 Estuarine Wetlands

SC 1.1 Does the wetland meet all of the following criteria for Estuarine wetlands?

- The dominant water regime is tidal
- The wetland is vegetated
- The water salinity is greater than 0.5 ppt

Yes - Go to SC 1.2

No - Not an Estuarine Wetland

Result:

SC 1.2 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 Estuarine Wetland

No - Go to SC 1.3

Result:

SC 1.3 Is the wetland unit at least 1ac 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.
- At least 75% of the landward edge of the wetland has a 100ft 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 Estuarine Wetland

No - Category II Estuarine Wetland

Result:

SC 2.0 Wetlands of High Conservation Value

SC 2.1 Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?

Yes - Category I Wetland of High Conservation Value

No - Go to SC 2.2

Result: Go to SC 2.2

SC 2.2 Does the wetland have a rare plant species, rare plant community, or high-quality common plant community that may qualify the site as a WHCV?

Yes - Category I Wetland of High Conservation Value

No - Not a Wetland of High Conservation Value

Result: Not a Wetland of High Conservation Value

Wetland name or number: C

SC 3.0 Bogs

SC 3.1 Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?

Yes - Go to SC 3.3

No - Go to SC 3.2

Result: 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 - Not a Bog Wetland

Result: Not a Bog Wetland

SC 3.3 Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least 30% cover of plant species listed in the table provided in the instructions?

Yes - Category I Bog Wetland

No - Go to SC 3.4

Result:

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 combinations of species) listed in the table found in the instructions provide more than 30% of the cover under the canopy?

Yes - Category I Bog Wetland

No - Not a Bog Wetland

Result:

SC 4.0 Forested Wetlands

SC 4.1 Does the wetland have at least 1 contiguous acre of forest that meets one of the following criteria?

Old-growth forests

Mature forests

Yes - Category I Forested Wetland

No - Not a Forested Wetland

Result: Not a Forested Wetland

Wetland name or number: C

SC 5.0 Wetlands in Coastal Lagoons

SC 5.1 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 rocks
- The depression 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 open water area (measured near the bottom)
- The lagoon retains some of its surface water at low tide during spring tides

Yes - Go to SC 5.2

No - Not a Coastal Lagoon Wetland

Result: Not a Coastal Lagoon Wetland

SC 5.2 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).
- At least 75% of the landward edge of the wetland has a 100ft buffer of shrub, forest, or un-grazed or un-mowed grassland.
- the wetland is larger than 0.10ac (4350 sqft)

Yes - Category I Coastal Lagoon

No - Category II Coastal Lagoon

Result:

SC 6.0 Interdunal Wetlands

SC 6.1 Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership WBUO)?

Yes - Go to SC 6.2

No - Not an Interdunal Wetland

Result: Not an Interdunal Wetland

SC 6.2 Is the wetland 1ac or larger in size, or a mosaic that is 1ac or larger in size?

Wetland is larger than 1ac in size - Go to SC 6.3

Wetland is a mosaic larger than 1ac is size - Category II Interdunal Wetland

No - Go to SC 6.4

Result:

SC 6.3 Does the wetland score 8 or 9 points for the habitat functions?

Yes - Category I Interdunal Wetland

No - Category II Interdunal Wetland

Result:

SC 6.4 Is the wetland unit between 0.1ac and 1ac, or in a mosaic of wetlands that is between 0.1ac and 1ac in size?

Yes - Category III Interdunal Wetland

No - Category IV Interdunal Wetland

Result:

Wetland name or number: C

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form

Final Category: Not Applicable

Cowardin Classes

-  Forested
-  Scrub-shrub
-  Emergent
-  Aquatic bed
-  Open water



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure C-1
Cowardin Classes



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure C-2
Hydroperiods



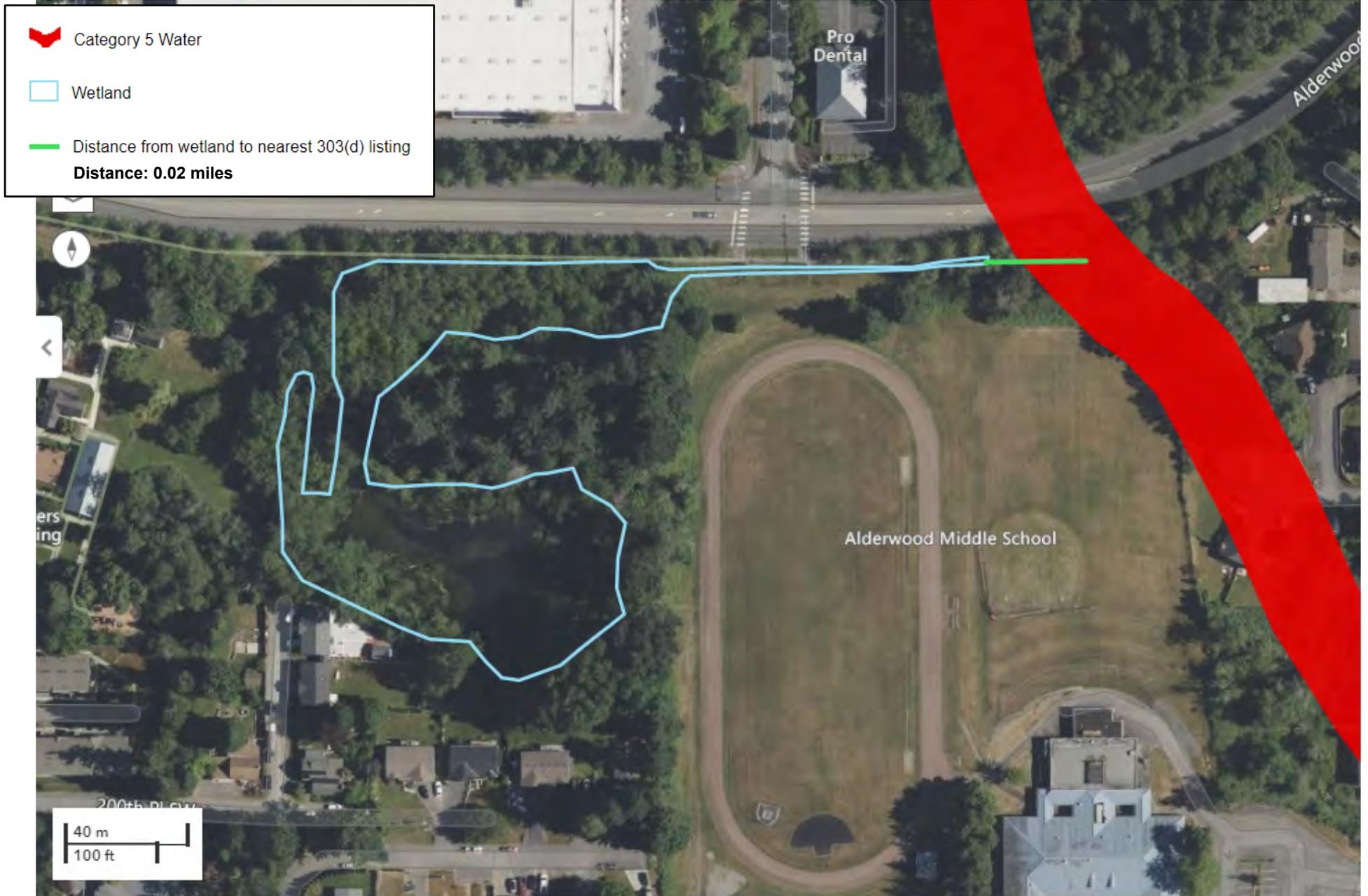
These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure C-3
Land Use Within 150 Feet



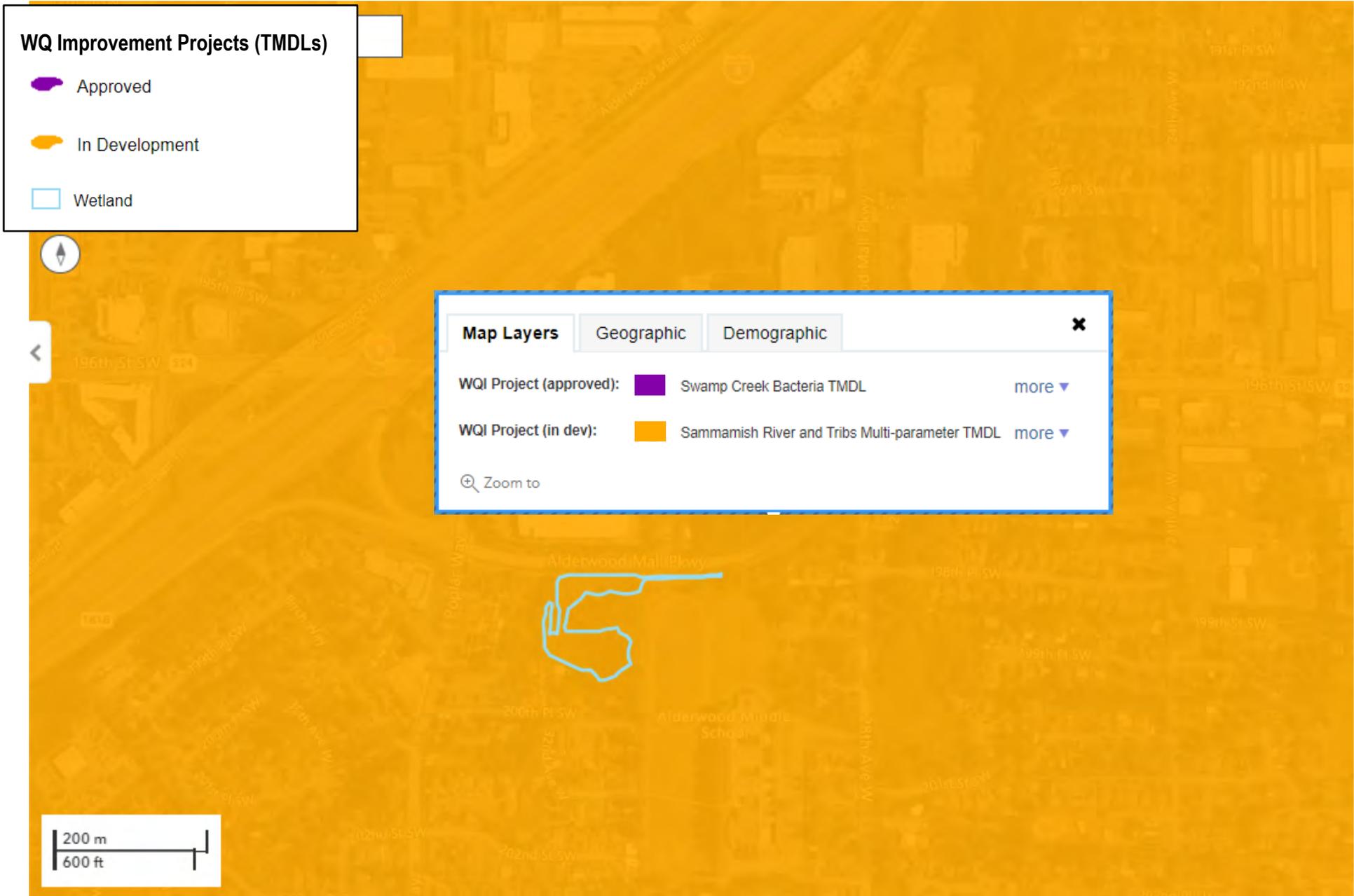
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These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure C-4
Contributing Basin



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure C-6
303d Listings



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure C-7
Map of Water Quality Improvement Projects (TMDLs)

Wetland name or number: D

RATING SUMMARY - Western Washington

Name of wetland (or ID#): D Date of site visit: 08/07/2024

Rated By: Olivia Sohn Trained by Ecology? Yes No Date of Training: 10/20/2023

HGM Class used for rating: Depressional

Wetland has multiple HGM classes? Yes No

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

Source of base aerial photo/map: Bing Imagery (C) 2024 Microsoft Corporation

OVERALL WETLAND CATEGORY: **[Category III]** (based on functions or special characteristics)

1. Category of wetland based on FUNCTIONS

Category I - Total score = 23 - 27

Category II - Total score = 20 - 22

Category III - Total score = 16 - 19

Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	M	M	L	
Landscape Potential	M	M	L	
Value	M	M	M	Total
Score Based on Ratings	6	6	4	16

Score for each function based on three ratings

(order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	
Wetland of High Conservation Value	
Bog	
Forested	
Coastal Lagoon	
Interdunal	
None of the above	Not Applicable

Wetland name or number: D

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	D-1
Hydroperiods	D 1.4, H 1.2	D-2
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	D-2
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	D-3
Map of the contributing basin	D 4.3, D 5.3	D-4
1km Polygon: Area that extends 1km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	D-5
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	D-6
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	D-7

Wetland name or number: D

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 What are the characteristics of surface water outflows from the wetland?

Wetland has no surface water outlet.	points = 3	
Wetland has an intermittently flowing, or highly constricted, outlet.	points = 2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 1	
Wetland is a flat depression whose outlet is a permanently flowing ditch.	points = 1	Score: 3

D 1.2 Is the soil 2 in. below the surface a true clay or organic soil?

Mapped as true clay or organic (muck or peat)	points = 4	
Soil texture identified as clay or organic in field	points = 4	
Soil texture identified as clay or organic by laboratory test	points = 4	
None of the above	points = 0	Score: 0

D 1.3 What are the characteristics and distribution of persistent plants?

Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > 50% of area	points = 3	
Wetland has persistent, ungrazed plants > 10% of area	points = 1	
Wetland has persistent, ungrazed plants < 10% of area	points = 0	Score: 5

D 1.4 What are the characteristics of seasonal ponding or inundation in the wetland area?

Area seasonally ponded is > 50% total area of wetland	points = 4	
Area seasonally ponded is equal to or > 25% total area of wetland	points = 2	
Area seasonally ponded is < 25% total area of wetland	points = 0	Score: 0

Total for D 1: 8

Rating of Site Potential

[] 12-16 = H [X] 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	points = 1	
No	points = 0	Score: 0

D 2.2 Is >10% of the area within 150ft of the wetland in land uses that generate pollutants in surface runoff?

Yes	points = 1	
No	points = 0	Score: 0

D 2.3 Are there septic systems within 250ft of the wetland?

Yes	points = 1	
-----	------------	--

No	points = 0	Score: 0
D 2.4 <u>Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?</u>		
Yes	points = 1	
No	points = 0	Score: 1

Wetland name or number: D

D 2.5 What are the other sources of pollutants coming into the wetland?

Dog waste

Total for D 2: **1**

Rating of Landscape Potential

3-4 = H 1-2 = 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 points = 1

No points = 0

Score: 0

D 3.2 Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?

Yes points = 1

No points = 0

Score: 1

D 3.3 Has the site been identified in a watershed or local plan as important for maintaining water quality?

Yes points = 2

No points = 0

Score: 0

Total for D 3: **1**

Rating of Value

2-4 = H 1 = M 0 = L

Record the rating on the first page

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 What are the characteristics of surface water outflows from the wetland?

Wetland has no surface water outlet. points = 4

Wetland has an intermittently flowing, or highly constricted, outlet. points = 2

Wetland is a flat depression whose outlet is a permanently flowing ditch. points = 1

Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0 **Score: 4**

D 4.2 What is the depth of storage during the wet periods?

Marks of ponding are 3ft or more above the surface or bottom of the outlet. points = 7

Marks of ponding are between 2ft to <3ft from the surface or bottom of the outlet. points = 5

Marks of ponding are at least 0.5ft to <2ft from the surface or the bottom of the outlet. points = 3

The wetland is a "headwater" wetland. points = 3

The wetland is flat but has small depressions on the surface that trap water. points = 1

Marks of ponding are less than 0.5ft (6in). points = 0 **Score: 0**

Wetland name or number: D

D 4.3 <u>What is the contribution of the wetland to storage in the watershed?</u>		
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	
Entire wetland is in the Flats class	points = 5	Score: 5
Total for D 4:		9

Rating of Site Potential

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 <u>Does the wetland unit receive stormwater discharges?</u>		
Yes	points = 1	
No	points = 0	Score: 0
D 5.2 <u>Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?</u>		
Yes	points = 1	
No	points = 0	Score: 1
D 5.3 <u>Is more than 25% of the contributing basin of the wetland covered with intensive human land uses?</u>		
Yes	points = 1	
No	points = 0	Score: 0
Total for D 5:		1

Rating of Landscape Potential

3 = H 1-2 = 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 <u>Is the wetland in a landscape that has flooding problems?</u>		
Flooding occurs in a sub-basin that is immediately down-gradient of the wetland.	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
Flooding from groundwater is an issue in the basin.	points = 1	
The existing or potential outflow from the wetland is so constrained that water cannot reach areas that flood.	points = 0	
There are no problems with flooding downstream of the wetland.	points = 0	Score: 1
D 6.2 <u>Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</u>		
Yes	points = 2	
No	points = 0	Score: 0
Total for D 6:		1

Rating of Value

2-4 = H 1 = M 0 = L

Record the rating on the first page

Wetland name or number: D

HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

H 1.0 Does the wetland have the potential to provide habitat for many species?

H 1.1 What is the structure of the plant community?

- Aquatic Bed
- Emergent
- Scrub-shrub
- Forested
- Multiple strata within the Forested class (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)

4 structures or more	points = 4	
3 structures	points = 2	
2 structures	points = 1	
1 structure	points = 0	
No structures present	points = 0	Score: 2

H 1.2 What are the hydroperiods that meet the size thresholds in the wetland?

- Permanently flooded or inundated
- Seasonally flooded or inundated
- Occasionally flooded or inundated
- Saturated only
- Permanently flowing stream or river in, or adjacent to, the wetland
- Seasonally flowing stream in, or adjacent to, the wetland
- Lake Fringe wetland
- Freshwater Tidal wetland

4 or more types present	points = 3	
3 types present or Lake Fringe / Freshwater Tidal Fringe	points = 2	
2 types present	points = 1	
1 type present	points = 0	
None present	points = 0	Score: 1

H 1.3 What is the richness of the plant species in the wetland?

>19 species	points = 2	
5-19 species	points = 1	
<5 species	points = 0	Score: 1

Wetland name or number: D

H 1.4 <u>What is the interspersions of habitats?</u>	
High	points = 3
Moderate	points = 2
Low	points = 1
None	points = 0
Score: 2	
H 1.5 <u>What are the special habitat features in the wetland?</u>	
<input type="checkbox"/> Large, downed, woody debris within the wetland (>4in diameter and 6ft long).	
<input type="checkbox"/> Standing snags (dbh >4in) within the wetland	
<input type="checkbox"/> Undercut banks are present for at least 6.6ft (2m) and/or overhanging plants extend at least 3.3ft (1m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33ft (10m)	
<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 (cut shrubs or trees that have not yet weathered where wood is exposed)	
<input type="checkbox"/> At least 0.25ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)	
<input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)	
6 habitats selected	points = 6
5 habitats selected	points = 5
4 habitats selected	points = 4
3 habitats selected	points = 3
2 habitats selected	points = 2
1 habitat selected	points = 1
No habitats selected	points = 0
Score:	
Total for H 1:	
6	

Rating of Site Potential

[] 15-18 = H [] 7-14 = M [X] 0-6 = L

Record the rating on the first page

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

H 2.1 <u>What is the percentage of accessible habitat within 1km of the wetland?</u>	
>33% of 1km Polygon	points = 3
20-33% of 1km Polygon	points = 2
10-19% of 1km Polygon	points = 1
<10% of 1km Polygon	points = 0
Score: 0	
H 2.2 <u>What is the percentage of total habitat in a 1km polygon around the wetland?</u>	
Total habitat is >50% of the Polygon	points = 3
Total habitat is 10-50% of the Polygon and in 1-3 patches	points = 2

Total habitat is 10-50% of the Polygon and in >3 patches

points = 1

Total habitat is <10% of the Polygon

points = 0

Score: 0

Wetland name or number: D

H 2.3 What is the land use intensity in the 1km polygon?

50% of the Polygon is high intensity land use

points = -2

<50% of the Polygon is high intensity land use

points = 0

Score: -2

Total for H 2:

-2

Rating of Landscape Potential

[] 4-6 = H [] 1-3 = M [X] 0 = 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?

- Aspen Stands
- Biodiversity Areas and Corridors
- Herbaceous Balds
- Old-growth/Mature Forests
- Oregon White Oak
- Riparian
- Westside Prarie
- Fresh Deepwater
- Instream
- Nearshore (Coastal, Open Coast, Puget Sound)
- Caves
- Cliffs
- Snags and Logs
- Talus

The following criteria automatically score 2 points:

- The wetland provides habitat for Threatened or Endangered species
- The wetland is mapped as a location for an individual WDFW priority species
- The wetland is a Wetland of High Conservation Value
- The wetland has been categorized as an important habitat site in a local plan

The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value

points = 2

The site has 1 or 2 WDFW priority habitats within 100m

points = 1

The site does not meet any of the criteria for societal value

points = 0

Score: 1

Total for H 3:

1

Rating of Value

[] 2 = H [X] 1 = M [] 0 = L

Record the rating on the first page

Wetland name or number: D

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

SC 1.0 Estuarine Wetlands

SC 1.1 Does the wetland meet all of the following criteria for Estuarine wetlands?

- The dominant water regime is tidal
- The wetland is vegetated
- The water salinity is greater than 0.5 ppt

Yes - Go to SC 1.2

No - Not an Estuarine Wetland

Result: Not an Estuarine Wetland

SC 1.2 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 Estuarine Wetland

No - Go to SC 1.3

Result:

SC 1.3 Is the wetland unit at least 1ac 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.
- At least 75% of the landward edge of the wetland has a 100ft 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 Estuarine Wetland

No - Category II Estuarine Wetland

Result:

SC 2.0 Wetlands of High Conservation Value

SC 2.1 Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?

Yes - Category I Wetland of High Conservation Value

No - Go to SC 2.2

Result: Go to SC 2.2

SC 2.2 Does the wetland have a rare plant species, rare plant community, or high-quality common plant community that may qualify the site as a WHCV?

Yes - Category I Wetland of High Conservation Value

No - Not a Wetland of High Conservation Value

Result: Not a Wetland of High Conservation Value

Wetland name or number: D

SC 3.0 Bogs

<p>SC 3.1 <u>Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?</u></p> <p>Yes - Go to SC 3.3 No - Go to SC 3.2</p>	<p>Result: Go to SC 3.2</p>
<p>SC 3.2 <u>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?</u></p> <p>Yes - Go to SC 3.3 No - Not a Bog Wetland</p>	<p>Result: Not a Bog Wetland</p>
<p>SC 3.3 <u>Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least 30% cover of plant species listed in the table provided in the instructions?</u></p> <p>Yes - Category I Bog Wetland No - Go to SC 3.4</p>	<p>Result:</p>
<p>SC 3.4 <u>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 combinations of species) listed in the table found in the instructions provide more than 30% of the cover under the canopy?</u></p> <p>Yes - Category I Bog Wetland No - Not a Bog Wetland</p>	<p>Result:</p>

SC 4.0 Forested Wetlands

<p>SC 4.1 <u>Does the wetland have at least 1 contiguous acre of forest that meets one of the following criteria?</u></p> <p><input type="checkbox"/> Old-growth forests <input type="checkbox"/> Mature forests</p> <p>Yes - Category I Forested Wetland No - Not a Forested Wetland</p>	<p>Result: Not a Forested Wetland</p>
--	--

Wetland name or number: D

SC 5.0 Wetlands in Coastal Lagoons

SC 5.1 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 rocks
- The depression 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 open water area (measured near the bottom)
- The lagoon retains some of its surface water at low tide during spring tides

Yes - Go to SC 5.2

No - Not a Coastal Lagoon Wetland

Result: Not a Coastal Lagoon Wetland

SC 5.2 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).
- At least 75% of the landward edge of the wetland has a 100ft buffer of shrub, forest, or un-grazed or un-mowed grassland.
- the wetland is larger than 0.10ac (4350 sqft)

Yes - Category I Coastal Lagoon

No - Category II Coastal Lagoon

Result:

SC 6.0 Interdunal Wetlands

SC 6.1 Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership WBUO)?

Yes - Go to SC 6.2

No - Not an Interdunal Wetland

Result: Not an Interdunal Wetland

SC 6.2 Is the wetland 1ac or larger in size, or a mosaic that is 1ac or larger in size?

Wetland is larger than 1ac in size - Go to SC 6.3

Wetland is a mosaic larger than 1ac is size - Category II Interdunal Wetland

No - Go to SC 6.4

Result:

SC 6.3 Does the wetland score 8 or 9 points for the habitat functions?

Yes - Category I Interdunal Wetland

No - Category II Interdunal Wetland

Result:

SC 6.4 Is the wetland unit between 0.1ac and 1ac, or in a mosaic of wetlands that is between 0.1ac and 1ac in size?

Yes - Category III Interdunal Wetland

No - Category IV Interdunal Wetland

Result:

Wetland name or number: D

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form

Final Category: Not Applicable

Cowardin Classes

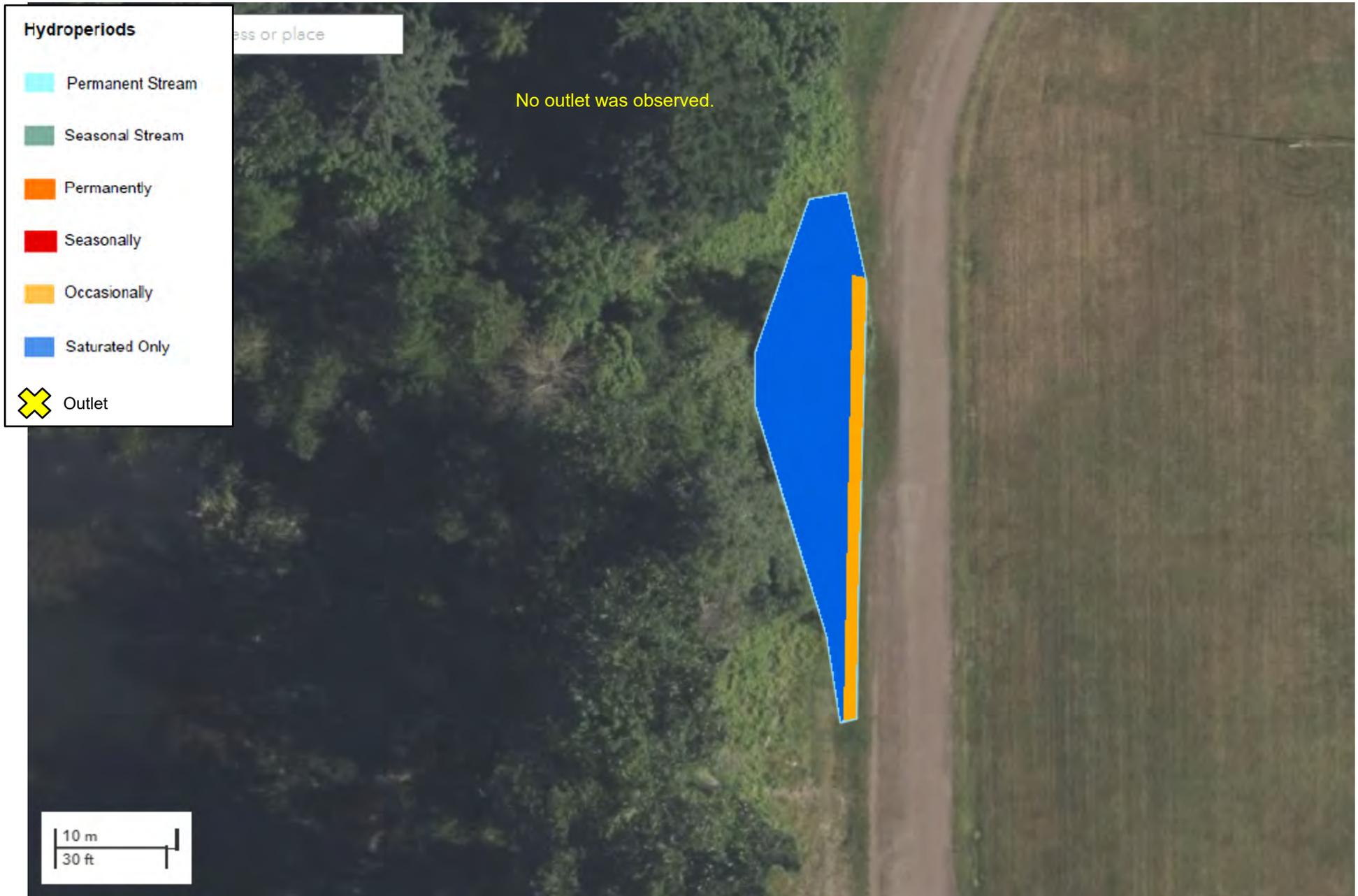
address or place

- Forested
- Scrub-shrub
- Emergent
- Aquatic bed
- Open water



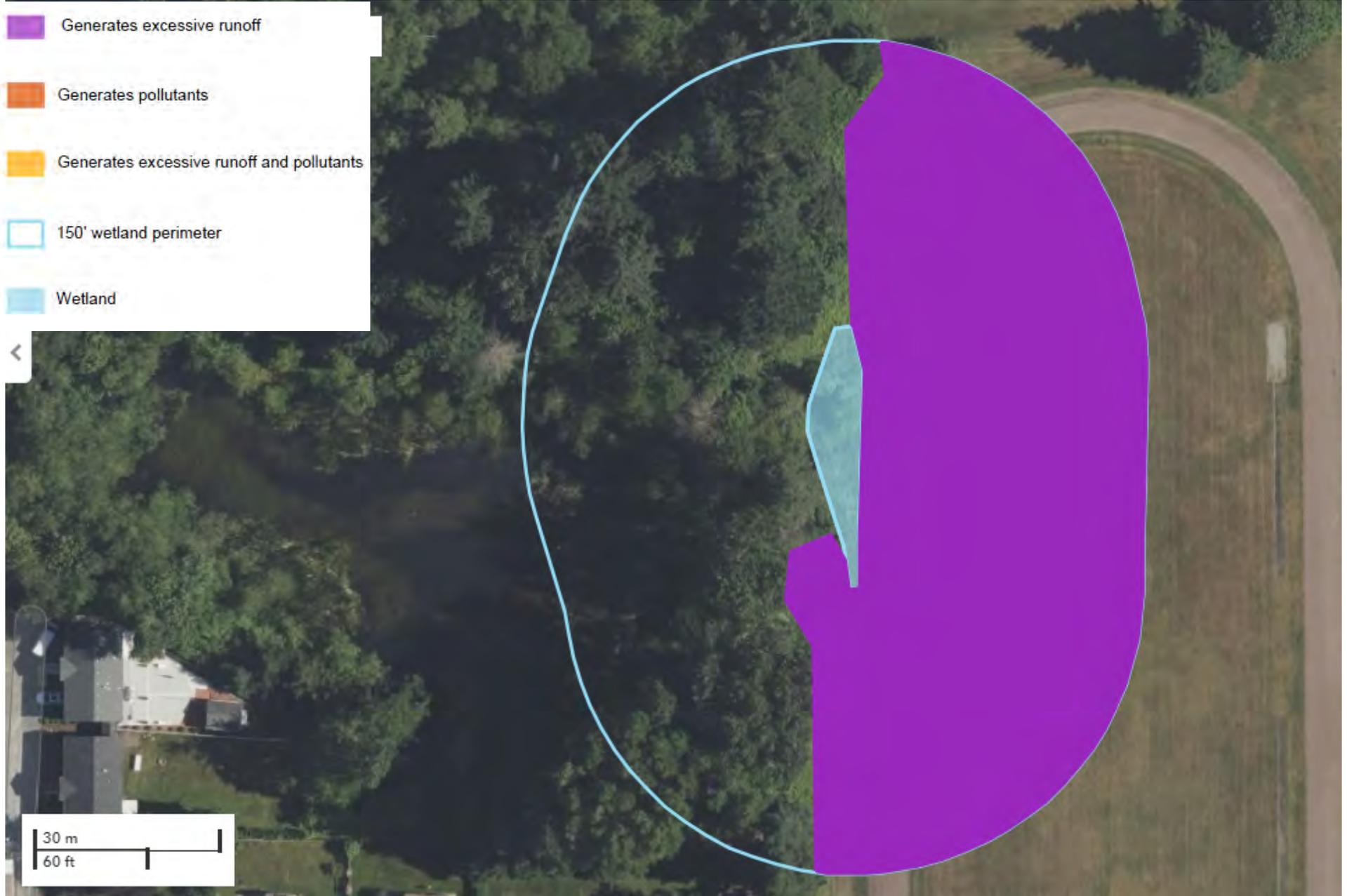
These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure D-1
Cowardin Classes



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure D-2
Hydroperiods



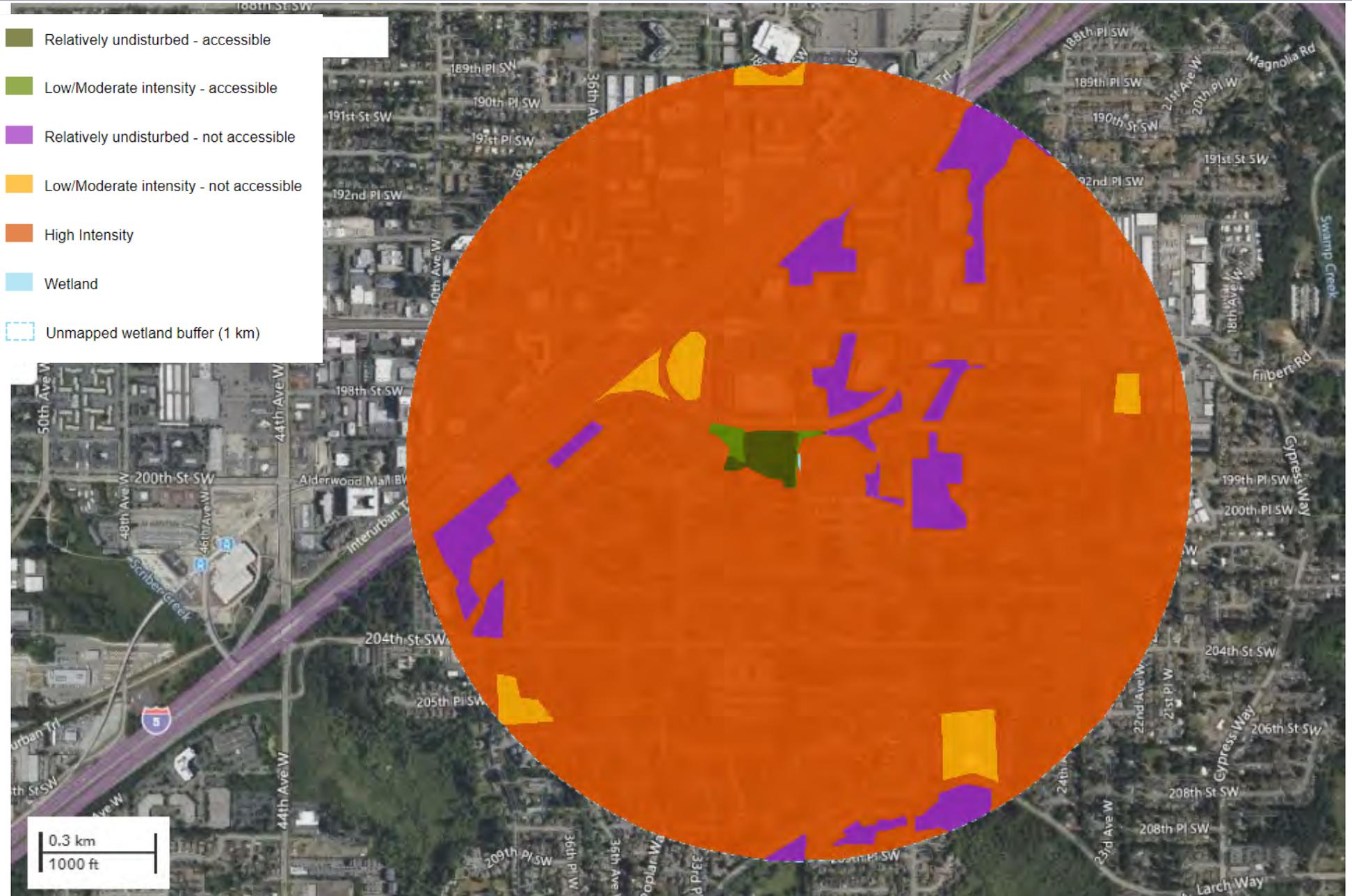
These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure **D-3**
Land Use Within 150 Feet



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure D-4
Contributing Basin



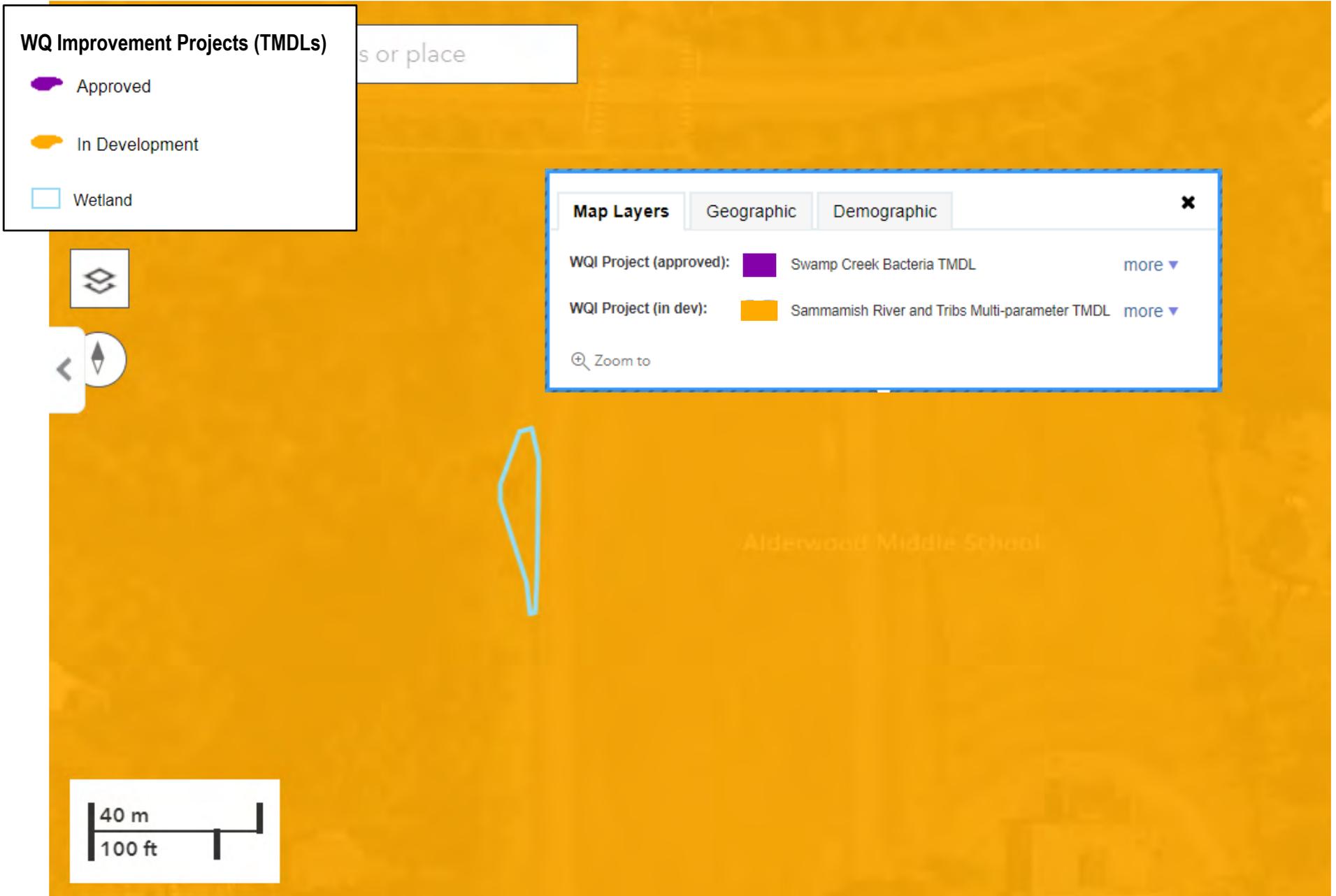
N
These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure D-5
1km Habitat & Land Use Intensity



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure D-6
303d Listings



These figures were generated using the Washington State Department of Ecology "Washington Tool for Online Rating (WATOR)" web tool.

Rating Figure D-7
Map of Water Quality Improvement Projects (TMDLs)

Appendix D

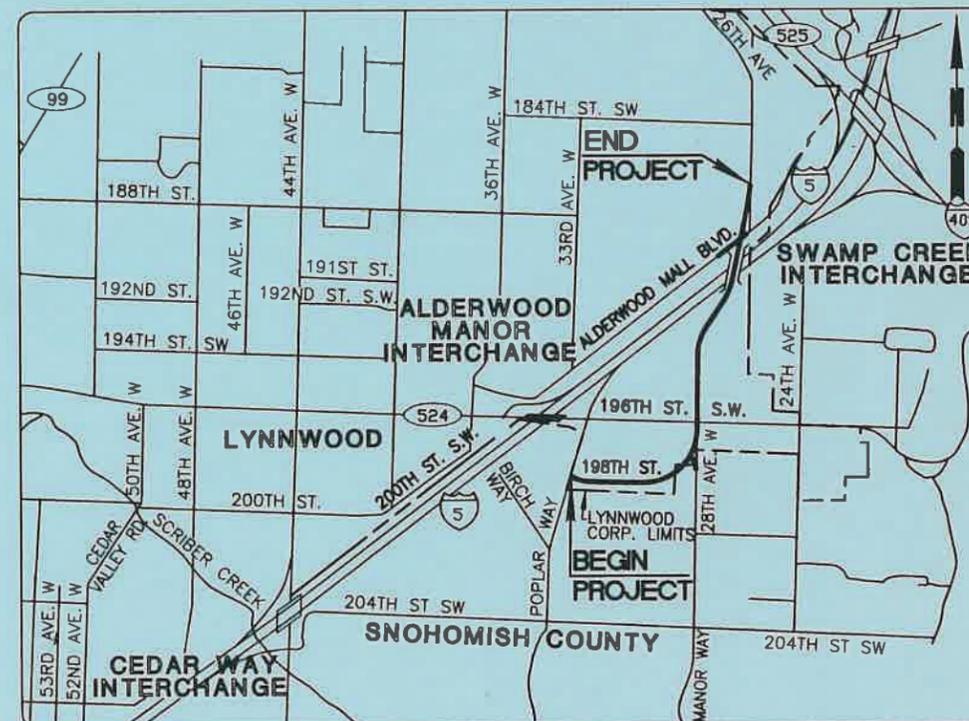
Excerpt of 28th Ave W. / 198th ST SW Street Improvements Contract Plans

Contract Plans

28TH AVE. W. / 198TH ST. S.W. STREET IMPROVEMENTS

T.I.B. No. 9P-0715(001)-4
L.I.D. No. 93-1

CITY OF LYNNWOOD Lynnwood, Washington



VICINITY MAP

BW BELL·WALKER ENGINEERS Inc.
 Bellevue, Washington • Boise, Idaho

INDEX

LEGEND

SCHEDULE 1 STREET AND DRAINAGE IMPROVEMENTS

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5-6	MD1-MD2	MISCELLANEOUS DETAILS
7-10	QT1-QT4	QUANTITY TABULATIONS
11	PP1	PLAN & PROFILE - 198TH ST. S.W.
12	PP2	PLAN & PROFILE - 198TH ST. S.W./28TH AVE. W.
13-14	PP3-PP4	PLAN & PROFILE - 28TH AVE. W.
15	XP1	CROSS STREET PROFILES
16	SED1	SUPER ELEVATION DIAGRAM - 28TH AVE. W./INTERURBAN TRAIL
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49-51	TS4-TS6	TRAFFIC SIGNAL - 198TH ST. S.W./EAGLE DRIVEWAY
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58-60	TS13-TS15	TRAFFIC SIGNAL - 196TH ST./EAGLE DRIVEWAY
61-63	TS16-TS18	TRAFFIC SIGNAL - 28TH AVE. W./ALDERWOOD MALL BLVD.
64-66	TS19-TS21	TRAFFIC SIGNAL - AWM/MALL ENTRANCE (SEARS)
67-69	TS22-TS24	TRAFFIC SIGNAL - 184TH ST./MALL ENTRANCE (NORDSTROM'S)
70-71	TS25-TS26	TRAFFIC SIGNAL INTERCONNECT PLAN
72-73	I1-I2	ILLUMINATION
74	IS1	ILLUMINATION SCHEDULE
75-76	TC1-TC2	TRAFFIC CONTROL PLAN - SR5
77-78	IC1-IC2	INTERIM CHANNELIZATION - SR5

SCHEDULE 2 PEDESTRIAN TUNNEL

79	PT1	PLANS & ELEVATIONS
80	PT2	TUNNEL SECTIONS
81	PT3	SECTIONS & DETAILS
82	PT4	DETAILS

SCHEDULE 3 28TH AVE. W. U'XING

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84	2	LAYOUT & GENERAL NOTES
85	3	FOOTING LAYOUT
86	4	CONSTRUCTION SEQUENCE
87	5	PLAN & ELEVATION- PIER 1
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89	7	FOOTING REINFORCEMENT- PIER 1
90	8	PLAN & ELEVATION REINFORCEMENT- PIER 1
91	9	CURTAIN WALL PLANS & ELEVATIONS- PIER 1
92-93	10-11	COUNTERFORT ELEVATIONS- PIER 1
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SCHEDULE 3 (CONT.) 28TH AVE. W. U'XING

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98	16	FOOTING PLAN & SECTIONS- PIER 5
99	17	FOOTING REINFORCEMENT- PIER 5
100	18	PLAN & ELEVATION REINFORCEMENT- PIER 5
101	19	CURTAIN WALL PLANS & ELEVATIONS- PIER 5
102	20	COUNTERFORT ELEVATIONS- PIER 5
103	21	SECTIONS & DETAILS- PIER 5
104-105	22-23	SHEAR KEY DETAILS- PIERS 1 & 5
106	24	FRAMING PLAN
107	25	FRAMING PLAN & TYPICAL PS GIRDER SECTION
108	26	FRAMING PLAN & TYPICAL BOX GIRDER SECTION
109	27	FRAMING PLAN & TYPICAL RAISED CROSSBEAM SECTION
110	28	CROSSBEAM PLAN- PIER 2
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112	30	SECTIONS & DETAILS- PIERS 2 & 4
113	31	FRAMING PLAN- PIER 3
114-115	32-33	SECTIONS & DETAILS- PIER 3
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118-120	36-38	W74G SERIES GIRDER
121-122	39-40	W74G SERIES GIRDER SCHEDULE
123	41	DIAPHRAM PLAN, ELEVATION & DETAILS- PIERS 1 & 5
124	42	DIAPHRAM DETAILS & BEARINGS
125	43	SLAB PLAN- SPAN 1 & 2 (TOP REINF.)
126	44	SLAB PLAN- SPAN 2 & 3 (TOP REINF.)
127	45	SLAB PLAN- SPAN 3 & 4 (TOP REINF.)
128	46	SLAB PLAN- SPAN 1 & 2 (BOT REINF.)
129	47	SLAB PLAN- PIER 2 & 3 (BOT REINF.)
130	48	SLAB PLAN- PIER 3 & 4 (BOT REINF.)
131	49	SLAB PLAN- BOX GIRDER BOTTOM SLAB (TOP REINF.)
132	50	SLAB PLAN- BOX GIRDER BOTTOM SLAB (BOT REINF.)
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EXISTING	PROPOSED	ITEM
---	---	RIGHT-OF-WAY
---	---	SLOPE EASEMENT
---	---	DITCH
=====	=====	CULVERT
---BT---	---	BURIED TELEPHONE CABLE
---OT---	---	OVERHEAD TELEPHONE
---OP---	---	OVERHEAD POWER
---W---	---W---	WATERLINE
---G---	---	GAS PIPELINE
---ST---	---S.S.P.---	STORM DRAINAGE PIPE
---S---	---S---	SANITARY SEWER
○	●	SANITARY SEWER MANHOLE
□	□	CATCH BASIN
⊕	⊕	FIRE HYDRANT
⊕	⊕	GAS VALVE
⊕	⊕	WATER VALVE
⊕	⊕	LIGHT POLE
⊕ _{PP}	⊕	UTILITY POLE
⊕	⊕	GUY POLE ANCHOR
□	□	POWER OR UTILITY VAULT
○	○	TELE. MANHOLE
⊕ _{WM}	⊕	WATER METER
○	○	BLOW OFF VALVE
⊕ _{PM}	⊕	BY PASS METER
MB □	MB □	MAIL BOX
---	---	FENCE
⊕	⊕	TRAFFIC CONTROLLER
⊕	⊕	JUNCTION BOX
⊕	⊕	TRAFFIC SIGN
⊕	⊕	WHEELCHAIR RAMP
⊕	⊕	SECTION CORNER
⊕	⊕	ROCK WALL
⊕	⊕	DRAINAGE QUANTITY TABULATION CODE No.
⊕	⊕	TREE & SHRUB
⊕	⊕	WETLANDS



DATE	NO.	REVISION	BY	CHECKED	REM	FILE	93031	199INDEX

BW BELL-WALKER ENGINEERS Inc.
Boise, Idaho • Bellevue, Washington

CITY OF LYNNWOOD
28TH AVE. W. / 198TH STREET S.W.
STREET IMPROVEMENTS

INDEX & LEGEND

L1
SHEET 2
OF
182 SHEETS

T.27N. R.4E. W.M.

CURVE DATA					
P.I. STATION	Δ	R	T	L	S
198TH 11+96.81	174°5'47"	700.00'	109.39'	217.02'	0.02'/FT.
198TH 22+36.13	44°57'19"	711.52'	294.40'	558.27'	0.02'/FT.

Wall built as part of the 1994 project. Wall currently abuts the north boundary of Wetland C's depressional portion. Constructed swale starts at east end of wall.

CONSTRUCTION NOTES

- ① ADJUST WATER VALVE
- ② ADJUST SAN. M.H.
- ③ ADJUST GAS VALVE
- ④ REMOVE CEMENT CONC. CURB AND GUTTER
- ⑤ REMOVE CEMENT CONC. SIDEWALK
- ⑥ REMOVE TRAFFIC CURB
- ⑦ REMOVE TRAFFIC ISLAND

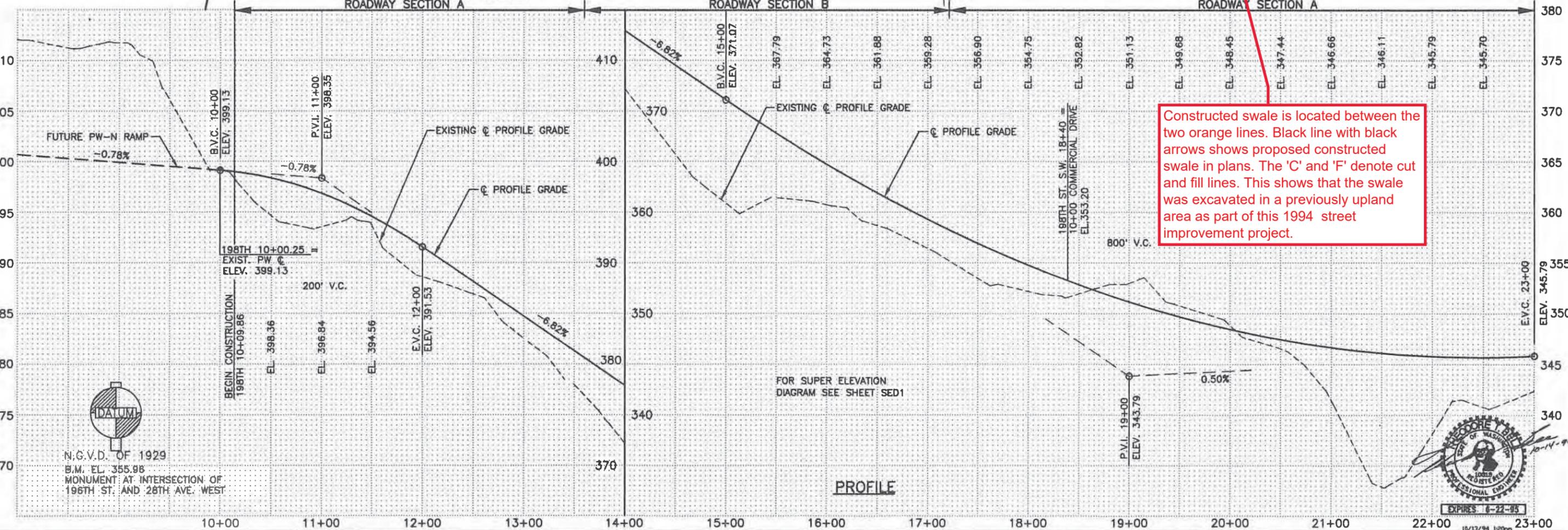
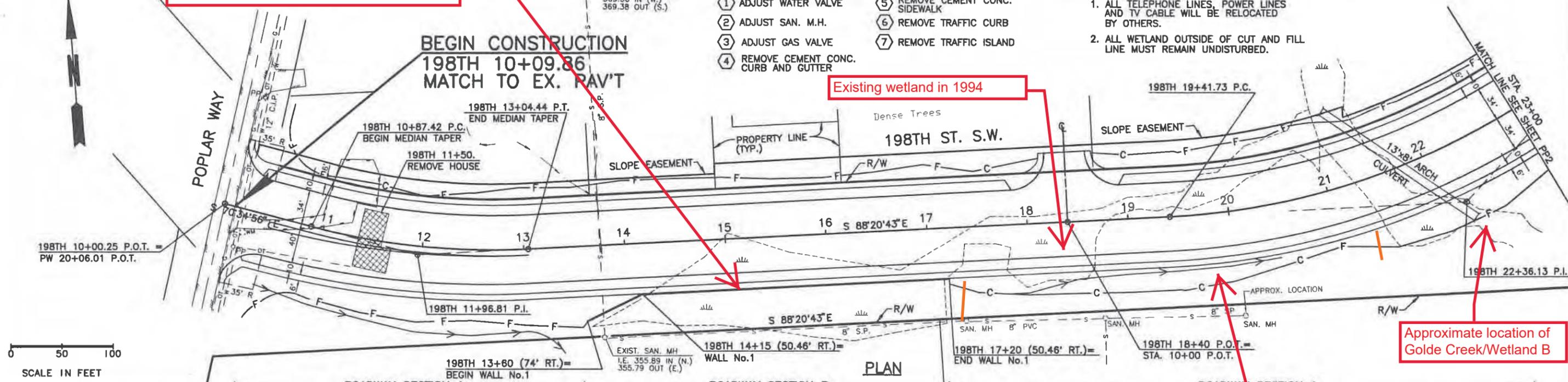
NOTE:

1. ALL TELEPHONE LINES, POWER LINES AND TV CABLE WILL BE RELOCATED BY OTHERS.
2. ALL WETLAND OUTSIDE OF CUT AND FILL LINE MUST REMAIN UNDISTURBED.

Existing wetland in 1994

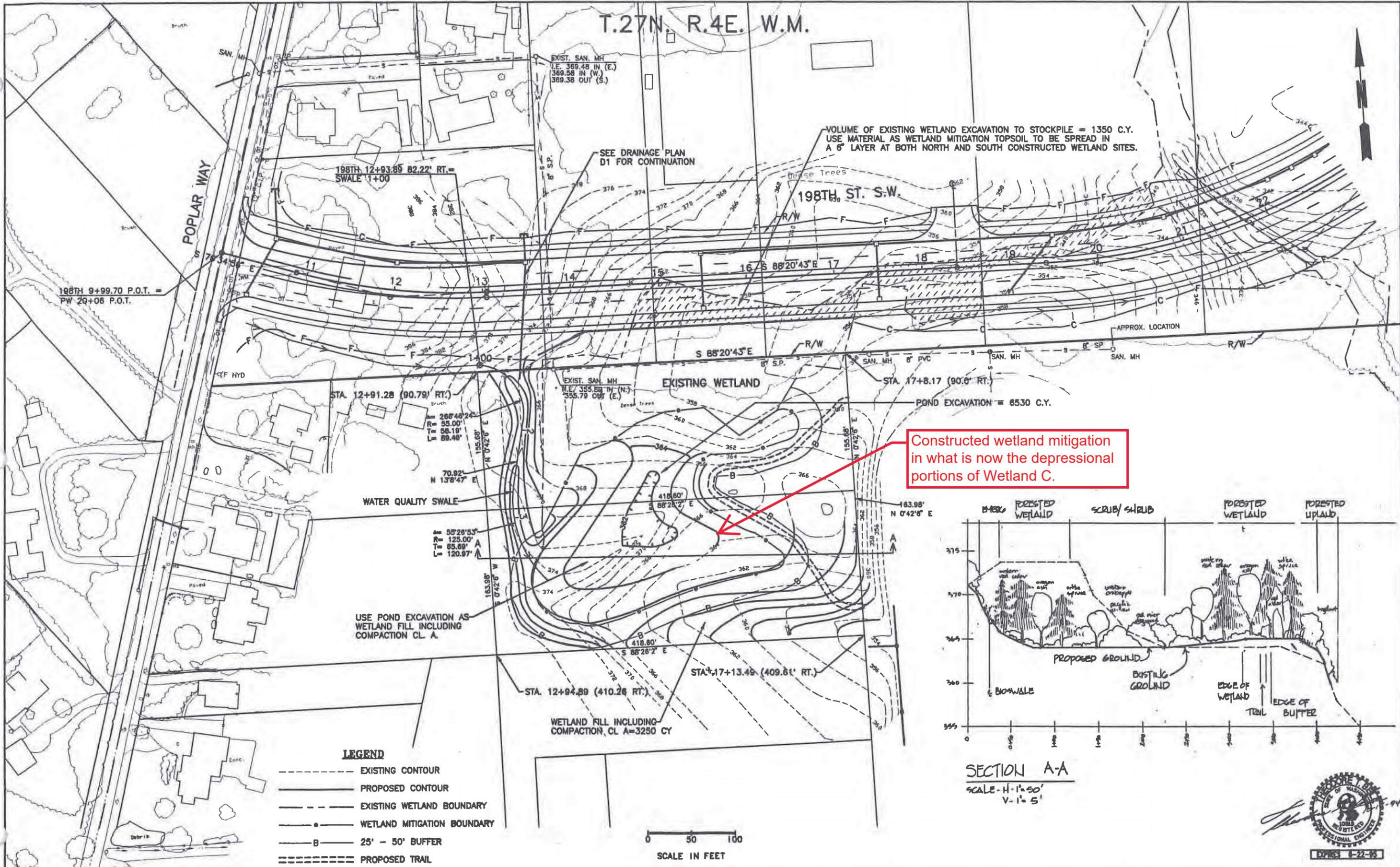
Approximate location of Golde Creek/Wetland B

Constructed swale is located between the two orange lines. Black line with black arrows shows proposed constructed swale in plans. The 'C' and 'F' denote cut and fill lines. This shows that the swale was excavated in a previously upland area as part of this 1994 street improvement project.

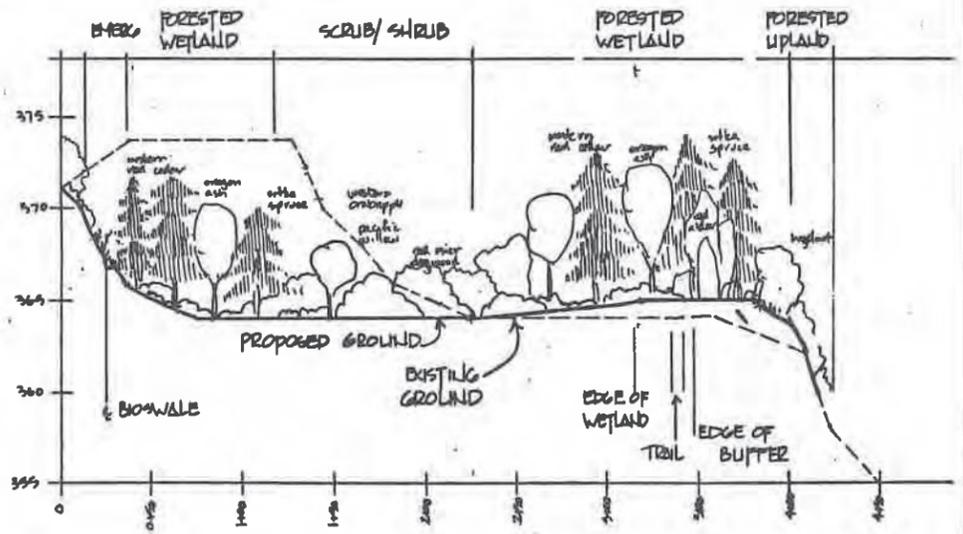


DESIGNED RKG		APPROVED TTB		BELL-WALKER ENGINEERS Inc. Boise, Idaho • Bellevue, Washington	CITY OF LYNNWOOD 28TH AVE. WEST / 198TH ST. S.W. STREET IMPROVEMENTS	PLAN AND PROFILE 198TH ST. S.W.	PP1 SHEET 11 OF 182 SHEETS
DATE	NL	REVISION	BY				

T.27N. R.4E. W.M.



Constructed wetland mitigation in what is now the depressional portions of Wetland C.



SECTION A-A
SCALE - H-1"=50'
V-1"=5'

- LEGEND**
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - - - EXISTING WETLAND BOUNDARY
 - WETLAND MITIGATION BOUNDARY
 - B- 25' - 50' BUFFER
 - ==== PROPOSED TRAIL



DESIGNED	BAS	APPROVED	KMM
DRAWN	BCS	SCALE	1"=50'
DATE	NO.	REVISION	BY
			CHECKED

BWU BELL-WALKER ENGINEERS Inc.
Boise, Idaho • Bellevue, Washington

CITY OF LYNNWOOD
28TH AVE. WEST / 198TH ST. S.W.
STREET IMPROVEMENTS

CONSTRUCTED WETLAND - SOUTH SITE
GRADING PLAN

CW1
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OF
182 SHEETS



Important Information

About Your Wetland Delineation/Mitigation and/or Stream Assessment Report

IMPORTANT INFORMATION

A WETLAND/STREAM REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

Wetland delineation/mitigation and stream classification reports are based on a unique set of project-specific factors. These typically include the general nature of the project and property involved, its size and configuration, historical use and practice, the location of the project on the site and its orientation, and the level of additional risk the client assumed by virtue of limitations imposed upon the exploratory program. The jurisdiction of any particular wetland/stream is determined by the regulatory authority(ies) issuing the permit(s). As a result, one or more agencies will have jurisdiction over a particular wetland or stream with sometimes confusing regulations. It is necessary to involve a consultant who understands which agency(ies) has jurisdiction over a particular wetland/stream and what the agency(ies) permitting requirements are for that wetland/stream. To help reduce or avoid potential costly problems, have the consultant determine how any factors or regulations (which can change subsequent to the report) may affect the recommendations.

Unless your consultant indicates otherwise, your report should not be used:

- If the size or configuration of the proposed project is altered.
- If the location or orientation of the proposed project is modified.
- If there is a change of ownership.
- For application to an adjacent site.
- For construction at an adjacent site or on site.
- Following floods, earthquakes, or other acts of nature.

Wetland/stream consultants cannot accept responsibility for problems that may develop if they are not consulted after factors considered in their reports have changed. Therefore, it is incumbent upon you to notify your consultant of any factors that may have changed prior to submission of our final report.

Wetland boundaries identified and stream classifications made by Shannon & Wilson are considered preliminary until validated by the U.S. Army Corps of Engineers (Corps) and/or the local jurisdictional agency. Validation by the regulating agency(ies) provides a certification, usually written, that the wetland boundaries verified are the boundaries that will be regulated by the agency(ies) until a specified date, or until the regulations are modified, and that the stream has been properly classified. Only the regulating agency(ies) can provide this certification.

MOST WETLAND/STREAM "FINDINGS" ARE PROFESSIONAL ESTIMATES.

Site exploration identifies wetland/stream conditions at only those points where samples are taken and when they are taken, but the physical means of obtaining data preclude the determination of precise conditions. Consequently, the information obtained is intended to be sufficiently accurate for design but is subject to interpretation. Additionally, data derived through sampling and subsequent laboratory testing are extrapolated by the consultant who then renders an opinion about overall conditions, the likely reaction to proposed construction activity, and/or appropriate design. Even under optimal circumstances, actual conditions may differ from those thought to exist because no consultant, no matter how qualified, and no exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock, and time. Nothing can be done to prevent the unanticipated, but steps can be taken to help reduce their impacts. For this reason, most experienced owners retain

their consultants through the construction or wetland mitigation/stream classification stage to identify variances, conduct additional evaluations that may be needed, and recommend solutions to problems encountered on site.

WETLAND/STREAM CONDITIONS CAN CHANGE.

Since natural systems are dynamic systems affected by both natural processes and human activities, changes in wetland boundaries and stream conditions may be expected. Therefore, delineated wetland boundaries and stream classifications cannot remain valid for an indefinite period of time. The Corps typically recognizes the validity of wetland delineations for a period of five years after completion. Some city and county agencies recognize the validity of wetland delineations for a period of two years. If a period of years has passed since the wetland/stream report was completed, the owner is advised to have the consultant reexamine the wetland/stream to determine if the classification is still accurate.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or water fluctuations may also affect conditions and, thus, the continuing adequacy of the wetland/stream report. The consultant should be kept apprised of any such events and consulted to determine if additional evaluation is necessary.

THE WETLAND/STREAM REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when plans are developed based on misinterpretation of a wetland/stream report. To help avoid these problems, the consultant should be retained to work with other appropriate professionals to explain relevant wetland, stream, geological, and other findings, and to review the adequacy of plans and specifications relative to these issues.

DATA FORMS SHOULD NOT BE SEPARATED FROM THE REPORT.

Final data forms are developed by the consultant based on interpretation of field sheets (assembled by site personnel) and laboratory evaluation of field samples. Only final data forms are customarily included in a report. These data forms should not, under any circumstances, be drawn for inclusion in other drawings, because drafters may commit errors or omissions in the transfer process. Although photographic reproduction eliminates this problem, it does nothing to reduce the possibility of misinterpreting the forms. When this occurs, delays, disputes, and unanticipated costs are frequently the result.

To reduce the likelihood of data from misinterpretation, contractors, engineers, and planners should be given ready access to the complete report. Those who do not provide such access may proceed under the mistaken impression that simply disclaiming responsibility for the accuracy of information always insulates them from attendant liability. Providing the best available information to contractors, engineers, and planners helps prevent costly problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because a wetland delineation/stream classification is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in written transmittals. These are not exculpatory clauses designed to foist the consultant's liabilities onto someone else; rather, they are definitive clauses that identify where

the consultant’s responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

THERE MAY BE OTHER STEPS YOU CAN TAKE TO REDUCE RISK.

Your consultant will be pleased to discuss other techniques or designs that can be employed to mitigate the risk of delays and to provide a variety of alternatives that may be beneficial to your project.

Contact your consultant for further information.

IMPORTANT INFORMATION