A PORTION OF THE SE 1/4 OF SECTION 23, TWP. 26 N., RGE. 1 E.,WM



BUFFER GIVE/TAKE ANALYSIS

	WETLAND A	WETLAND B
TOTAL GIVE	1,018 SF	11,511 SF
TOTAL TAKE	856 SF	10,895 SF
NET GIVE	162 SF	616 SF

BUFFER ADDITION ("GIVE") AREAS ARE SITED ENTIRELY OVER EXISTING, UNDISTURBED GROUND. NO CLEARING, GRADING, VEGETATION REMOVAL, OR UTILITY INSTALLATION IS PROPOSED OR PERMITTED WITHIN THESE AREAS. PROTECTIVE CRITICAL AREA FENCING WILL BE INSTALLED AT THE OUTER LIMIT OF ALL "GIVE" AREAS PRIOR TO ANY ON-SITE GRADING ACTIVITIES.

STORMWATER OUTFALL NOTE

STORMWATER FACILITY DISCHARGE OUTFALL SHALL TERMINATE ENTIRELY ABOVE THE ORDINARY HIGH WATER MARK (OHWM). FINAL OUTFALL DISSIPATION DESIGN (E.G., RIPRAP / ROCK PAD / OR PERFORATED FLOW DISPERSION TRENCH SHALL BE DETERMINED AT FINAL DESIGN. I

REVISIONS

NO.	DESCRIPTION/DATE	BY

BRANDON MICHAEL LOUCKS, STATE OF WASHINGTON, 50085, REGISTERED PROFESSIONAL ENGINEER
09/16/2026

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Civil Engineering Public Works
Land Surveying Project Management
Land Planning Landscape Architecture

MONTEBANC MANAGEMENT, LLC

PINNACLE AT LIBERTY BAY PRD

BUFFER MITIGATION PLAN

CITY OF POULSBO WASHINGTON

JOB NO.:	2090-004-022
DWG. NAME:	PP-06
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
DATE:	09/16/2026
DATE OF PRINT:	

PP-06

File: \\esm8\ENGR\ESM-JOBS\2090\004\022\P-plot\Plots\PP-06.dwg
Plotted: 9/16/2026 3:52 PM Plotted By: Simon Upham

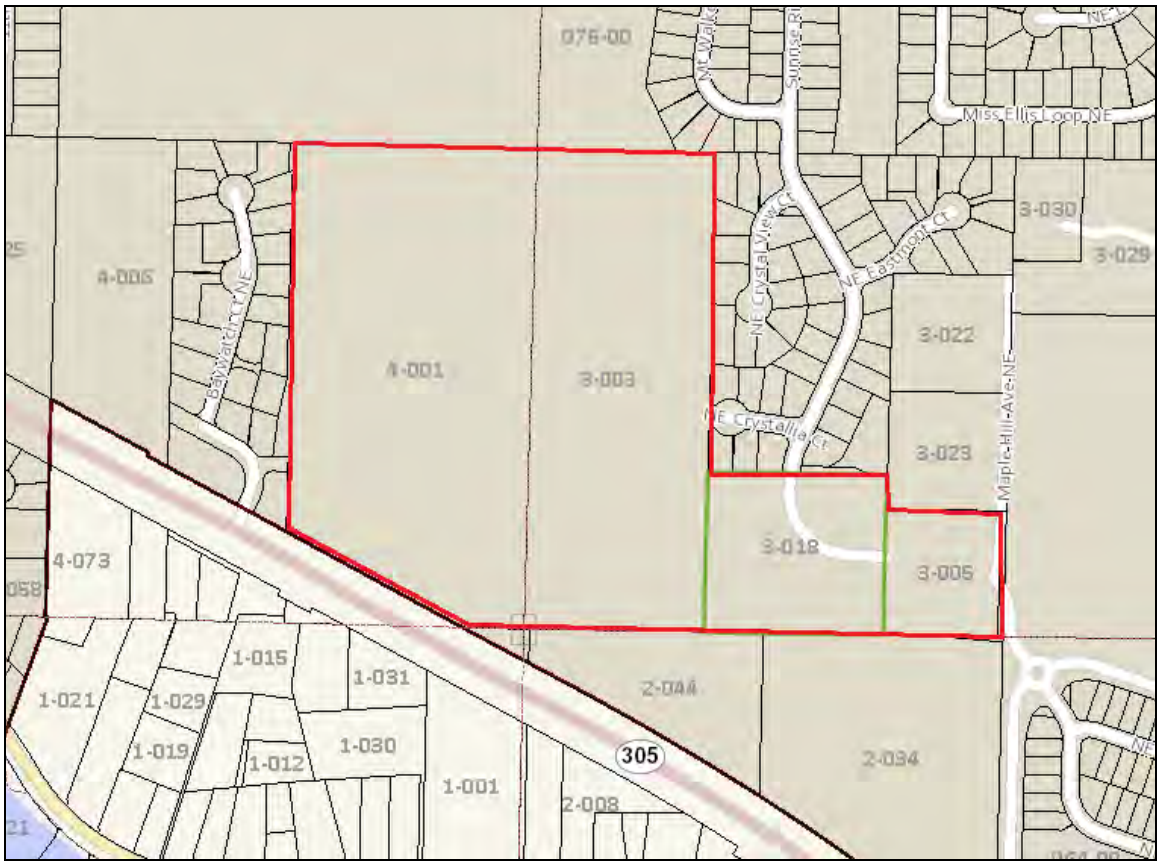
Sewall Wetland Consulting, Inc.
PO Box 880
Fall City, WA 98024
Phone: 253-859-0515

July 14, 2025

Montebanc Management
400 NW Gilman Blvd #2781
Issaquah, Washington 98027

RE: Pinnacle at Liberty Bay Critical Area Report
& Habitat Management Plan
SWC Job #24-158

This report describes our observations of jurisdictional wetlands, streams and buffers on or within 200' of the proposed "Pinnacle at Liberty Bay plat in the City of Poulsbo, Washington.

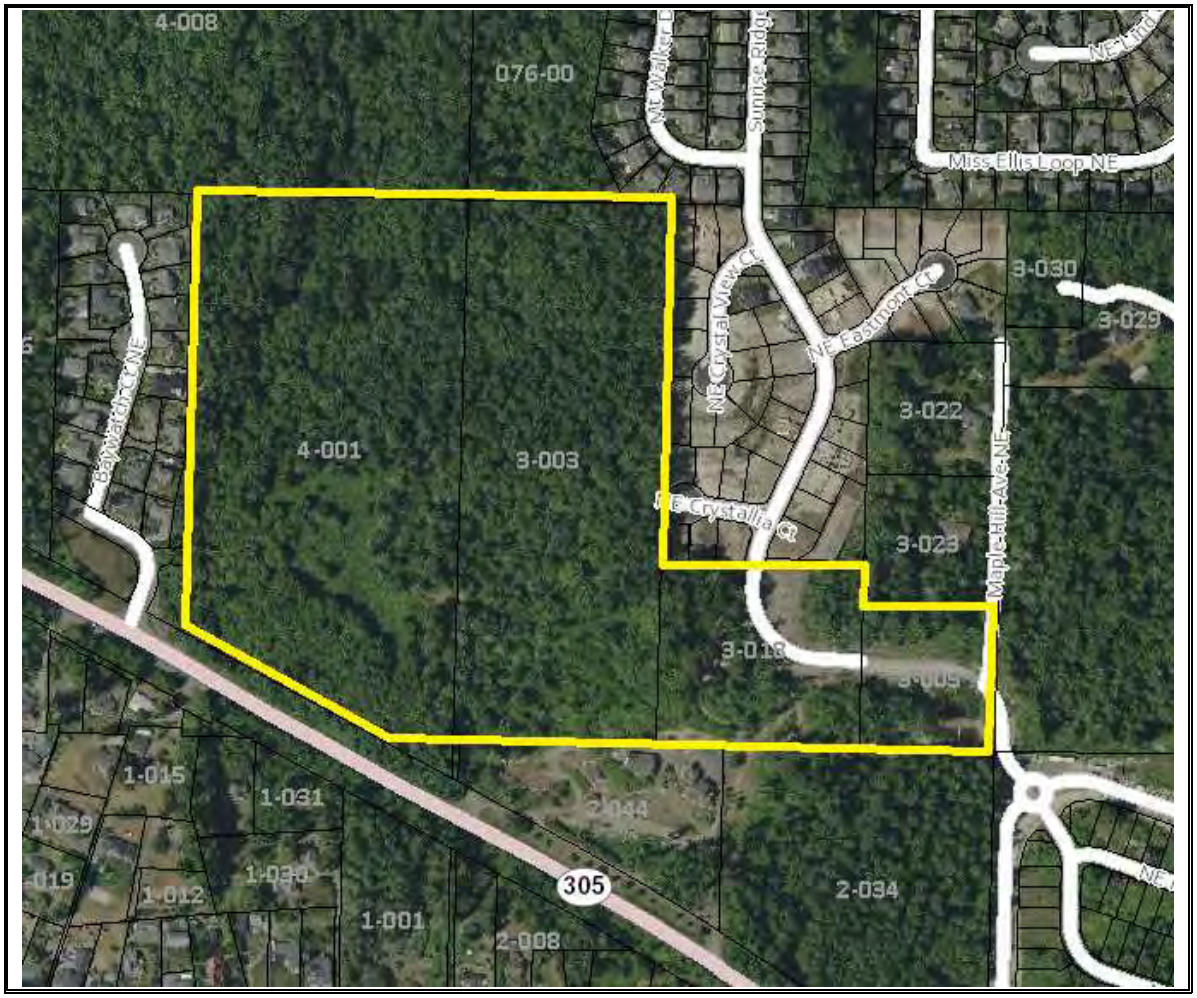


Above: Vicinity Map of the site from Kitsap County Parcel Map.

The site consists of four (4) abutting parcels (#23222601-4-001-2009, #23222601-3-001-2008, 23222601-3-018-2001, & #23222601-3-005-2006 located in the City of Poulsbo, Washington (the "site").

The site is an irregular shaped, 41.28 acre property located within the SE ¼ of Section 23, Township 26 North, Range 1 East of the W.M. and the SW ¼ of Section 24, Township 26 North, Range 1 East of the W.M

The site consists of a generally southwesterly sloping forested hillside. The eastern two parcels have an extension of Sunrise Ridge Avenue NE passing through it as well as a single family home and stormwater facility. The eastern edge of the site is bordered by unimproved Maple Hill Avenue NE.



Above: Kitsap County aerial mapping of the site.

METHODOLOGY

Ed Sewall of Sewall Wetland Consulting, Inc. inspected the site in September of 2024, January and April of 2025. The site was reviewed using methodology described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987), and the *Western Mountains, Valleys and Coast region Supplement (*Version 2.0) dated June 24, 2010, as required by the US Army Corps of Engineers & City of Poulsbo. Soil colors were identified using the 1990 Edited and Revised Edition of the Munsell Soil Color Charts (Kollmorgen Instruments Corp. 1990).

The ordinary high water mark (OHWM) of any stream was located based upon the criteria described in the Washington Department of Ecology draft publication *Determining The Ordinary High Water Mark on Streams In Washington State* (WADOE Publication 08-06-001, March 2008).

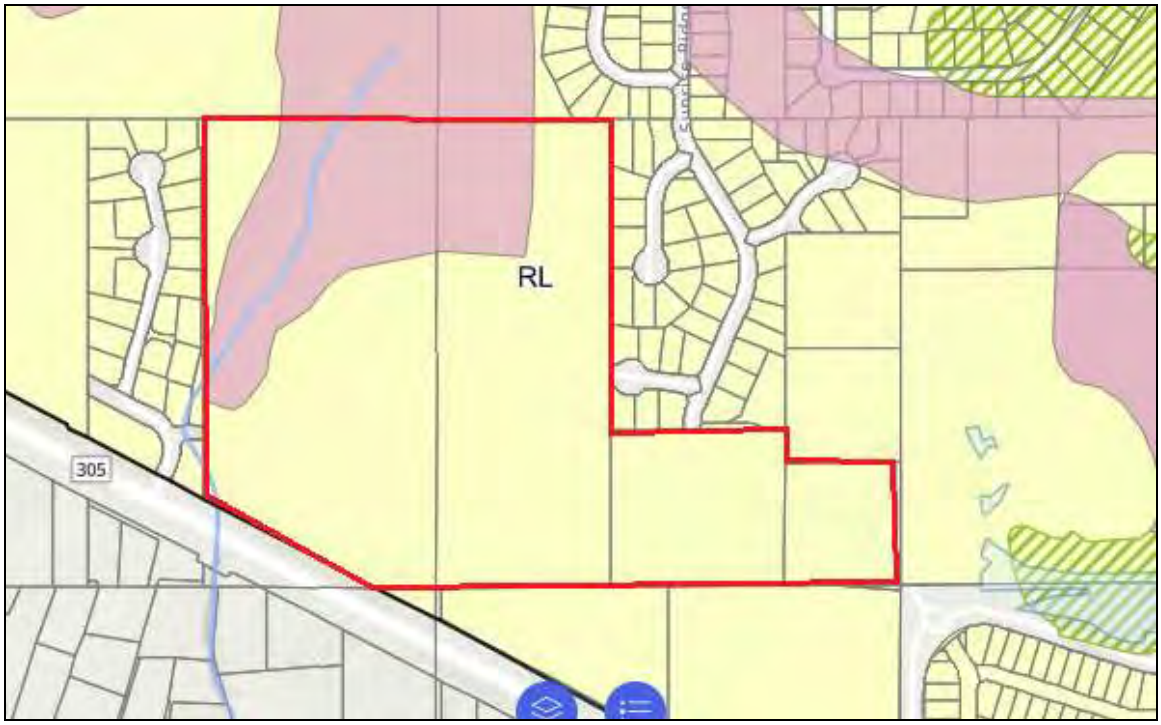
OBSERVATIONS

Existing Site Documentation.

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

City of Poulsbo Zoning map

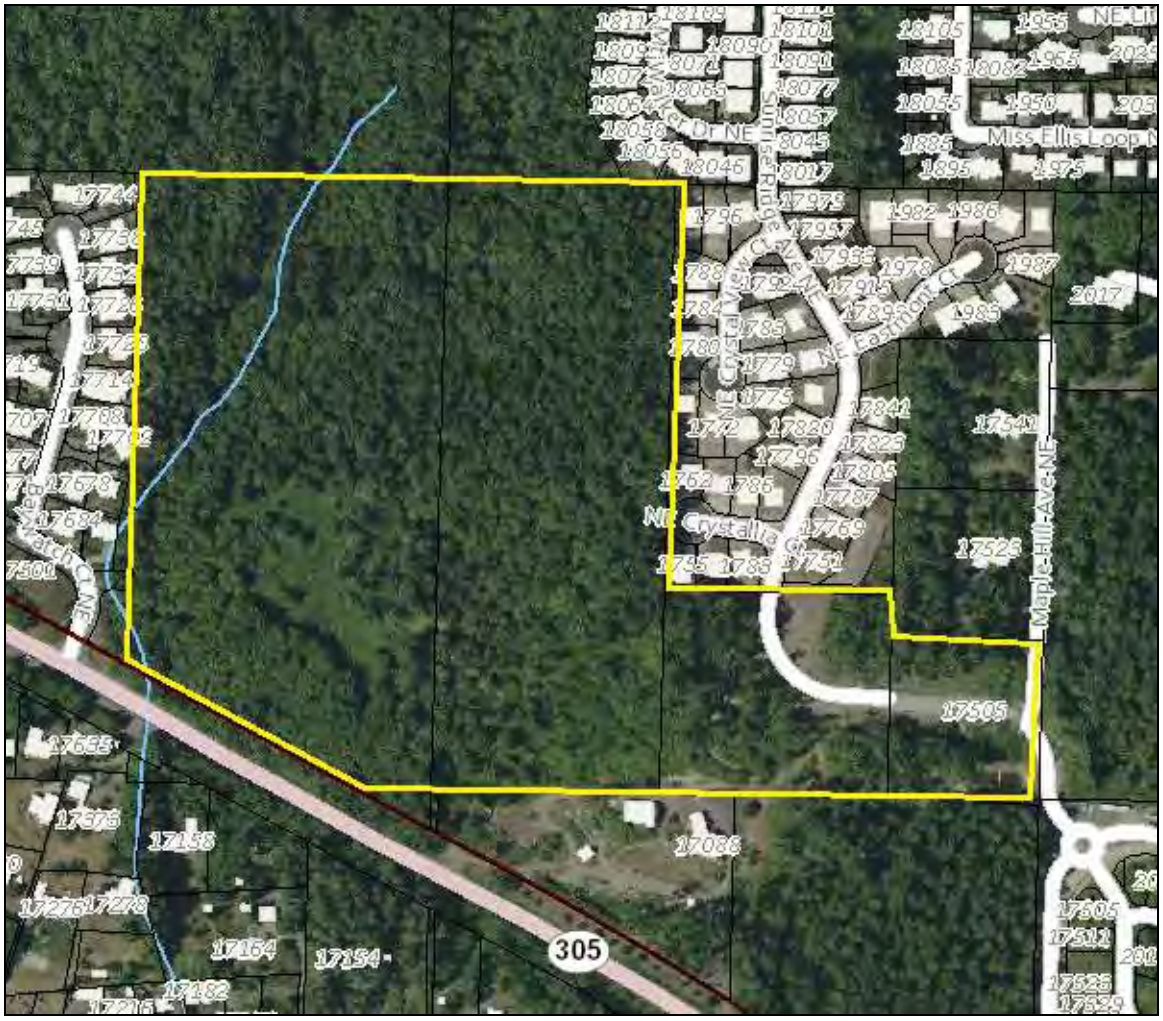
The City of Poulsbo Zoning map with wetland and stream layers activated depicts a stream across the western side of the site. The pink layer depicts a geologic hazard area.



Above: City of Poulsbo Zoning Map with critical areas activated.

Kitap County Mapping – Wetlands and streams

The Kitsap County online critical area mapping depicts a stream diagonally across the northwestern side if the site.



Above: Kitsap County Critical Areas Mapping.

Soil Survey

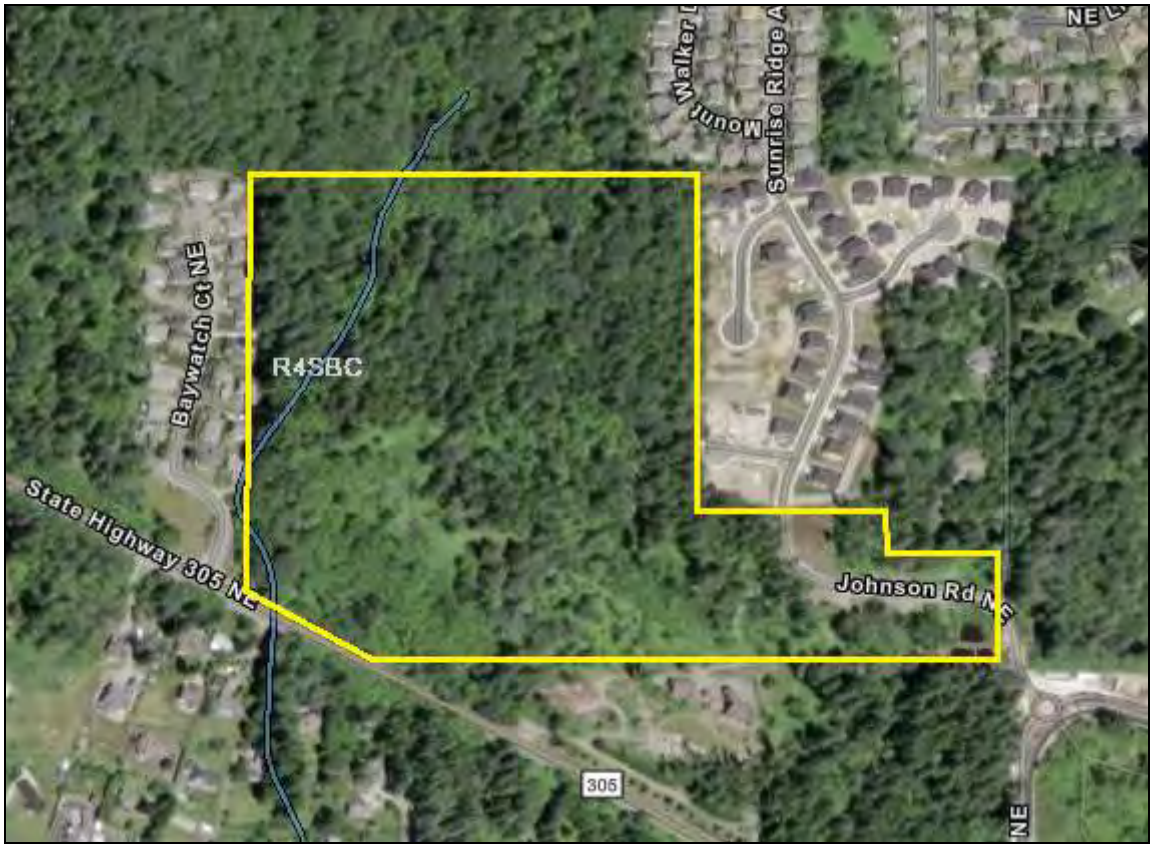
According to the NRCS Soil Mapper, the site is mapped entirely as moderately well drained Poulsbo gravelly sandy loam with various slopes up to 30%. Poulsbo soils are not considered a wetland/hydric soil.



Above: USDA Soil Survey Map of the site

National Wetlands Inventory (NWI)

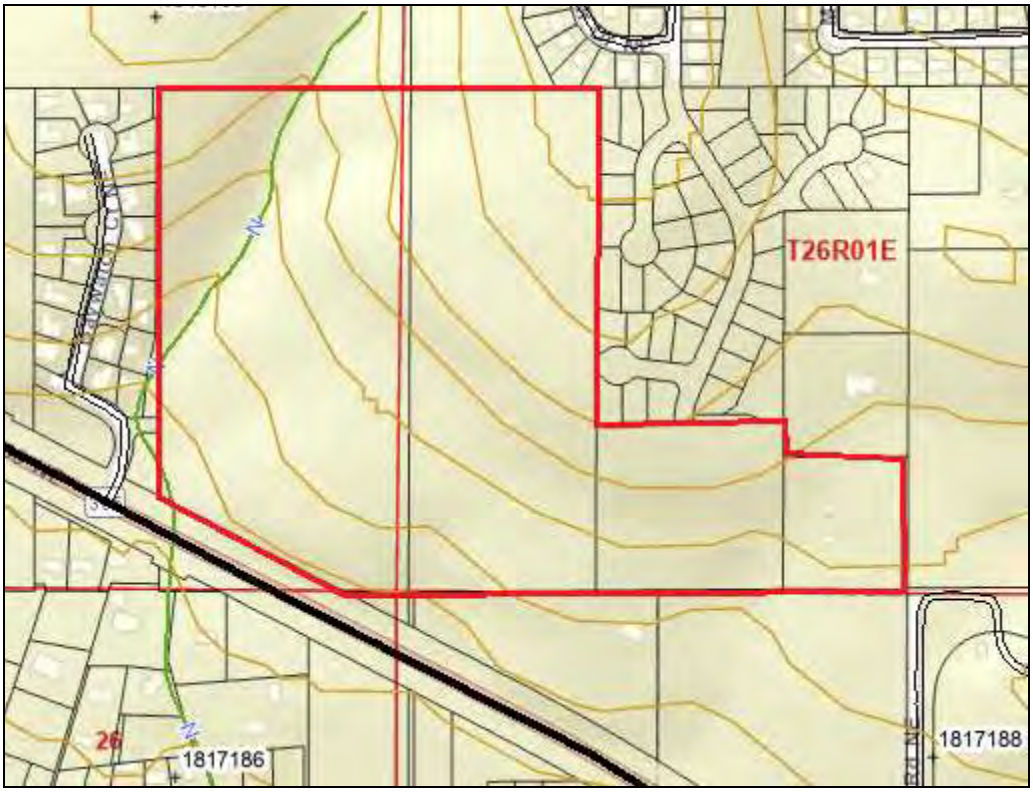
According to the NWI map for the site, there is a stream located diagonally across the western side of the site.



Above: National Wetlands Inventory Map of the site.

WDNR Fpars Stream Mapping

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



Above: WDNR stream mapping for area of the site

WDFW Priority Habitat Maps

The WDFW Priority habitats and species map depicts no priority habitats or listed species observations on the site.



Above: WDFW Priority Habitats and Species map of the site.

City of Poulsbo Wetlands and Fish and Wildlife Habitat Report

A report prepared by Farallon Consulting and Grette Associates dated "Revised June 2024" and titled "*City of Poulsbo – Wetlands and Fish and Wildlife Habitat Conservation Area Bets Available Science Review and Recommended Protection Measures Report – Revised*" has a discussion of a creek known as Barrante's Creek which passes along the western side of the site. Below is an excerpt from Page 46 of the document discussing Barrente's Creek;

> *3.1.6 Barrante's Creek*
>
> Barrante's Creek runs approximately 0.5 mainstem river miles south, emptying into Liberty Bay north of Lemolo (Figure 8). Barrante's Creek is Type Ns stream.



Above: Portions of map depicting Barrante's Creek from the Poulsbo Habitat report (page 47).

Field observations

Uplands

As previously described, the site consists of a large forested hillside bordered by subdivisions to the east and west. An undeveloped forested park known as "Frank Raab Park" is located to the north of the site. The eastern side of the site contains a gated portion of Sunrise Ridge Avenue NE that is partially paved and partially gravel. A small single family house and gravel driveway are located along the south east corner of the site as well as a small storm water facility.

The site contains several old overgrown roadbeds, possibly relics of past logging operations. The stream on the western side of the site has an old culverted road crossing completely overgrown.

The site has a conifer overstory on the east which grades to a mixed overstory on the remainder of the site. Overstory species include douglas fir, madrone, western red cedar, red alder and big leaf maple with an understory of salal, Oregon grape, sword fern, stinging nettle, Indian plum, salmonberry, hazelnut, vine maple, and large thickets of blackberry.

The site contains a plateau on the northeast which slopes off to the south and west. A large depression is located near the north side of the site which contains a large slope wetland.

Soil pits excavated throughout the upland portions of the site revealed a gravelly loam soil with a chroma of 3-6 in the B horizon similar to the description of the Poulsbo soil series.

Four (4) different wetlands were identified on the site as well as four (4) streams. Below is a description of these areas;

Wetland A & Stream A

Wetland A consists of a forested, slope type wetland located on the southeast portion of the site. This wetland was flagged with purple flagging labeled sequentially A1-A9. The south edge of the wetland is at the edge of an old roadbed crossing the site from east to west. A small, seasonal stream drains out the southeast end of the wetland through a small pvc culvert under the roadbed draining to the south and off-site.

The wetland is vegetated with an overstory of small alders with Himalayan blackberry, creeping buttercup, giant horsetail, lady fern and piggy-back-plant in the understory.

Soil pits excavated within the wetland revealed a silty loam with a B-horizon soil color of 10YR 4/2 with common, medium, distinct redoximorphic concentrations. Soils were observed to be saturated to the surface during our non-growing season winter review.

Using the 2014 WADOE Wetland Rating system (2023 updated form) and rating the wetland as a slope type wetland, this wetland scored a total of 14 points with 4 for habitat which indicates a Category IV wetland.

According to Poulsbo Municipal Code (PMC) Chapter 16.20.230.C, Table 16.20.230.B, Category IV wetlands with a high impact land use such as a subdivision have a 50' buffer measured from the wetland edge.

Table 16.20.230.B—Wetland Buffer Width Standards

Wetland Category and Characteristics	Buffer Width Standards	Other Measures Recommended for Protection
Category IV		
Habitat score for all 3 functions is less than 16 points		No recommendations at this time
Low Impact Use	25 feet	
Moderate Impact Use	40 feet	
High Impact Use	50 feet	

Stream A

A small stream with a channel from 6"-12" in width drains water out of Wetland A and through a pvc culvert under and old road bed to the south. This channel had some flow in portions of the channel during our site visit but appears discontinuous depending on soil permeability. However, the channel has evidence of flow throughout its length at some time of the year. It appear to flow off-site to the south to a roadside ditch along SR 305.

This stream is <2' in width and has a slope that exceeds 16% on the south. The stream has seasonal flow and best meets the critieria of a Type Ns stream. Under PMC Table 16.20.315, this stream appears to best meet the classification of a Type Ns2 stream as it appears to just drain to a roadside ditch. Type Ns2 streams have a 50' buffer as well as a 25' Building Setback from the edge of the buffer,

Table 16.20.315—Fish and Wildlife Habitat Conservation Area Development Standards

Standard Buffers and Setback Requirements		
Water Type	**Buffer Width (feet, each side of stream)**	**Building Setback (feet, each side of buffer)**
F1 (salmonids)	200	25
F2 (nonsalmonids)	150	25
Np	100	25
Ns 1 (connected to S, F, Np)	75	25
Ns 2 (not connected to S, F, Np)	50	25

Wetland B

Wetland B consists of a large forested, slope type wetland located on the north edge of the site. The wetland extends off-site to the north.

The wetland edge was flagged with purple flagging labeled B1-B28.

The wetland is vegetated with an overstory of cottonwoods and alders with an understory of salmonberry, blackberry, lady fern, piggy-back-plant, skunk cabbage, and giant horsetail.

Soil pits excavated within the wetland revealed a black sapric muck overlaying a silt loam B horizon. The sapric muck layer was up to 12" in depth, with surface seepage throughout the wetland. A small discontinuous channel drains water through the wetland where it enters a 12" culvert under an old roadbed. This culvert drains a small seasonal stream (Stream B) to the west to Stream C located on the western side of the site.

Using the 2014 WADOE Wetland Rating system (2023 updated form) and rating the wetland as a slope type wetland, this wetland scored a total of 18 points with 6 for habitat which indicates a Category III wetland.

According to Poulsbo Municipal Code (PMC) Chapter 16.20.230.C, Table 16.20.230.B, Category III wetlands with 6 habitat points and a high

impact land use such as a subdivision have a 150' buffer measured from the wetland edge.

Table 16.20.230.B—Wetland Buffer Width Standards

Category III			
Habitat score from 8—9 points: use Category II buffers with habitat score 8—9 points			
Habitat score 5—7 points			No recommendations at this time
	Low Impact Use	75 feet	
	Moderate Impact Use	110 feet	
	High Impact Use	150 feet	

Wetland C

Wetland C consists of a small area of slope and riverine wetland surrounding the outfall of the stream exiting Wetland B to the west and connecting with Stream B on the western side of the site, this area was flagged with purple flags C1-C8.

The scrub-shrub wetland is vegetated with salmonberry, lady fern, and some water parsley.

Soil pits excavated within the wetland revealed a 4"-8" black sapric muck overlaying a silt loam B horizon.

Using the 2014 WADOE Wetland Rating system (2023 updated form) and rating the wetland as a riverine type wetland, this wetland scored a total of 17 points with 5 for habitat which indicates a Category III wetland.

According to Poulsbo Municipal Code (PMC) Chapter 16.20.230.C, Table 16.20.230.B, Category III wetlands with 5 habitat points and a high impact land use such as a subdivision have a 150' buffer measured from the wetland edge.

Stream B

A small stream with a channel from 12”-24”” in width drians water from a culvert under and old road bed from Wetland B into Wetland C and then Stream C to the west. The channel has several steep sections and appears to be seasonal in flow. The OHWM of the stream was flagged with blue flags N1-N3 and S1-S3.

This stream is <2’ in width and has a slope that exceeds 16% just east of its connectionn with Stream C. The stream has seasonal flow and best meets the critieria of a Type Ns stream. Under PMC Table 16.20.315, this stream appears o best meet the classification of a Type Ns2 stream. Type Ns2 streams have a 50’ buffer as well as a 25’ Building Setback from the edge of the buffer,

Table 16.20.315—Fish and Wildlife Habitat Conservation Area Development Standards

Standard Buffers and Setback Requirements		
Water Type	**Buffer Width (feet, each side of stream)**	**Building Setback (feet, each side of buffer)**
F1 (salmonids)	200	25
F2 (nonsalmonids)	150	25
Np	100	25
Ns 1 (connected to S, F, Np)	75	25
Ns 2 (not connected to S, F, Np)	50	25

Wetland D

Wetland consists of a small area of slope wetland located east of Stream C and on a bench above the creek approximately 4’ in elevation. This area was flagged with purple flags D1-D9.

The scrub-shrub wetland is vegetated with salmonberry, lady fern, and some water parsley.

Soil pits excavated within the wetland revealed a 4”-8” black sapric muck overlaying a silt loam B horizon.

Using the 2014 WADOE Wetland Rating system (2023 updated form) and rating the wetland as a slope type wetland, this wetland scored a total of 12 points with 4 for habitat which indicates a Category IV wetland.

According to Poulsbo Municipal Code (PMC) Chapter 16.20.230.C, Table 16.20.230.B, Category IV wetlands with 4 habitat points and a high impact land use such as a subdivision have a 50' buffer measured from the wetland edge.

Category IV			
Habitat score for all 3 functions is less than 16 points			No recommendations at this time
	Low Impact Use	25 feet	
	Moderate Impact Use	40 feet	
	High Impact Use	50 feet	

Barrante's Creek/Stream C

Stream C, known as Barrante's Creek is a well-defined stream located along the western side of the site. The ordinary high water mark/top of bank was flagged with blue flags labeled E1-E38 and W1-W38. The stream enters the site from the north and flows through the western side of the site passing through a hanging 18" concrete culvert in an old roadbed between flags E18-E19 & W18-W19. It then drains further south until passing off-site through a 36" culvert under SR 305. This culvert has a 4'-5' drop on the south side of SR 305 making it impassable at that point.

The stream has a mud, sand and gravel substrate with several vertical drops over large root crossings in the channel. The width of the stream varies for 2'-6' but is more of a ditched configuration on the south end of the site.

The stream has been shown as a non-fish bearing stream on the Fpars website and there was no evidence of fish use observed during our site visit.

The City of Pouslbo 2024 report titled "*City of Poulsbo – Wetlands and Fish and Wildlife Habitat Conservation Area Best Available Science Review and Recommended Protection Measures Report – Revised*" identifies Barrante's Creek as a Type Ns stream (see report excerpt below).

> *3.1.6 Barrante's Creek*
>
> Barrante's Creek runs approximately 0.5 mainstem river miles south, emptying into Liberty Bay north of Lemolo (Figure 8). Barrante's Creek is Type Ns stream.

The stream may have perennial flow and best meets the critieria of a Type Ns1 stream. Under PMC Table 16.20.315, Type Ns1 streams have a 75' buffer as well as a 25' Building Setback from the edge of the buffer,

Table 16.20.315—Fish and Wildlife Habitat Conservation Area Development Standards

Standard Buffers and Setback Requirements		
Water Type	**Buffer Width (feet, each side of stream)**	**Building Setback (feet, each side of buffer)**
F1 (salmonids)	200	25
F2 (nonsalmonids)	150	25
Np	100	25
Ns 1 (connected to S, F, Np)	75	25
Ns 2 (not connected to S, F, Np)	50	25

Stream D

A small stream is located along the east side of rhe site aand passes through a culvert unnder Sunrise Ridge Road and then a gravel driveway at the south edge of the site. This stream was identified as Stream D and flagged with blue flags E1-E7 & W1-W7. This stream has intermittent flow (no flow was presnet during our April site visit) with a channel from 12"-18" in width. A quarry spall stormwater dispersion trench is located along the stream channel south of Sunrise Ridge Road.

This stream is <2' in width and has a slope that exceeds 16%. The stream has seasonal flow and best meets the critieria of a Type Ns2

stream. Under PMC Table 16.20.315, this stream appears o best meet the classification of a Type Ns2 stream. Type Ns2 streams have a 50' buffer as well as a 25' Building Setback from the edge of the buffer,

Table 16.20.315—Fish and Wildlife Habitat Conservation Area Development Standards

Standard Buffers and Setback Requirements		
Water Type	**Buffer Width (feet, each side of stream)**	**Building Setback (feet, each side of buffer)**
F1 (salmonids)	200	25
F2 (nonsalmonids)	150	25
Np	100	25
Ns 1 (connected to S, F, Np)	75	25
Ns 2 (not connected to S, F, Np)	50	25

Proposed Project

The proposed project is the construction of a 151 lot residential plat with associated infrastructure.

Barrante's Creek Crossing impacts and conceptual mitigation

An access to the site on the east will be required from NE Crystallia Court. The City also requires accessing the site from the Baywatch Plat to the west off Baywatch Court NE. This will require crossing Barrante's Creek as well as its buffer to access the site from the west. This crossing will require a wildlife passable culvert to pass over the creek as well as 6,830sf of permanent stream buffer impact. There will also be an additional 5,107sf of temporarily impact to the stream buffer from the construction process. There will also be a 757sf area of the buffer that will be temporarily impacted for the storm water facility outfall.

The culvert type and size will be determined using WDFW culvert sizing criteria and as approved through a WDFW Hydraulic Project Approval (HPA).

Proposed Mitigation

The proposed impacts to 6,830sf of stream buffer will be mitigated by adding 6,926sf of buffer just east of the buffer around the crossing. This will maintain the overall buffer size and place this wider buffer in the vicinity of the impact and road crossing. The temporary impact areas will be replanted with native trees and shrubs as are found in the abutting forested areas.

As previously stated, a WDFW approved culvert will be used for the crossing. A mitigation measure will be to remove the old perched culvert on an old logging road crossing upstream of the proposed road crossing which blocks connectivity through the creek and will restore natural stream conditions to this area.

Buffer Averaging Wetland A

As depicted on the site plan, some minor buffer averaging is proposed along the outer portion of the buffer of Wetland A. The total reduced portion of the buffer is 2,003sf. This will be averaged by adding 2,207sf of buffer as depicted.

According to Poulsbo Municipal Code 16.20.230.E, buffer averaging can be utilized if the following criteria are met;

E. Buffer Width Averaging. The widths of buffers may be averaged if this will improve the protection of wetland functions, or if it is the only way to allow for reasonable use of a parcel. Averaging may not be used in conjunction with any of the other provisions for reductions of buffers in subsection F of this section.

Response: Due to the topography and the road width requirements, it is not feasible to get the road around this wetland without minor impacts to the buffer. The impacts are from grading to support the road and a small park area.

1. Averaging to improve wetland protection may be permitted when all of the following conditions are met:

a. The wetland has significant differences in characteristics that affect its habitat functions, such as wetland with a forested component adjacent to a degraded emergent component or a "dual-rated" wetland with a Category I area adjacent to a lower-rated area.

Response: The portions of the buffer to be reduced are primarily overgrown with blackberry and/or old logging roadbeds and provide little function. The added areas are more heavily vegetated and will maintain the existing functions of the wetland.

b. The buffer is increased adjacent to the higher-functioning area of habitat or more sensitive portion of the wetland and decreased adjacent to the lower-functioning or less sensitive portion.

Response: As previously noted, the reduced portions are heavily overgrown with blackberry and do not contain any mature vegetation.

c. The total area of buffer after averaging is equal to the area required without averaging.

Response: The total area of buffer reduced is less than the amount added, resulting in a net increase in buffer area of 174sf.

d. The buffer at its narrowest point is never less than three-quarters of the required width.

Response: The minimum buffer width is 37.5' which is 75% of the standard 50' buffer as required.

Buffer Averaging Wetland B

As depicted on the site plan, buffer averaging is proposed along the outer part of the buffer of Wetland B in 3 locations. These are being required by the existing grades and slopes which require some grading along the buffer edge As well as to fit several lots better thin the layout.

The total reduced portion of the buffer is 11,637sf. This will be averaged by adding 11,912sf of buffer as depicted.

According to Poulsbo Municipal Code 16.20.230.E, buffer averaging can be utilized if the following criteria are met;

E. Buffer Width Averaging. The widths of buffers may be averaged if this will improve the protection of wetland functions, or if it is the only way to allow for reasonable use of a parcel. Averaging may not be used in conjunction with any of the other provisions for reductions of buffers in subsection F of this section.

1. Averaging to improve wetland protection may be permitted when all of the following conditions are met:

a. The wetland has significant differences in characteristics that affect its habitat functions, such as wetland with a forested component adjacent to a degraded emergent component or a "dual-rated" wetland with a Category I area adjacent to a lower-rated area.

Response: The portions of the buffer to be reduced are primarily shrub dominated with no special habitat features. The added areas are more heavily vegetated and will maintain the existing functions of the wetland.

b. The buffer is increased adjacent to the higher-functioning area of habitat or more sensitive portion of the wetland and decreased adjacent to the lower-functioning or less sensitive portion.

Response: As previously noted, the added area is mature native vegetation with similar function to that to be removed through the averaging. The large width of this buffer on Wetland B as well as its slope type and separation by an old logging road between the wetland and the reduced buffer will maintain buffer functions. .

c. The total area of buffer after averaging is equal to the area required without averaging.

Response: The total area of buffer reduced is less than the amount added, resulting in a net increase in buffer area of 275sf.

d. The buffer at its narrowest point is never less than three-quarters of the required width.

Response: The minimum buffer width is 112.5' which is 75% of the standard 150' buffer as required.

Stream A Temporary impact

In order to get utilities through the area near Stream A, a temporary impact to 3,788sf of the buffer will be required as well as the channel bottom. This will be restored following work and all channel work will follow requirements of an HPA through WDFW.

Stream D Buffer Impact

As depicted on the plan, a small temporary impact (477sf) of buffer will occur from placement of a 5'x10' storm water outfall. The buffer area will be restored with native vegetation and the outfall area (50sf) will be added to the buffer to maintain total buffer area.

All of the above impacts and mitigation will be detailed in a Mitigation Plan to be submitted to the City following approval of the conceptual items described above and shown on the site plan.

Habitat Management Plan Requirements

As detailed in PMC 16.20.755;

A. When intrusions, reductions, alterations or impacts to a fish and wildlife habitat conservation area is proposed, or when otherwise required, a habitat management plan shall be prepared. The habitat management plan shall identify how the development impacts from the proposed project will be mitigated. The Washington Department of Fish and Wildlife Priority Habitat and Species Management Recommendations, dated May 1991, or bald eagle protection rules outlined in WAC 220-610-100, as now or hereafter amended, may serve as guidance for this report. The recommendations in Washington Department of Fish and Wildlife Priority Habitat and Species Management Recommendations found at http://wdfw.wa.gov/conservation/phs/mgmt_recommendations/ may serve as guidance for habitat management plans created to regulate the design, construction, and operation of projects that affect fish and wildlife conservation areas.

B. The habitat management plan shall contain a map prepared at an easily readable scale, showing:

1. The location of the proposed development site;

Response: See images and description of Page 1& 2 of this report and the attached site plan.

2. The relationship of the site to surrounding topography, water features, and cultural features;

Response: The site consists of a generally southwesterly sloping forested hillside. The eastern two parcels have an extension of Sunrise Ridge Avenue NE passing through it as well as a single family home and storm water facility. The eastern edge of the site is bordered by unimproved Maple Hill Avenue NE.

As previously described, the site consists of a large forested hillside bordered by subdivisions to the east and west. An undeveloped forested park known as "Frank Raab Park" is located to the north of the site. The eastern side of the site contains a gated portion of Sunrise Ridge Avenue NE that is partially paved and partially gravel. A small single family house and gravel driveway are located along the south east corner of the site as well as a small storm water facility.

The site contains several old overgrown roadbeds, possibly relics of past logging operations. The stream on the western side of the site has an old culverted road crossing completely overgrown.

The site contains a plateau on the northeast which slopes off to the south and west. A large depression is located near the north side of the site which contains a large slope wetland. A a small Type Ns stream known as Barrante's Creek is locate along the western side of the site. This drains water from Wetlands B, C & D on site as well as potential wetlands north of the site. This water drains through the creek down a steep slope approximately 1,000' to Liberty Bay.

No known cultural features are on or near the site.

3. Proposed building locations and arrangements; and

Response: See attached site plan.

4. A legend which includes a complete legal description, acreage of the parcel, scale, north arrow, and date of map revision.

Response: See attached site plan.

C. The habitat management plan shall also contain a report which describes:

1. The nature and intensity of the proposed development;

Response: The proposed project is the construction of a 151 lot residential plat with associated infrastructure. Townhomes are proposed on the southeast portion of the site. This all meets existing zoning for the site. All of the area along Barrante's Creek, the wetlands and their buffers as well as forested land to the west of the stream will be left undeveloped. Wetland A and Stream A will also be left undisturbed with additional forested land surrounding them left undisturbed.

2. An analysis of the effect of the proposed development, activity or land use change upon the wildlife species and habitat identified for protection, including impacts on buffer and building setbacks.

Response: As detailed on pages 18-22 of this report, the wetlands, and streams will be protected as will their buffers with some buffer averaging where needed as well as a crossing of Barrante's Creek from the west to allow access to the site.

The site as been zoned for residential development by the City of Poulsbo. The proposed site plan is within the zoning allowed for the site. Any development on undeveloped land impacts habitat and species using the site. No state or federally listed species have been noted to use the site or the area around the site. The site is used by typical human tolerant wildlife species such as coyote, raccoon, eastern gray squirrels, and common bird species. The area provides a habitat island within a large area of residential development.

The site is the southern end of an approximate 84 acre area of continuous forested habitat which includes off-site area to the north and west. This forested area is surrounded by dense residential development, a park and roads which all reduce its habitat value to some species due to isolation.



Above: Area of contiguous habitat including the site is 84 acres.

The site plan protects the most important habitat features on the site which are the wetlands and the associated streams. The entire western side of the site and most of the north in the large topographic depression with the wetland is located are proposed to be protected. These are the areas that have the most evidence of wildlife use.

3. An analysis of any special management recommendations that will be implemented to ensure protection of the species and/or habitat.

As detailed in the site plan, wetlands and the streams on the site will be protected as well as the buffers required by the City of Poulsbo. This will ensure that the most important habitat features on the site are undisturbed and remain contiguous with the 44 acres of forested land to the north. Storm water that comes from the site will be controlled and treated as required under the storm water manual to maintain water quality of the receiving streams on the site.

4. A plan which identifies how the applicant proposes to mitigate any adverse impacts to wildlife habitats created by the proposed development. Mitigation measures are required where buffer reduction or intrusions into building setbacks are proposed, and shall include buffer enhancement.

Response: The proposed site plan depicts conceptually the areas of buffer reduction through averaging as well as the creek crossing of Barrante's Creek. Any of the reduced buffer areas, as well as the temporarily impacted buffer areas during construction will be replanted with native trees and shrubs to restore the habitat and function of these areas. The crossing of Barrante's Creek will be with a WDFW approved crossing/culvert and will meet any requirements of the HPA permit.

Once a more detailed site plan has approval of the City, a final Mitigation Plan will be prepared to show details of the proposed mitigation for any impacts previously discussed.

5. Assessment and evaluation of the effectiveness of the mitigation measures proposed.

Response: Any proposed mitigation will have monitoring goals and requirements to determine effectiveness of the proposed mitigation. This will be detailed in the final mitigation plan.

6. Assessment and evaluation of ongoing management practices which will protect fish and wildlife habitat conservation areas after development of the project site, including monitoring and maintenance programs, and operation constraints.

Response: The undeveloped critical habitat areas of the site outside of the proposed development will be in protected tracts with operational constraints and limitations on what activities can occur in these areas.

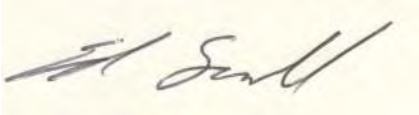
7. Assessment of project impact or effect on water quality upon SF Dogfish Creek or any regulated stream, and any proposed methods or practices to avoid degradation of water quality.

Response: As previously described, the storm water outfalls for the proposed storm water facilities will discharge to Barrante's creek as well as Stream D. These outfalls will be from water quality facilities that will

treat water to within the required standards as dictated by the City's storm water manual. Best management practices will be utilized during construction to include timing of the work as well as temporarily sediment ponds and fences. Storm water testing as required for the storm water facilities based upon the City stands should maintain water quality in the sites streams.

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

Sincerely,
Sewall Wetland Consulting, Inc.



Ed Sewall
Senior Wetlands Ecologist PWS #212

Attached: *Site Plan*
Data Sheets
Rating forms and associated exhibits

REFERENCES

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

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

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

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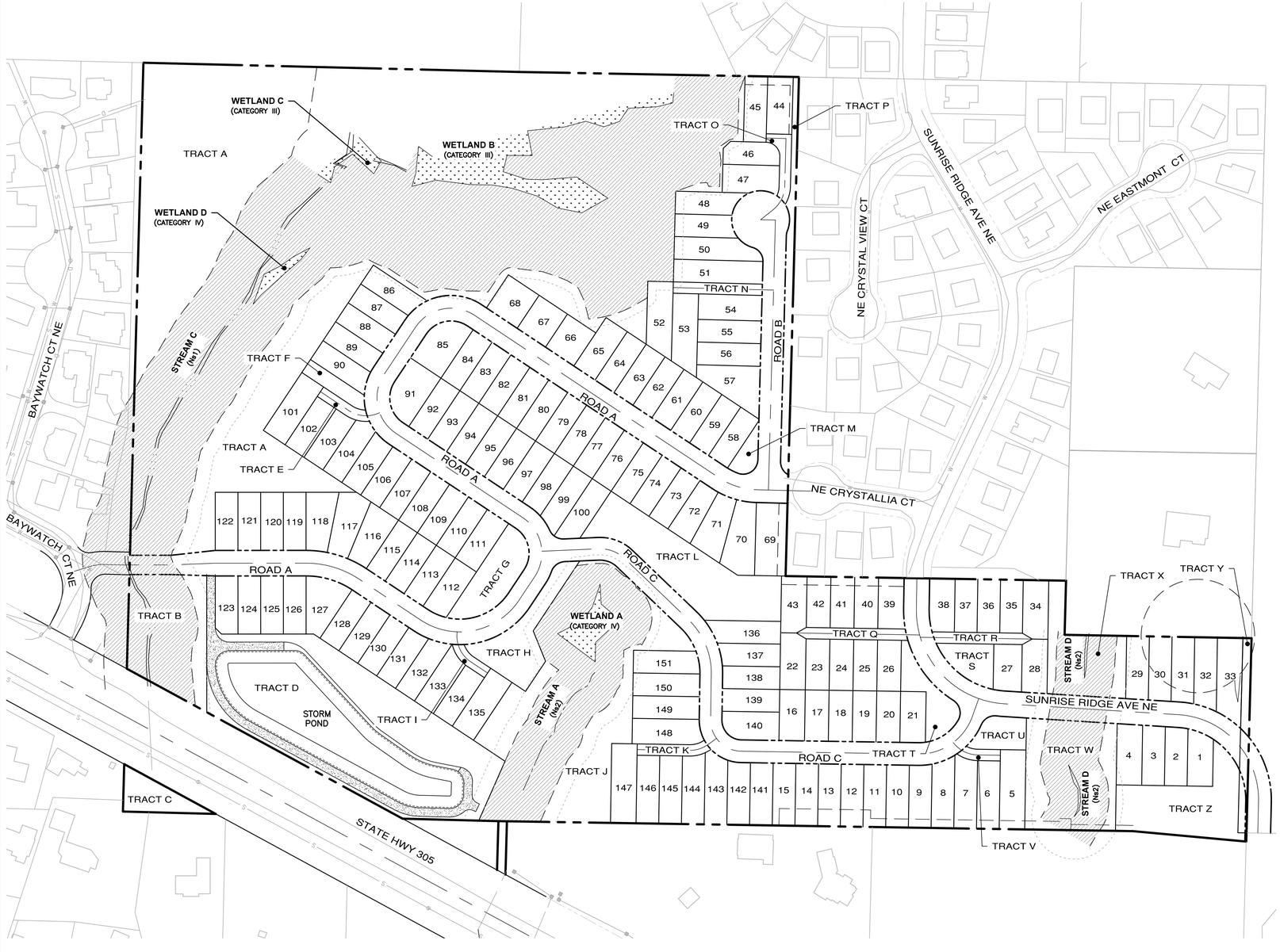
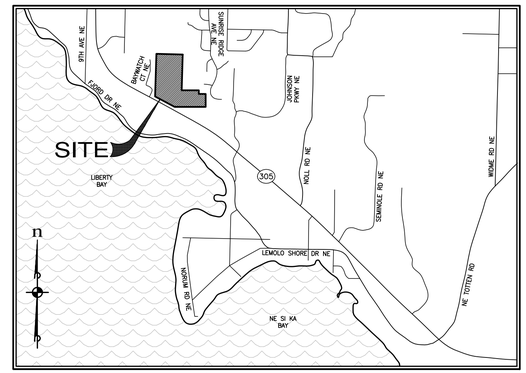
Reed, P.B. Jr. 1993. 1993 Supplement to the list of plant species that occur in wetlands: Northwest (Region 9). USFWS supplement to Biol. Rpt. 88(26.9) May 1988.

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

A PORTION OF THE SE 1/4 OF SECTION 23, TWP. 26 N., RGE. 1 E.,WM





VICINITY MAP
NOT TO SCALE

n

SCALE: 1" = 100'
100 50 0 100 200

SHEET INDEX

Dwg.	Description
PP-01	COVER SHEET
PP-02 – PP-04	EXISTING CONDITIONS
PP-05	BUFFER MITIGATION PLAN
PP-06	OVERALL SITE PLAN & PHASING PLAN
PP-07 – PP-09	PRELIMINARY SITE PLANS
PP-10 – PP-12	PRELIMINARY GRADING PLANS
PP-13	OVERALL ROAD & UTILITY PLAN
PP-14 – PP-16	PRELIMINARY ROAD & UTILITY PLANS
PP-17	PRELIMINARY POND LAYOUT
PP-18	PRELIMINARY POND SECTIONS
PP-19	PRELIMINARY VAULT SECTIONS
PP-20	OFFSITE SEWER CONNECTION/CROSSING PLAN & PROFILE
PP-21	STREAM A STORM/SEWER CROSSING PLAN & PROFILE
PP-22	STREAM C STORM/SEWER CROSSING PLAN & PROFILE
PP-23	ENTERING SITE DISTANCE (BAYWATCH CT NE)
PP-24 – PP-26	PRELIMINARY LANDSCAPE PLANS

PROJECT TEAM

OWNER/DEVELOPER
MONTEBANC MANAGEMENT, LLC
400 NW GILMAN BLVD. #2781
ISSAQUAH, WA 98027
CONTACT: PAUL DEVENZIO
PHONE: (206) 391-8366

CIVIL ENGINEER/SURVEYOR
ESM CONSULTING ENGINEERS
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CONTACT: ALISON DENNISON, LEG
PHONE: (206) 780-7717

BIOLOGIST
SEWALL WETLAND CONSULTING, INC
PO BOX 880
FALL CITY, WA 98024
CONTACT: ED SEWALL
PHONE: (253) 859-0515

TRAFFIC ENGINEER
HEATH & ASSOCIATES
1011 E MAIN AVE, STE 453
PUYALLUP, WA 98372
CONTACT: AARON VAN AKEN
PHONE: (253) 859-0515

SITE STATISTICS

NUMBER OF LOTS:	151
LOTS PER GROSS ACRE:	xxx
TOTAL SITE AREA:	x,xxx,xxx SF xx.xx ACRES
SITE ADDRESS:	ADDRESS NOT ASSIGNED
PARCEL NUMBER(S):	23260140012009
	24260130032008
	24260130182001
	24260130052006
	24260130192000
LOT SIZE:	
LARGEST LOT:	7,035 SF
SMALLEST LOT:	3,758 SF
AVERAGE LOT:	4,456 SF
SEWERAGE SYSTEM:	CITY OF POULSBO
WATER SUPPLY:	CITY OF POULSBO
FIRE DISTRICT:	CITY OF POULSBO

REVISIONS

NO.	DESCRIPTION/DATE	BY

BRANDON MICHAEL LOUCH
STATE OF WASHINGTON
50085
REGISTERED
PROFESSIONAL ENGINEER

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Civil Engineering
Public Works
Land Planning
Landscape Architecture
Land Surveying
Project Management

MONTEBANC MANAGEMENT, LLC

PINNACLE AT LIBERTY BAY SUBDIVISION

COVER SHEET

CITY OF POULSBO WASHINGTON

JOB NO.:	2090-004-022
DWG. NAME:	PP-01
DESIGNED BY:	TLS
DRAWN BY:	HAF
CHECKED BY:	
DATE:	6/19/2025
DATE OF PRINT:	

PP-01

1 OF 26 SHEETS

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A PORTION OF THE SE 1/4 OF SECTION 23, TWP. 26 N., RGE. 1 E.,WM

LEGAL DESCRIPTIONS

PARCEL A (TAX PARCEL NO. 232601-4-001):

THE EAST HALF OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER IN SECTION 23, TOWNSHIP 26 NORTH, RANGE 1 EAST, W.M., KITSAP COUNTY, WASHINGTON;

EXCEPT 1.43 ACRES TO HIGHWAY 21A.

PARCEL B (TAX PARCEL 242601-3-003):

THE WEST 15 ACRES OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 24, TOWNSHIP 26 NORTH, RANGE 1 EAST, W.M., KITSAP COUNTY, WASHINGTON.

PARCEL C (TAX PARCEL 252601-2-047):

THE WEST 15 FEET OF GOVERNMENT LOT 7, SECTION 25, TOWNSHIP 26 NORTH, RANGE 1 EAST, W.M. LYING NORTHEASTERLY OF STATE HIGHWAY NO. 21A;

SITUATED IN KITSAP COUNTY, WASHINGTON.

PARCEL D (TAX PARCEL NO. 252601-2-048):

THE WEST 15 FEET OF GOVERNMENT LOT 7, SECTION 25, TOWNSHIP 26 NORTH, RANGE 1 EAST, W.M. LYING SOUTHEASTERLY OF STATE HIGHWAY NO. 21A;

SITUATED IN KITSAP COUNTY, WASHINGTON.

PARCEL E (PORTIOIN OF TAX PARCEL 242601-3-005 LYING NORTH OF SECTION LINE):

THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 24, TOWNSHIP 26 NORTH, RANGE 1 EAST, W.M., IN KITSAP COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SAID QUARTER:

THENCE WEST ALONG THE SOUTH LINE OF SAID SECTION 24 A DISTANCE OF 330 FEET; THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID QUARTER A DISTANCE OF 345.7 FOOT; THENCE EAST PARALLEL WITH THE SOUTH LINE OF SAID QUARTER A DISTANCE OF 330 FEET TO THE EAST LINE OF SAID QUARTER; THENCE SOUTH ALONG SAID EAST LINE A DISTANCE OF 345.7 FEET TO THE POINT OF BEGINNING:

EXCEPT THE EAST 15 FEET THEREOF.

PARCEL E1 (PORTION OF TAX PARCEL 242601-3-005 LYING SOUTH OF SECTION LINE):

THAT PORTION OF GOVERNMENT LOT 7, SECTION 25, TOWNSHIP 26 NORTH, RANGE 1 EAST, W.M., IN KITSAP COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST COMER OF SAID GOVERNMENT LOT 7; THENCE SOUTH 15 FEET; THENCE NORTHWESTERLY IN A STRAIGHT LINE TO A POINT ON THE NORTH LINE OF SAID GOVERNMENT LOT 7, WHICH IS 200 FEET WEST OF THE NORTHEAST CORNER OF SAID GOVERNMENT LOT 7; THENCE EAST ALONG SAID NORTH LINE 200 FEET TO THE NORTHEAST CORNER THEREOF AND THE POINT OF BEGINNING, AS DISCLOSED IN DECREE FILED IN KITSAP COUNTY SUPERIOR COURT
CAUSE NO. 57080.

SITUATE IN THE COUNTY OF KITSAP, STATE OF WASHINGTON.

PARCEL F (TAX PARCEL NO. 242601-3-018):

THE SOUTH 1/3, EXCEPT COUNTY ROAD NO. 141, OF THE FOLLOWING DESCRIBED PROPERTY: THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER, SECTION 24, TOWNSHIP 26 NORTH, RANGE 1 EAST, W.M.. IN KITSAP COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT 330 FEET WEST OF THE NORTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 24; THENCE WEST 495 FEET; THENCE SOUTH 1320 FEET; THENCE EAST 495 FEET; THENCE NORTH 1320 FEET TO THE POINT OF BEGINNING.

SITUATE IN THE COUNTY OF KITSAP, STATE OF WASHINGTON.

PARCEL G (TAX PARCEL 242601-3-019):

THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER, SECTION 24, TOWNSHIP 26 NORTH, RANGE 1 EAST, W.M., IN KITSAP COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SAID SUBDIVISION:

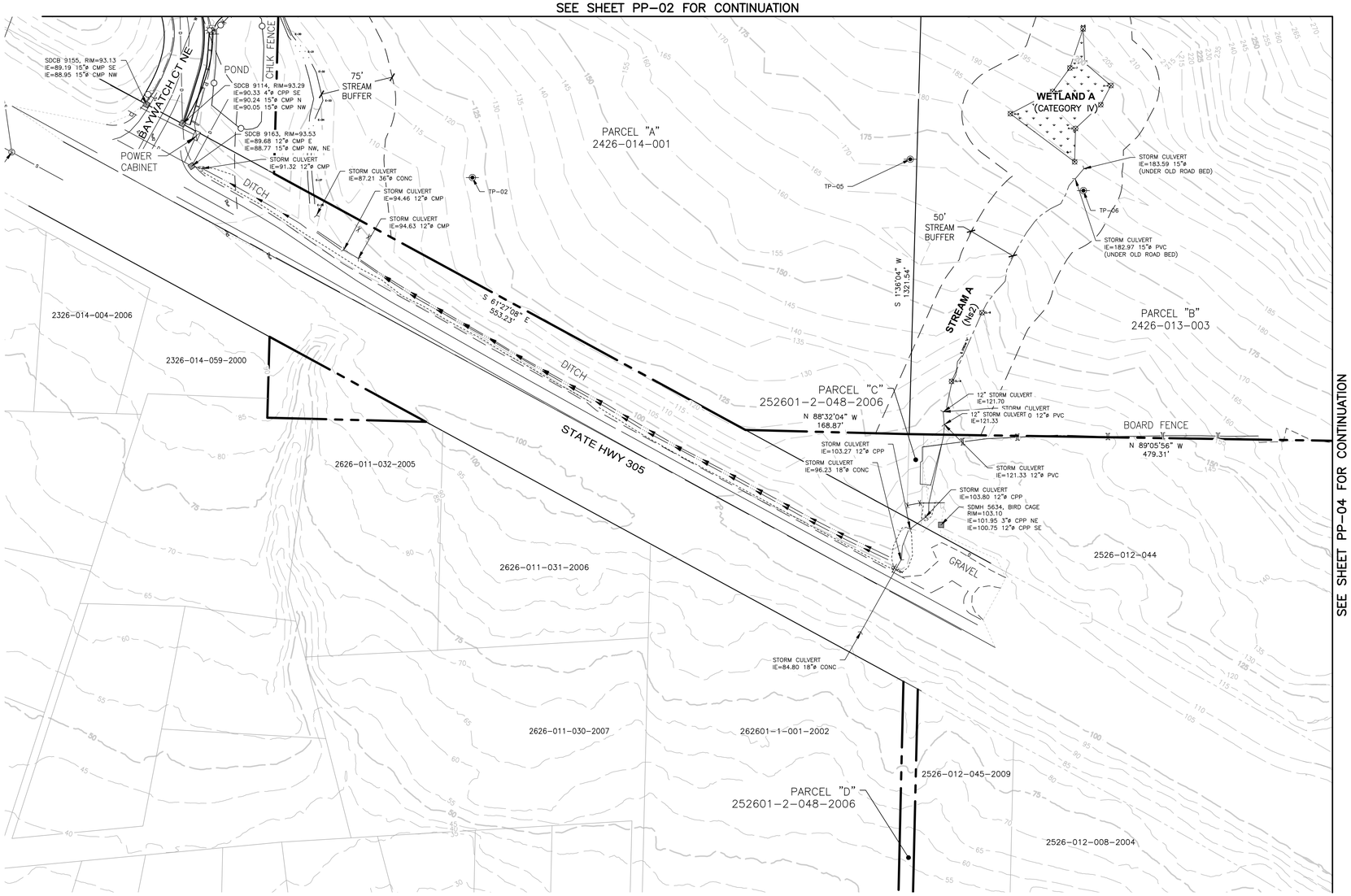
THENCE NORTH 89°02'10" WEST ALONG SOUTH LINE, 15 FEET:

THENCE NORTH 01°30'56" EAST PARALLEL WITH THE EAST LINE OF SAID SUBDIVISION, 345.7 FEET:

THENCE SOUTH 29°02'10" EAST, 15 FEET TO THE EAST LINE OF SAID SUBDIVISION; THENCE SOUTH 01°30'56" WEST ALONG SAID EAST LINE, 345.7 FEET, MORE OR LESS, TO THE TRUE POINT OF BEGINNING.

SITUATE IN THE COUNTY OF KITSAP, STATE OF WASHINGTON.

SEE SHEET PP-02 FOR CONTINUATION



SEE SHEET PP-04 FOR CONTINUATION

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SCALE: 1" = 60'

60 30 0 60 120

CONTOUR INTERVAL = 5'

SEE LEGEND ON SHEET PP-02

REVISIONS		
NO.	DESCRIPTION/DATE	BY

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Public Works
Land Planning
Landscape Architecture
Land Surveying
Project Management

MONTEBANC MANAGEMENT, LLC

PINNACLE AT LIBERTY BAY SUBDIVISION

EXISTING CONDITIONS

CITY OF POULSBO WASHINGTON

JOB NO.:	2090-004-022
DWG. NAME:	PP-03
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
DATE:	6/20/2025
DATE OF PRINT:	

PP-03

3 OF 26 SHEETS

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PINNACLE AT LIBERTY BAY PRD



ESM CONSULTING ENGINEERS LLC
33400 8th Ave South, Suite 205
Federal Way, WA 98003

A PORTION OF THE SE 1/4 OF SECTION 23, TWP. 26 N., RGE. 1 E.,WM



n

SCALE: 1" = 80'

80 40 0 80 160

BUFFER GIVE/TAKE ANALYSIS

	WETLAND A	WETLAND B
TOTAL GIVE	2,207 SF	11,912 SF
TOTAL TAKE	2,033 SF	11,637 SF
NET GIVE	174 SF	275 SF

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

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REVISIONS

NO.	DESCRIPTION/DATE	BY

BRANDON MICHAEL LOUDON — STATE OF WASHINGTON — 50085 — REGISTERED PROFESSIONAL ENGINEER

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MONTEBANC MANAGEMENT, LLC

PINNACLE AT LIBERTY BAY

BUFFER MITIGATION PLAN

CITY OF POULSBO WASHINGTON

JOB NO.:	2090-004-022
DWG. NAME:	PP-05
DESIGNED BY:	TLS
DRAWN BY:	HAF
CHECKED BY:	
DATE:	6/17/2025
DATE OF PRINT:	

PP-05

5 OF 26 SHEETS

wetland A

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region
See ERDC/EL TR-10-3; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Monthaven Poulsbo City/County: Poulsbo Sampling Date: 10-6-25
Applicant/Owner: State: WA Sampling Point: DP#1
Investigator(s): Ed Scott Section, Township, Range:
Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR/MLRA): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No ___	**Is the Sampled Area within a Wetland?** Yes ✓ No ___
Hydric Soil Present?	Yes ✓	No ___	
Wetland Hydrology Present?	Yes ✓	No ___	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	50		FAC
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1. Salix sitchensis	20		FACW
2. Rubus discolor	50		FAC
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: ___)			
1. Ranunculus repens	30		FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	=Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	=Total Cover		
% Bare Ground in Herb Stratum ___			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species ___	x 3 = ___
FACU species ___	x 4 = ___
UPL species ___	x 5 = ___
Column Totals: ___ (A)	___ (B)
Prevalence Index = B/A = ___	

Hydrophytic Vegetation Indicators:
✓ 1 - Rapid Test for Hydrophytic Vegetation
___ 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.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks:

SOIL

Sampling Point: DP#1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
6	10YR 3/3							
16	2.5Y 4/2		Common med distinct				silty clay loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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 on 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): 0" (includes capillary fringe)

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

upland next to Wet A

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region
See ERDC/EL TR-10-3; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Monthaire Paulsbo City/County: Paulsbo Sampling Date: 1-6-25
Applicant/Owner: State: WA Sampling Point: DP#2
Investigator(s): Ed Sendt Section, Township, Range:
Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR/MLRA): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	50		FAC
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. Rubus discolor	80		FAC
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	=Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		
% Bare Ground in Herb Stratum			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:
✓ 1 - Rapid Test for Hydrophytic Vegetation
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.

Hydrophytic Vegetation Present? ✓ Yes No

Remarks:

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 Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
16	10YR 3/3						silt loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (If observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ___ No ✓

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

Remarks:

upslope of wet A

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region
See ERDC/EL TR-10-3; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Montbare Poulsbo City/County: Poulsbo Sampling Date: 1-6-25
Applicant/Owner: State: WA Sampling Point: DP#3
Investigator(s): Ed Scott Section, Township, Range:
Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR/MLRA): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No ___	**Is the Sampled Area within a Wetland?** Yes ___ No ✓
Hydric Soil Present?	Yes ___	No ✓	
Wetland Hydrology Present?	Yes ___	No ___	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. Thuja plicata	30		FAC
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: ___)			
1. Urtica dioica	60		FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	=Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	=Total Cover		
% Bare Ground in Herb Stratum ___			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species ___	x 3 = ___
FACU species ___	x 4 = ___
UPL species ___	x 5 = ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 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.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks:

SOIL

Sampling Point: DP#3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
6	10YR3/2							
16	10YR3/3						silt loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ___ No ✓

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

Remarks:

wet B east

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region
See ERDC/EL TR-10-3; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Montbare Pavilion City/County: Pavilion Sampling Date: 1-6-25
Applicant/Owner: State: WA Sampling Point: DP#4
Investigator(s): Ed Scott Section, Township, Range:
Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR/MLRA): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No ___	**Is the Sampled Area within a Wetland?** Yes ✓ No ___
Hydric Soil Present?	Yes ✓	No ___	
Wetland Hydrology Present?	Yes ___	No ___	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	50		FAC
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1. Ribes spicatus	30		FAC
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: ___)			
1. Athyrium filix-femina	20		FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	=Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	=Total Cover		
% Bare Ground in Herb Stratum ___			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species ___	x 3 = ___
FACU species ___	x 4 = ___
UPL species ___	x 5 = ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:
✓ 1 - Rapid Test for Hydrophytic Vegetation
___ 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.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks:

SOIL

Sampling Point: DP#4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
8	10YR 2/2						Sandy Muck	
16	10Y 2/1						Sandy L	

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

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

- ___ Histosol (A1)
- ✓ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ___	No ✓	Depth (inches): ___
Water Table Present?	Yes ___	No ✓	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ✓	No ___	Depth (inches): 2"

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

upland east of wet 13

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region
See ERDC/EL TR-10-3; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Montbare Poulsbo City/County: Poulsbo Sampling Date: 1-6-25
Applicant/Owner: State: WA Sampling Point: DP#6
Investigator(s): Ed Sendt Section, Township, Range:
Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR/MLRA): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ___	No ✓	**Is the Sampled Area within a Wetland?** Yes ___ No ✓
Hydric Soil Present?	Yes ___	No ✓	
Wetland Hydrology Present?	Yes ___	No ___	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	30		FAC
2. Acer macrophyllum	30		FACU
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1. Rubus spectabilis	50		FAC
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: ___)			
1. Polystichum munitum	20		FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	=Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species 80	x 3 = 240
FACU species 50	x 4 = 200
UPL species ___	x 5 = ___
Column Totals: 130 (A)	440 (B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 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.

Hydrophytic Vegetation Present? Yes ___ No ✓

Remarks:

SOIL

Sampling Point: DP#6

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

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

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ___ No ✓

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

Remarks:

wet B south west

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region
See ERDC/EL TR-10-3; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Methow Paulsbo City/County: Paulsbo Sampling Date: 1-6-25
Applicant/Owner: State: WA Sampling Point: DP #7
Investigator(s): Ed Scott Section, Township, Range:
Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR/MLRA): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No ___	**Is the Sampled Area within a Wetland?** Yes ✓ No ___
Hydric Soil Present?	Yes ✓	No ___	
Wetland Hydrology Present?	Yes ✓	No ___	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	50		FAC
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1. Rubus spectabilis	80		FAC
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: ___)			
1. Lysichiton americanus	20		OBL
2. Tolmiea menziesii	20		FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	=Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	=Total Cover		
% Bare Ground in Herb Stratum ___			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species ___	x 3 = ___
FACU species ___	x 4 = ___
UPL species ___	x 5 = ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 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.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks:

SOIL

Sampling Point: DP#7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
5	10YR 2/1						Sapric muck	
16	10YR 3/2		Few	Few	Pr		gs L	

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

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

- ___ Histosol (A1)
- ✓ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ___	No ✓	Depth (inches): ___
Water Table Present?	Yes ___	No ✓	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ✓	No ___	Depth (inches): -3"

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

wet, c

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Montbare Poulsbo City/County: Poulsbo Sampling Date: 1-6-25

Applicant/Owner: State: WA Sampling Point: DP#8

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

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

Subregion (LRR/MLRA): Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1. Rubus spectabilis	60		FAC
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: ___)			
1. Tolmen mex zaso.	30		FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
		=Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✓ 1 - Rapid Test for Hydrophytic Vegetation

___ 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.

Hydrophytic Vegetation Present? Yes ✓ No ___

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 Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
6	10YR 2/2						sym muck	
16	10YR 2/2						OSL	

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

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

- ___ Histosol (A1)
- ✓ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ___	No ✓	Depth (inches): ___
Water Table Present?	Yes ___	No ✓	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ✓	No ___	Depth (inches): -4"

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

wetland D

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region
See ERDC/EL TR-10-3; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Monthaven Poulsbo City/County: Poulsbo Sampling Date: 1-6-25
Applicant/Owner: State: WA Sampling Point: DP #9
Investigator(s): Ed Sendt Section, Township, Range:
Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR/MLRA): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. Rubus discolor	20		FAC
2. Rubus spectabilis	60		FAC
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. Athyrium filix-femina	30		FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	=Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		
% Bare Ground in Herb Stratum			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:
✓ 1 - Rapid Test for Hydrophytic Vegetation
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.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

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 Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
6	10YR 2/1						Sapric muc	
16	10YR 2/2						Sapric muc	

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

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

- ___ Histosol (A1)
- ✓ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ___	No ✓	Depth (inches): ___
Water Table Present?	Yes ___	No ✓	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ✓	No ___	Depth (inches): 0"

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

Swale like Feature
South west

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region
See ERDC/EL TR-10-3; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Monthare Paulsbo City/County: Paulsbo Sampling Date: 1-6-25
Applicant/Owner: State: WA Sampling Point: DP#10
Investigator(s): Ed Scott Section, Township, Range:
Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR/MLRA): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	30		FAC
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. Rubus spectabilis	50		FAC
2. Rubus discolor	20		FAC
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	=Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
✓ 1 - Rapid Test for Hydrophytic Vegetation
___ 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.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

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 Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
16	10YR3/2						sol	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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 on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ___ No ✓

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

Remarks:

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Matthews Wet A Date of site visit: 9-4-24

Rated by [signature] Trained by Ecology? ✓Yes ___No Date of training ___

HGM Class used for rating Slope Wetland has multiple HGM classes? ___Y ✓N

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

Source of base aerial photo/map ___

OVERALL WETLAND CATEGORY IV (based on functions___ or special characteristics__)

1. Category of wetland based on FUNCTIONS

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

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

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

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		Circle the appropriate ratings		
Site Potential	H (M) L	H M (L)	H M (L)	
Landscape Potential	H M (L)	H M (L)	H M (L)	
Value	(H) M L	H (M) L	H (M) L	TOTAL
Score Based on Ratings	6	4	4	14

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	✓

Wetland name or number A

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

Wetland name or number A

HGM Classification of Wetlands in Western Washington

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

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

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

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

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

   NO – Saltwater Tidal Fringe (Estuarine) **YES – Freshwater Tidal Fringe**
   If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe, it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.

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

   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.

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

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

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

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

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

Wetland name or number A

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

   NO – go to 6 **YES** – The wetland class is **Riverine**
   NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? This means that any outlet, if present, is higher than the interior of the wetland.

   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched but has no obvious natural outlet.

   NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

   NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

Wetland name or number A

SLOPE WETLANDS

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

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

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

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

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

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

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

Wetland name or number A

SLOPE WETLANDS

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

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

S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows. Dense, uncut, **rigid** plants cover > 90% of the area of the wetland — points = 1 All other conditions — points = 0 (circled)	0

Rating of Site Potential If score is: __1 = M ✓ 0 = L *Record the rating on the first page*

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

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

Rating of Landscape Potential If score is: __1 = M ✓ 0 = L *Record the rating on the first page*

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

S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately downgradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) — points = 2 Surface flooding problems are in a sub-basin farther downgradient — points = 1 (circled) No flooding problems anywhere downstream — points = 0	1
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? — Yes = 2 (No = 0 circled)	0
Total for S 6 — Add the points in the boxes above	1

Rating of Value If score is: __2-4 = H ✓ 1 = M __0 = L *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:

Wetland name or number A

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

____Aquatic bed	4 structures or more: points = 4
____Emergent	3 structures: points = 2
____Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points = (1)
____Forested (areas where trees have > 30% cover)	1 structure: points = 0

If the unit has a Forested class, check if:

____The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/groundcover) that each cover 20% within the Forested polygon

1

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland if the unit is < 2.5 ac, or ¼ ac if the unit is at least 2.5 ac to count (see text for descriptions of hydroperiods).

____Permanently flooded or inundated	4 or more types present: points = 3
____Seasonally flooded or inundated	3 types present: points = 2
____Occasionally flooded or inundated	2 types present: points = (1)
____Saturated only	1 type present: points = 0
____Permanently flowing stream or river in, or adjacent to, the wetland	
____Intermittently or seasonally flowing stream in, or adjacent to, the wetland	
____**Lake Fringe wetland**	**2 points**
____**Freshwater tidal wetland**	**2 points**

1

H 1.3. Richness of plant species

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

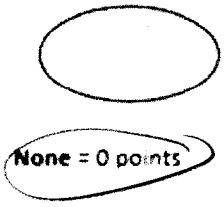
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. **Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canada thistle**

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

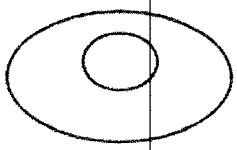
1

H 1.4. Interspersion of habitats

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



(**None** = 0 points)

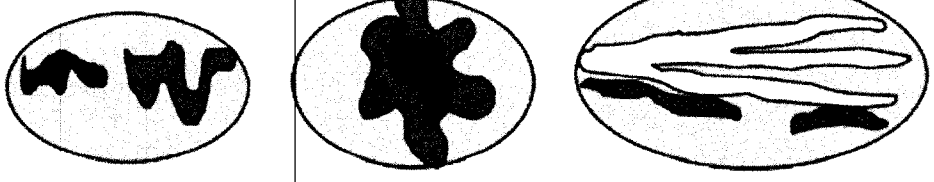


Low = 1 point



Moderate = 2 points

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



3

Wetland name or number A

3

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. The number of checks is the number of points. 1 Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long). 1 Standing snags (dbh > 4 in.) within the wetland ____Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extend at least 3.3 ft (1 m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ____Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed) ____At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) ____Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)	2
Total for H 1 — Add the points in the boxes above	5

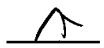
Rating of Site Potential If score is: __**15-18 = H** ___**7-14 = M** ✓**0-6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland. *Calculate:* % relatively undisturbed habitat 13 + [(% moderate and low intensity land uses)/2] 0 = 13 % Total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon — points = 3 20-33% of 1 km Polygon — points = 2 10-19% of 1 km Polygon — points = 1 < 10% of 1 km Polygon — points = 0	1
H 2.2. Total habitat in 1 km Polygon around the wetland. *Calculate:* % relatively undisturbed habitat 20 + [(% moderate and low intensity land uses)/2] 2 = 22 % Total habitat > 50% of Polygon — points = 3 Total habitat 10-50% and in 1-3 patches — points = 2 Total habitat 10-50% and > 3 patches — points = 1 Total habitat < 10% of 1 km Polygon — points = 0	1
H 2.3. Land use intensity in 1 km Polygon: > 50% of 1 km Polygon is high intensity land use — points = (-2) ≤ 50% of 1 km Polygon is high intensity — points = 0	-2
Total for H 2 — Add the points in the boxes above	0

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

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

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

Wetland name or number 

WDFW Priority Habitats

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

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

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

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

— **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.

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

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

— **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).

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

— **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. Do not select if Fresh Deepwater habitat is also present.

— **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.

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

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[133] http://wdfw.wa.gov/publications/00165/wdfw00165.pdf

Wetland name or number A

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, WDFW's Management Recommendations for Oregon White Oak[134] provides more detail for determining if they are Priority Habitats

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

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

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

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

[134] https://wdfw.wa.gov/publications/00030/wdfw00030.pdf

Wetland name or number A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes – Go to **SC 1.1** No= **Not an estuarine wetland**	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = **Category I** No – Go to **SC 1.2**	**Cat. I**
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species. If non-native species are *Spartina*, see chapter 4.8 in the manual. — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?[135] Yes = **Category I** No – Go to **SC 2.2** SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements. Yes – Submit data to WA Natural Heritage Program for determination,[136] Go to **SC 2.3** No = **Not a WHCV** SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria? Yes = **Category I** No = **Not a WHCV**	**Cat. I**
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below.* ***If you answer YES, you will still need to rate the wetland based on its functions.*** SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in. or more of the first 32 in. of the soil profile? Yes – Go to **SC 3.3** No – Go to **SC 3.2** SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to **SC 3.3** No = **Not a bog** SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = **Category I bog** No – Go to **SC 3.4** **NOTE:** If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in. deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = **Category I bog** No = **Not a bog**	**Cat. I**

[135] https://www.dnr.wa.gov/NHPdata
[136] https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

Wetland name or number A

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? ***If you answer YES, you will still need to rate the wetland based on its functions.*** — **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in. (81 cm) or more. — **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in. (53 cm). Yes = **Category I** No = **Not a forested wetland for this section**	**Cat. I**
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* — The lagoon retains some of its surface water at low tide during spring tides Yes – Go to **SC 5.1** No = **Not a wetland in a coastal lagoon** SC 5.1. Does the wetland meet all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species in H 1.5 in the manual). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than $^1/_{10}$ ac (4350 ft^2) Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer YES, you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. Yes – Go to **SC 6.1** No = **Not an interdunal wetland for rating** SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = **Category I** No – Go to **SC 6.2** SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = **Category II** No – Go to **SC 6.3** SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = **Category III** No = **Category IV**	**Cat I** **Cat. II** **Cat. III** **Cat. IV**
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	NA

Wetland name or number B

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Montbare Wet B Date of site visit: 9-4-24

Rated by Ed Small Trained by Ecology? ✓ Yes ___ No Date of training _____

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

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

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

1. Category of wetland based on FUNCTIONS

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

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

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

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		Circle the appropriate ratings		
Site Potential	H (M) L	H (M) L	H (M) L	
Landscape Potential	H (M) L	H M (L)	H M (L)	
Value	(H) M L	H (M) L	(H) M L	**TOTAL**
Score Based on Ratings	7	5	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	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV ✓
None of the above	

Wetland name or number TB

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

Wetland name or number B

HGM Classification of Wetlands in Western Washington

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

____The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheet flow, or in a swale without distinct banks,

____The water leaves the wetland **without being impounded**.

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

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

Wetland name or number B

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

   NO – go to 6 **YES** – The wetland class is **Riverine**
   NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? This means that any outlet, if present, is higher than the interior of the wetland.

   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched but has no obvious natural outlet.

   NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

   NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

Wetland name or number B

SLOPE WETLANDS

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

S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (A 1% slope has a 1 ft vertical change in elevation for every 100 ft of horizontal distance.) Slope is 1% or less — points = 3 Slope is > 1%-2% — points = 2 Slope is > 2%-5% — points = 1 (circled) Slope is greater than 5% — points = 0	1
S 1.2. The soil 2 in. below the surface (or duff layer) is true clay or true organic *(use NRCS definitions)*: Yes = 3 No = 0 (circled)	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed, and plants are higher than 6 in. Dense, uncut, herbaceous plants > 90% of the wetland area — points = 6 (circled) Dense, uncut, herbaceous plants > ½ of area — points = 3 Dense, woody, plants > ½ of area — points = 2 Dense, uncut, herbaceous plants > ¼ of area — points = 1 Does not meet any of the criteria above for plants — points = 0	6
Total for S 1 — Add the points in the boxes above	7

Rating of Site Potential If score is: __12 = H ✓6-11 = M ___0-5 = L *Record the rating on the first page*

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

Rating of Landscape Potential If score is: ✓1-2 = M ___0 = L *Record the rating on the first page*

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

Rating of Value If score is: ✓2-4 = H ___1 = M ___0 = L *Record the rating on the first page*

Wetland name or number B

SLOPE WETLANDS

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

S 4.0. Does the site have the potential to reduce flooding and stream erosion?		
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.		
Dense, uncut, **rigid** plants cover > 90% of the area of the wetland	points = 1	1
All other conditions	points = 0	

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

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?		
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?	Yes = 1 (No = 0)	0

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

S 6.0. Are the hydrologic functions provided by the site valuable to society?		
S 6.1. Distance to the nearest areas downstream that have flooding problems:		
The sub-basin immediately downgradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds)	points = 2	
Surface flooding problems are in a sub-basin farther downgradient	(points = 1)	1
No flooding problems anywhere downstream	points = 0	
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 (No = 0)	0
Total for S 6	Add the points in the boxes above	1

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

NOTES and FIELD OBSERVATIONS:

Wetland name or number B

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

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

If the unit has a Forested class, check if:

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

2

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland if the unit is < 2.5 ac, or ¼ ac if the unit is at least 2.5 ac to count (see text for descriptions of hydroperiods).

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

1

H 1.3. Richness of plant species

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

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

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

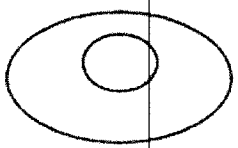
2

H 1.4. Interspersion of habitats

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



None = 0 points

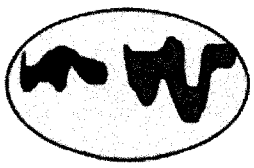


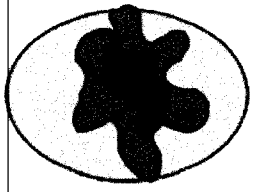
Low = 1 point

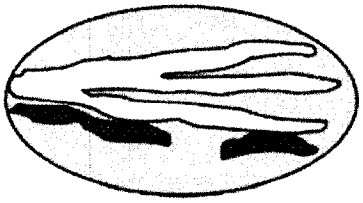


Moderate = 2 points

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







2

Wetland name or number B

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. The number of checks is the number of points. ✓ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long). ✓ Standing snags (dbh > 4 in.) within the wetland ___ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extend at least 3.3 ft (1 m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed) ___ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) ✓ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)	3
Total for H 1 — Add the points in the boxes above	16

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

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland. *Calculate:* % relatively undisturbed habitat 13 + [(% moderate and low intensity land uses)/2] 0 = 13 % Total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon — points = 3 20-33% of 1 km Polygon — points = 2 10-19% of 1 km Polygon — (points = 1) < 10% of 1 km Polygon — points = 0	1
H 2.2. Total habitat in 1 km Polygon around the wetland. *Calculate:* % relatively undisturbed habitat 20 + [(% moderate and low intensity land uses)/2] 2 = 21 % Total habitat > 50% of Polygon — points = 3 Total habitat 10-50% and in 1-3 patches — points = 2 Total habitat 10-50% and > 3 patches — (points = 1) Total habitat < 10% of 1 km Polygon — points = 0	1
H 2.3. Land use intensity in 1 km Polygon: > 50% of 1 km Polygon is high intensity land use — (points = (- 2)) ≤ 50% of 1 km Polygon is high intensity — points = 0	-2
Total for H 2 — Add the points in the boxes above	0

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

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

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

Wetland name or number B

WDFW Priority Habitats

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

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

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

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

— **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.

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

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

— **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).

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

— **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. Do not select if Fresh Deepwater habitat is also present.

— **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.

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

[133] http://wdfw.wa.gov/publications/00165/wdfw00165.pdf

Wetland name or number B

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, WDFW's Management Recommendations for Oregon White Oak[134] provides more detail for determining if they are Priority Habitats

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

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

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

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

[134] https://wdfw.wa.gov/publications/00030/wdfw00030.pdf

Wetland name or number B

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes – Go to **SC 1.1** No – **Not an estuarine wetland**	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = **Category I** No – Go to **SC 1.2**	**Cat. I**
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species. If non-native species are *Spartina*, see chapter 4.8 in the manual. — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?[135] Yes = **Category I** No – Go to **SC 2.2** SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements. Yes – Submit data to WA Natural Heritage Program for determination,[136] Go to **SC 2.3** No = **Not a WHCV** SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria? Yes = **Category I** No = **Not a WHCV**	**Cat. I**
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below.* ***If you answer YES, you will still need to rate the wetland based on its functions.*** SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in. or more of the first 32 in. of the soil profile? Yes – Go to **SC 3.3** No – Go to **SC 3.2** SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to **SC 3.3** No = **Not a bog** SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = **Category I bog** No – Go to **SC 3.4** **NOTE:** If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in. deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = **Category I bog** No = **Not a bog**	**Cat. I**

[135] https://www.dnr.wa.gov/NHPdata
[136] https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

Wetland name or number B

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? ***If you answer YES, you will still need to rate the wetland based on its functions.*** — **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in. (81 cm) or more. — **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in. (53 cm). Yes = **Category I** No = **Not a forested wetland for this section**	**Cat. I**
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* — The lagoon retains some of its surface water at low tide during spring tides Yes – Go to **SC 5.1** No = **Not a wetland in a coastal lagoon** SC 5.1. Does the wetland meet all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species in H 1.5 in the manual). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than $^1/_{10}$ ac (4350 ft^2) Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer YES, you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. Yes – Go to **SC 6.1** No = **Not an interdunal wetland for rating** SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = **Category I** No – Go to **SC 6.2** SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = **Category II** No – Go to **SC 6.3** SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = **Category III** No = **Category IV**	**Cat I** **Cat. II** **Cat. III** **Cat. IV**
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	NA

Wetland name or number C

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Matthews - Wet C Date of site visit: 7-6-25

Rated by EJ Sand Trained by Ecology? ✓ Yes ___ No Date of training 2017

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

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

Source of base aerial photo/map _____

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

1. Category of wetland based on FUNCTIONS

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

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

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

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		Circle the appropriate ratings		
Site Potential	H (M) L	H (M) L	H (M) L	
Landscape Potential	H (M) L	(H) M L	H M (L)	
Value	H (M) L	H M (L)	H (M) L	TOTAL
Score Based on Ratings	6	6	5	17

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	✓

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

Wetland name or number C

HGM Classification of Wetlands in Western Washington

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

___The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheet flow, or in a swale without distinct banks,

____The water leaves the wetland **without being impounded**.

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

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

Wetland name or number C

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

   NO – go to 6 **YES** – The wetland class is **Riverine**
   NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? This means that any outlet, if present, is higher than the interior of the wetland.

   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched but has no obvious natural outlet.

   NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

   NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

Wetland name or number C

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS

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

R 1.0. Does the site have the potential to improve water quality?		
R 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event:		
Depressions cover >3/4 area of wetland	points = 8	
Depressions cover > ½ area of wetland	points = 4 (circled)	
Depressions present but cover ≤ ½ area of wetland	points = 2	
No depressions present	points = 0	4
R 1.2. Structure of plants in the wetland (areas with >90% cover at person height, **not** Cowardin classes)		
Trees or shrubs > 2/3 area of the wetland	points = 8	
Trees or shrubs > 1/3 area of the wetland	points = 6	
Herbaceous plants (> 6 in. high) > 2/3 area of the wetland	points = 6 (circled)	
Herbaceous plants (> 6 in. high) > 1/3 area of the wetland	points = 3	
Trees, shrubs, and ungrazed herbaceous < 1/3 area of the wetland	points = 0	6
Total for R 1	Add the points in the boxes above	10

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

R 2.0. Does the landscape have the potential to support the water quality function of the site?		
R 2.1. Is the wetland within an incorporated city or within its UGA?	Yes = 2 (circled) No = 0	2
R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area?	Yes = 1 (circled) No = 0	1
R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years?	Yes = 1 No = 0 (circled)	0
R 2.4. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0 (circled)	0
R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4? Other sources _____	Yes = 1 No = 0 (circled)	0
Total for R 2	Add the points in the boxes above	3

Rating of Landscape Potential If score is: __**3-6 = H** ___**1 or 2 = M** ___**0 = L** *Record the rating on the first page*

R 3.0. Is the water quality improvement provided by the site valuable to society?		
R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?	Yes = 1 (circled) No = 0	1
R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens?	Yes = 1 No = 0 (circled)	0
R 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (Answer YES if there is a TMDL in development or in effect for the drainage in which the unit is found.)	Yes = 2 No = 0 (circled)	0
Total for R 3	Add the points in the boxes above	1

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

Wetland name or number C

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS

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

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

R 4.1. Characteristics of the overbank storage the wetland provides: Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average width of stream between banks). If the ratio is more than 20	points = 9	
If the ratio is 10-20	points = 6	
If the ratio is 5-<10	points = 4	
If the ratio is 1-<5	points = 2 (circled)	2
If the ratio is < 1	points = 1	
R 4.2. Characteristics of plants that slow down water velocities during floods: Treat large woody debris as forest or shrub. Choose the points appropriate for the best description (polygons need to have >90% cover at person height. These are NOT Cowardin classes). Forest or shrub for >1/3 area OR emergent plants > 2/3 area	points = 7	
Forest or shrub for > 1/10 area OR emergent plants > 1/3 area	points = 4 (circled)	4
Plants do not meet above criteria	points = 0	
Total for R 4	Add the points in the boxes above	6

Rating of Site Potential If score is: __12-16 = H ___6-11 = M ___0-5 = L *Record the rating on the first page*

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

R 5.1. Is the stream or river adjacent to the wetland downcut?	Yes = 0 No = 1 (circled)	1
R 5.2. Does the upgradient watershed include a UGA or incorporated area?	Yes = 1 (circled) No = 0	1
R 5.3. Is the upgradient stream or river controlled by dams?	Yes = 0 No = 1 (circled)	1
Total for R 5	Add the points in the boxes above	3

Rating of Landscape Potential If score is: ___3 = H ___1 or 2 = M ___0 = L *Record the rating on the first page*

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

R 6.1. Distance to the nearest areas downstream that have flooding problems? Choose the description that best fits the site. The sub-basin immediately downgradient of the wetland has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds)	points = 2	
Surface flooding problems are in a sub-basin farther downgradient	points = 1	
No flooding problems anywhere downstream	points = 0 (circled)	0
R 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0 (circled)	0
Total for R 6	Add the points in the boxes above	0

Rating of Value If score is: __2-4 = H ___1 = M ___0 = L *Record the rating on the first page*

Wetland name or number C

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

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

If the unit has a Forested class, check if:

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

1

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland if the unit is < 2.5 ac, or ¼ ac if the unit is at least 2.5 ac to count (see text for descriptions of hydroperiods).

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

2

H 1.3. Richness of plant species

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

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

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

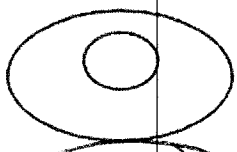
1

H 1.4. Interspersion of habitats

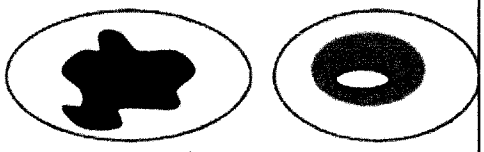
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always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



None = 0 points

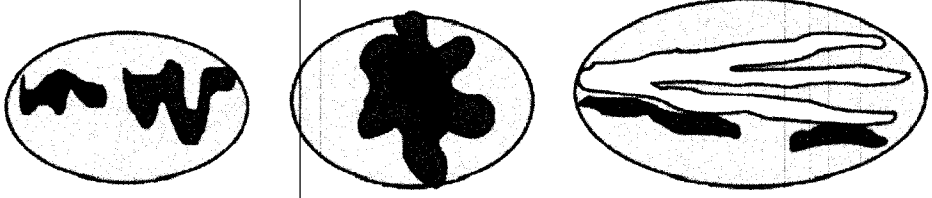


Low = 1 point



Moderate = 2 points

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



1

Wetland name or number C

5

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
✓ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long).	
___ Standing snags (dbh > 4 in.) within the wetland	
___ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extend at least 3.3 ft (1 m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	
___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)	
___ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)	
✓ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)	2
Total for H 1 — Add the points in the boxes above	7

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

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland.	
Calculate: % relatively undisturbed habitat 13 + [(% moderate and low intensity land uses)/2] C = 13 %	
Total accessible habitat is:	
> 1/3 (33.3%) of 1 km Polygon — points = 3	
20-33% of 1 km Polygon — points = 2	
10-19% of 1 km Polygon — (points = 1)	1
< 10% of 1 km Polygon — points = 0	
H 2.2. Total habitat in 1 km Polygon around the wetland.	
Calculate: % relatively undisturbed habitat 20 + [(% moderate and low intensity land uses)/2] 2 = 22 %	
Total habitat > 50% of Polygon — points = 3	
Total habitat 10-50% and in 1-3 patches — points = 2	
Total habitat 10-50% and > 3 patches — (points = 1)	1
Total habitat < 10% of 1 km Polygon — points = 0	
H 2.3. Land use intensity in 1 km Polygon:	
> 50% of 1 km Polygon is high intensity land use — (points = (~~2~~))	.2
≤ 50% of 1 km Polygon is high intensity — points = 0	
Total for H 2 — Add the points in the boxes above	0

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

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

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

Wetland name or number C

WDFW Priority Habitats

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

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

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

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

— **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.

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

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

— **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).

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

— **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. Do not select if Fresh Deepwater habitat is also present.

— **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.

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

[133] http://wdfw.wa.gov/publications/00165/wdfw00165.pdf

Wetland name or number C

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, WDFW's Management Recommendations for Oregon White Oak[134] provides more detail for determining if they are Priority Habitats

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

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

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

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

[134] https://wdfw.wa.gov/publications/00030/wdfw00030.pdf

Wetland name or number C

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes – Go to **SC 1.1** No= **Not an estuarine wetland**	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = **Category I** No – Go to **SC 1.2**	**Cat. I**
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species. If non-native species are *Spartina*, see chapter 4.8 in the manual. — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?[135] Yes = **Category I** No – Go to **SC 2.2** SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements. Yes – Submit data to WA Natural Heritage Program for determination,[136] Go to **SC 2.3** No = **Not a WHCV** SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria? Yes = **Category I** No = **Not a WHCV**	**Cat. I**
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below.* ***If you answer YES, you will still need to rate the wetland based on its functions.*** SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in. or more of the first 32 in. of the soil profile? Yes – Go to **SC 3.3** No – Go to **SC 3.2** SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to **SC 3.5** No = **Not a bog** SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = **Category I bog** No – Go to **SC 3.4** **NOTE:** If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in. deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = **Category I bog** No = **Not a bog**	**Cat. I**

[135] https://www.dnr.wa.gov/NHPdata

[136] https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

Wetland name or number C

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? ***If you answer YES, you will still need to rate the wetland based on its functions.*** — **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in. (81 cm) or more. — **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in. (53 cm). Yes = **Category I** No = **Not a forested wetland for this section**	**Cat. I**
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* — The lagoon retains some ~~of its surface water at low~~ tide during spring tides Yes – Go to **SC 5.1** No = **Not a wetland in a coastal lagoon** SC 5.1. Does the wetland meet ~~all of the following three conditions?~~ — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species in H 1.5 in the manual). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than $^1/_{10}$ ac (4350 ft^2) Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer YES, you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. Yes – Go to **SC 6.1** No = **Not an interdunal wetland for rating** SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = **Category I** No – Go to **SC 6.2** SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is **1** ac or larger? Yes = **Category II** No – Go to **SC 6.3** SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = **Category III** No = **Category IV**	**Cat I** **Cat. II** **Cat. III** **Cat. IV**
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	NA

Wetland name or number D

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Matthews - Wet D Date of site visit: 1-6-25

Rated by Ed Sarn Trained by Ecology? ✓ Yes ___ No Date of training 2017

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

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

Source of base aerial photo/map _____

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

1. Category of wetland based on FUNCTIONS

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

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

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

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	Circle the appropriate ratings			
Site Potential	H M (L)	H M (L)	H M (L)	
Landscape Potential	H M (L)	H M (L)	H M (L)	
Value	(H) M L	H M (L)	H (M) L	TOTAL
Score Based on Ratings	5	3	4	12

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	✓

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

Wetland name or number D

HGM Classification of Wetlands in Western Washington

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

___The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheet flow, or in a swale without distinct banks,

___The water leaves the wetland **without being impounded**.

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

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

Wetland name or number P

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

   NO – go to 6 **YES** – The wetland class is **Riverine**
   NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? This means that any outlet, if present, is higher than the interior of the wetland.

   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched but has no obvious natural outlet.

   NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

   NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

Wetland name or number D

SLOPE WETLANDS

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

S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of the average slope of the wetland: (A 1% slope has a 1 ft vertical change in elevation for every 100 ft of horizontal distance.)		
Slope is 1% or less	points = 3	
Slope is > 1%-2%	points = 2 (circled)	
Slope is > 2%-5%	points = 1	2
Slope is greater than 5%	points = 0	
S 1.2. The soil 2 in. below the surface (or duff layer) is true clay or true organic *(use NRCS definitions)*: Yes = 3	No = 0 (circled)	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed, and plants are higher than 6 in.		
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6	
Dense, uncut, herbaceous plants > ½ of area	points = 3	
Dense, woody, plants > ½ of area	points = 2 (circled)	
Dense, uncut, herbaceous plants > ¼ of area	points = 1	2
Does not meet any of the criteria above for plants	points = 0	
Total for S 1	Add the points in the boxes above	4

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

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

Rating of Landscape Potential If score is: __**1-2 = M** ___**0 = L** ✓ *Record the rating on the first page*

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

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

Wetland name or number D

SLOPE WETLANDS

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

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

S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.		
Dense, uncut, **rigid** plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	0

Rating of Site Potential If score is: __1 = M ___0 = L *Record the rating on the first page*

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

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

Rating of Landscape Potential If score is: __1 = M ___0 = L *Record the rating on the first page*

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

S 6.1. Distance to the nearest areas downstream that have flooding problems:		
The sub-basin immediately downgradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds)	points = 2	
Surface flooding problems are in a sub-basin farther downgradient	points = 1	
No flooding problems anywhere downstream	points = 0	0
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0	0
Total for S 6	Add the points in the boxes above	0

Rating of Value If score is: __2-4 = H ___1 = M ___0 = L *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:

Wetland name or number D

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

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

If the unit has a Forested class, check if:

____The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/groundcover) that each cover 20% within the Forested polygon

2

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland if the unit is < 2.5 ac, or ¼ ac if the unit is at least 2.5 ac to count (see text for descriptions of hydroperiods).

____Permanently flooded or inundated	4 or more types present: points = 3
✓ Seasonally flooded or inundated	3 types present: points = 2
____Occasionally flooded or inundated	2 types present: points = 1
____Saturated only	1 type present: points = 0
____Permanently flowing stream or river in, or adjacent to, the wetland	
____Intermittently or seasonally flowing stream in, or adjacent to, the wetland	
____**Lake Fringe wetland**	**2 points**
____**Freshwater tidal wetland**	**2 points**

0

H 1.3. Richness of plant species

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

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

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

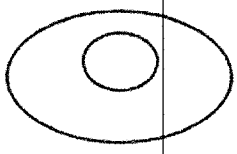
1

H 1.4. Interspersion of habitats

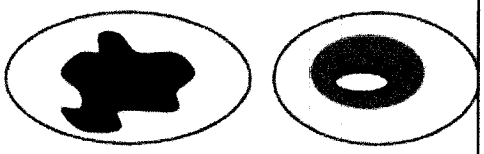
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always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



None = 0 points

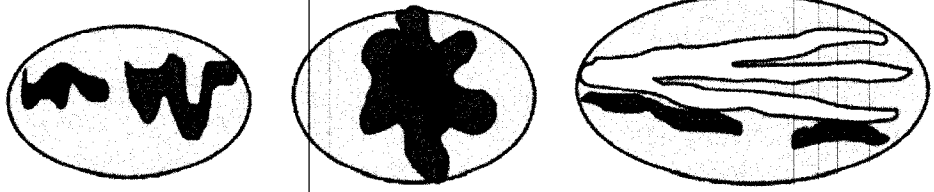


Low = 1 point



Moderate = 2 points

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



0

Wetland name or number D

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. The number of checks is the number of points. ✓ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long). ___ Standing snags (dbh > 4 in.) within the wetland ___ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extend at least 3.3 ft (1 m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed) ___ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) ✓ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)	2
Total for H 1 — Add the points in the boxes above	3

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

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

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

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

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

Wetland name or number D

WDFW Priority Habitats

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

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

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

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

— **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.

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

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

— **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).

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

— **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. Do not select if Fresh Deepwater habitat is also present.

— **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.

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

[133] http://wdfw.wa.gov/publications/00165/wdfw00165.pdf

Wetland name or number D

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, WDFW's Management Recommendations for Oregon White Oak[134] provides more detail for determining if they are Priority Habitats

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

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

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

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

[134] https://wdfw.wa.gov/publications/00030/wdfw00030.pdf

Wetland name or number D

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes – Go to **SC 1.1** No= **Not an estuarine wetland**	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary ~~Reserve, Natural~~ Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = **Category I** No – Go to **SC 1.2**	**Cat. I**
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species. If non-native species are *Spartina*, see chapter 4.8 in the manual. — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?[135] Yes = **Category I** No – Go to **SC 2.2** SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements. Yes – Submit data to WA Natural Heritage Program for determination,[136] Go to **SC 2.3** No = **Not a WHCV** SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria? Yes = **Category I** No = **Not a WHCV**	**Cat. I**
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below.* ***If you answer YES, you will still need to rate the wetland based on its functions.*** SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in. or more of the first 32 in. of the soil profile? Yes – Go to **SC 3.3** No – Go to **SC 3.2** SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on ~~top of a lake or~~ pond? Yes – Go to **SC 3.3** No = **Not a bog** SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = **Category I bog** No – Go to **SC 3.4** **NOTE:** If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in. deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = **Category I bog** No = **Not a bog**	**Cat. I**

[135] https://www.dnr.wa.gov/NHPdata

[136] https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

Wetland name or number 1

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? ***If you answer YES, you will still need to rate the wetland based on its functions.*** — **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in. (81 cm) or more. — **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in. (53 cm). Yes = **Category I** No = **Not a forested wetland for this section**	**Cat. I**
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* — The lagoon retains some of its surface water at low tide during spring tides Yes – Go to **SC 5.1** No = **Not a wetland in a coastal lagoon** SC 5.1. Does the wetland meet all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species in H 1.5 in the manual). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than $^1/_{10}$ ac (4350 ft^2) Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer YES, you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. Yes – Go to **SC 6.1** No = **Not an interdunal wetland for rating** SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = **Category I** No – Go to **SC 6.2** SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = **Category II** No – Go to **SC 6.3** SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = **Category III** No = **Category IV**	**Cat I** **Cat. II** **Cat. III** **Cat. IV**
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	NA

Assessment of state waters 303d | Water Quality Atlas - Map

https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&BBox=-14338616,5395963,-12562831,6503994&RT=0&Layers=27&Filters=y,n,n,n,n,n&F1.4=n,n,n,n,n,y

DEPARTMENT OF ECOLOGY
State of Washington

Water Quality Atlas Map

Legend | Filter | Zoom | **Tools**

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

Basic

Drawing

Other

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

Usage:

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

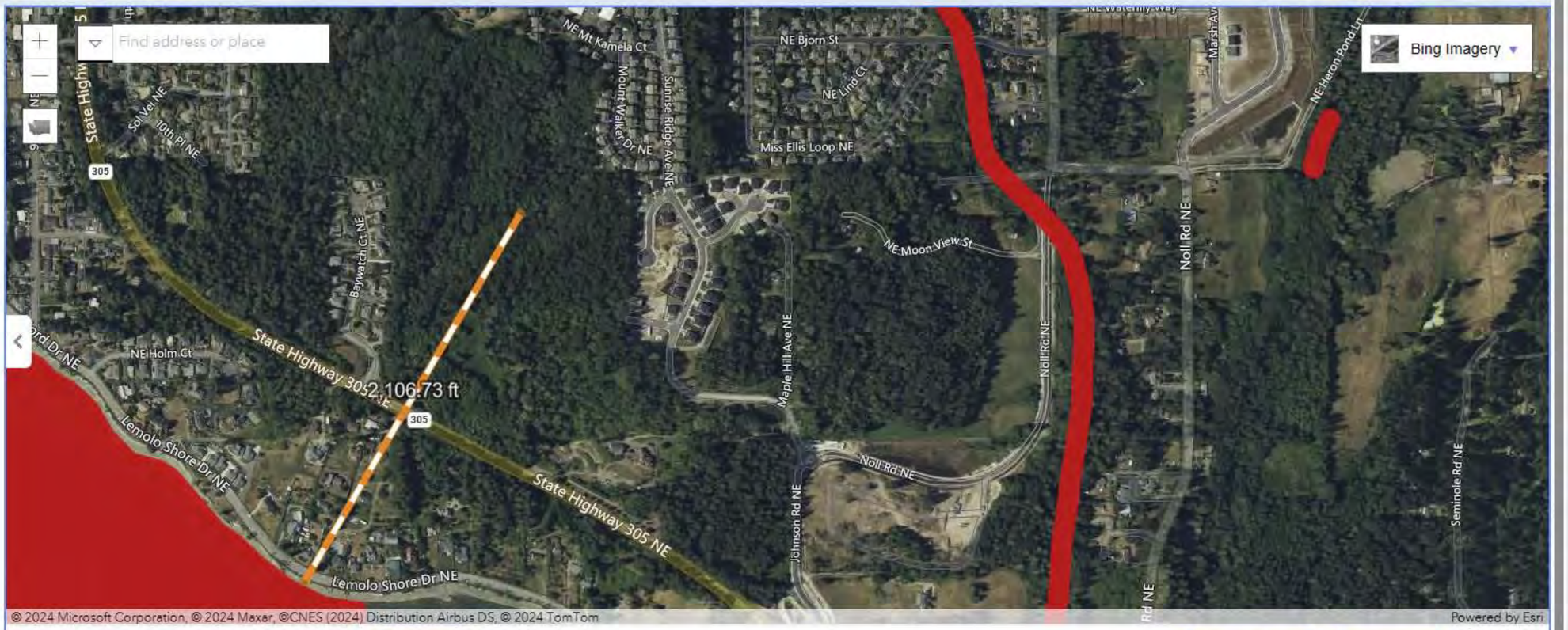
Unit

Feet

Distance

2,106.73 ft

New measurement



Assessed Water/Sediment | Filter Applied | Clear filters | Zoom to selection | Table to CSV

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details
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	3726	17030003000236_001_001	5	Water	Temperature	View
	3727	17030001000538_001_001	5	Water	Temperature	View

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

Type here to search | S&P 500 +0.01% | 12:40 PM 9/16/2024

Assessment of state waters 303d | Water Quality Atlas - Map

https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&BBox=-14338616,5395963,-12562831,6503994&RT=0&Layers=27&Filters=y,n,n,n,n,n&F1.4=n,n,n,n,n,y

DEPARTMENT OF ECOLOGY
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Water Quality Atlas Map

Legend | Filter | Zoom | **Tools**

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

Basic

Drawing

Other

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

Usage:

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

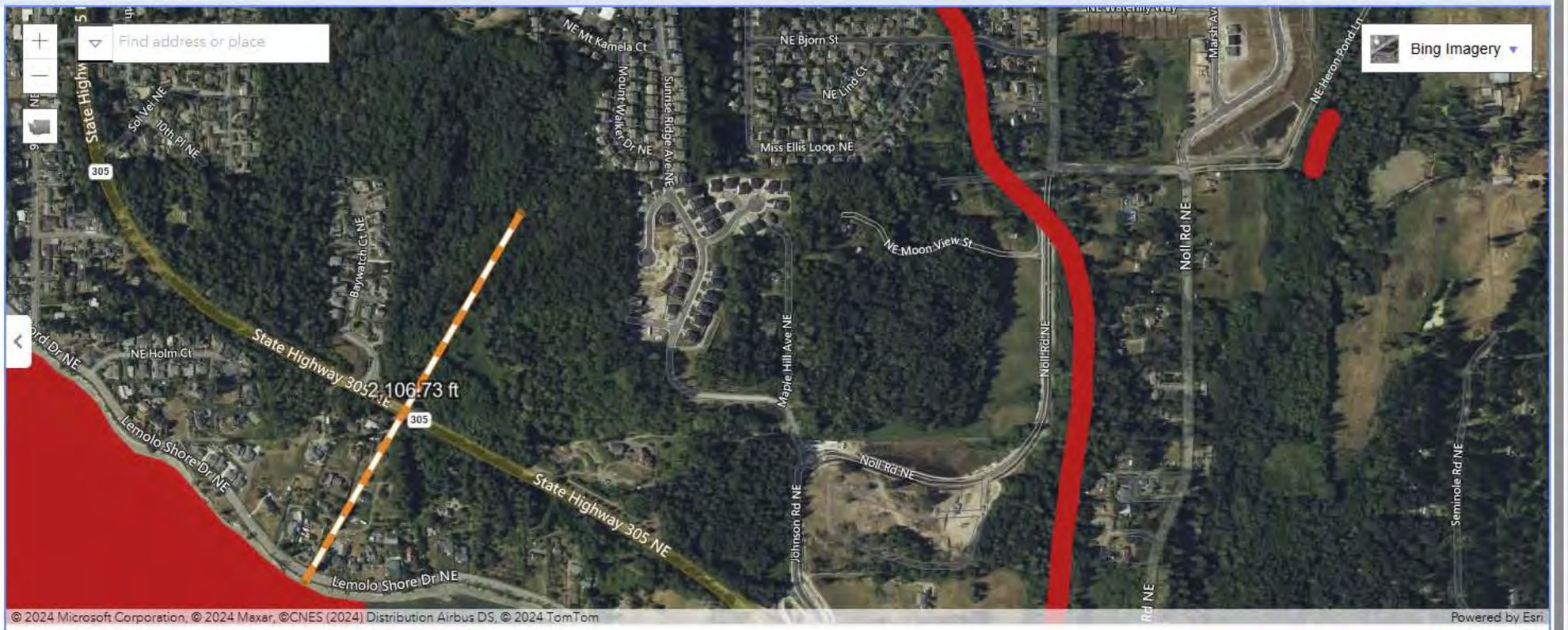
Unit

Feet

Distance

2,106.73 ft

New measurement



Assessed Water/Sediment | Filter Applied | Clear filters | Zoom to selection | Table to CSV

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details
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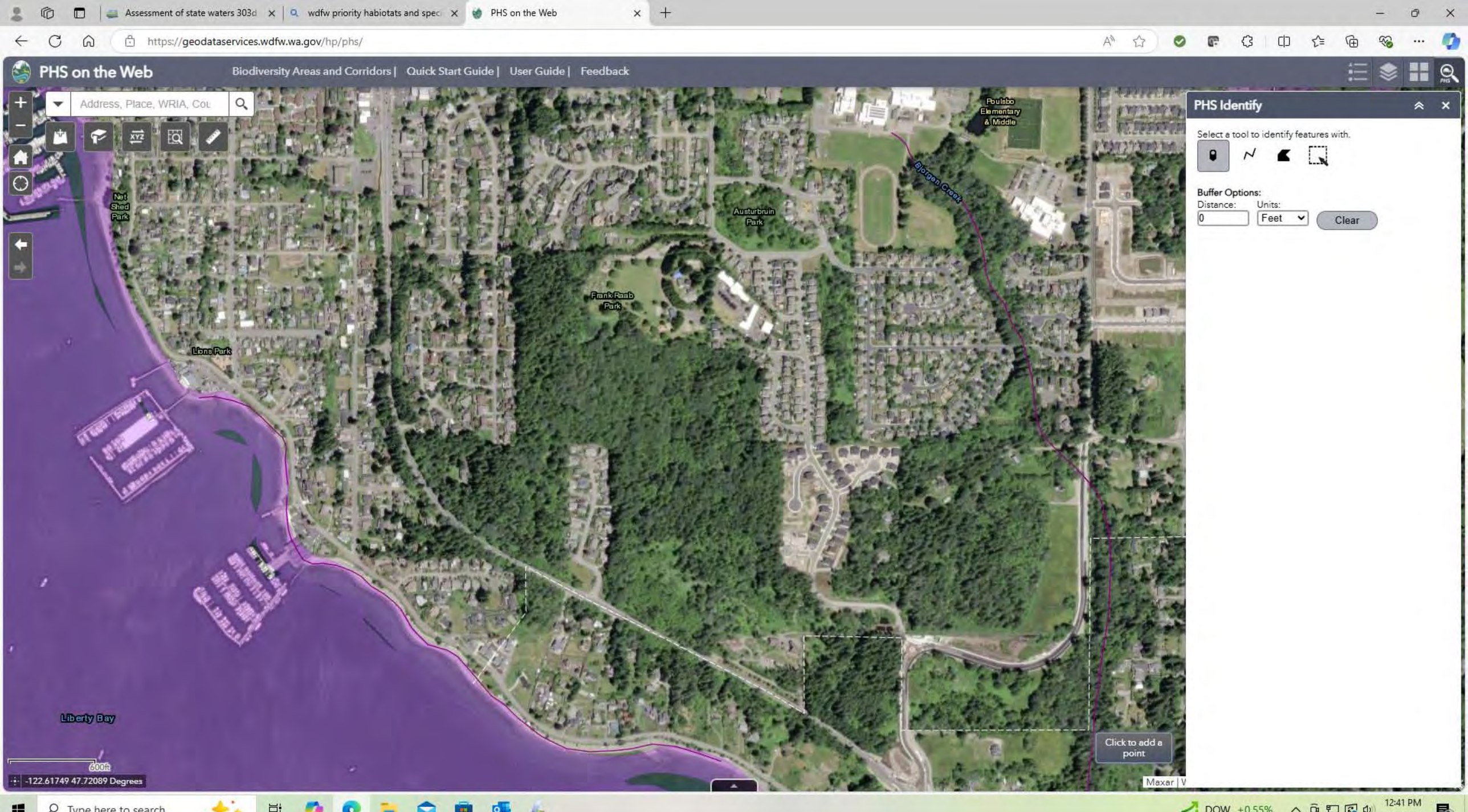
	3726	17030003000236_001_001	5	Water	Temperature	View
	3727	17030001000538_001_001	5	Water	Temperature	View

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

Type here to search | S&P 500 +0.01% | 12:40 PM 9/16/2024


Assessment of state waters 303d
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PHS on the Web
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PHS on the Web
Biodiversity Areas and Corridors |
Quick Start Guide |
User Guide |
Feedback
Address, Place, WRIA, Cou
Net Shed Park
Lions Park
Frank Raab Park
Austurbruin Park
Poulsbo Elementary & Middle
Bjorgen Creek
Liberty Bay
600ft
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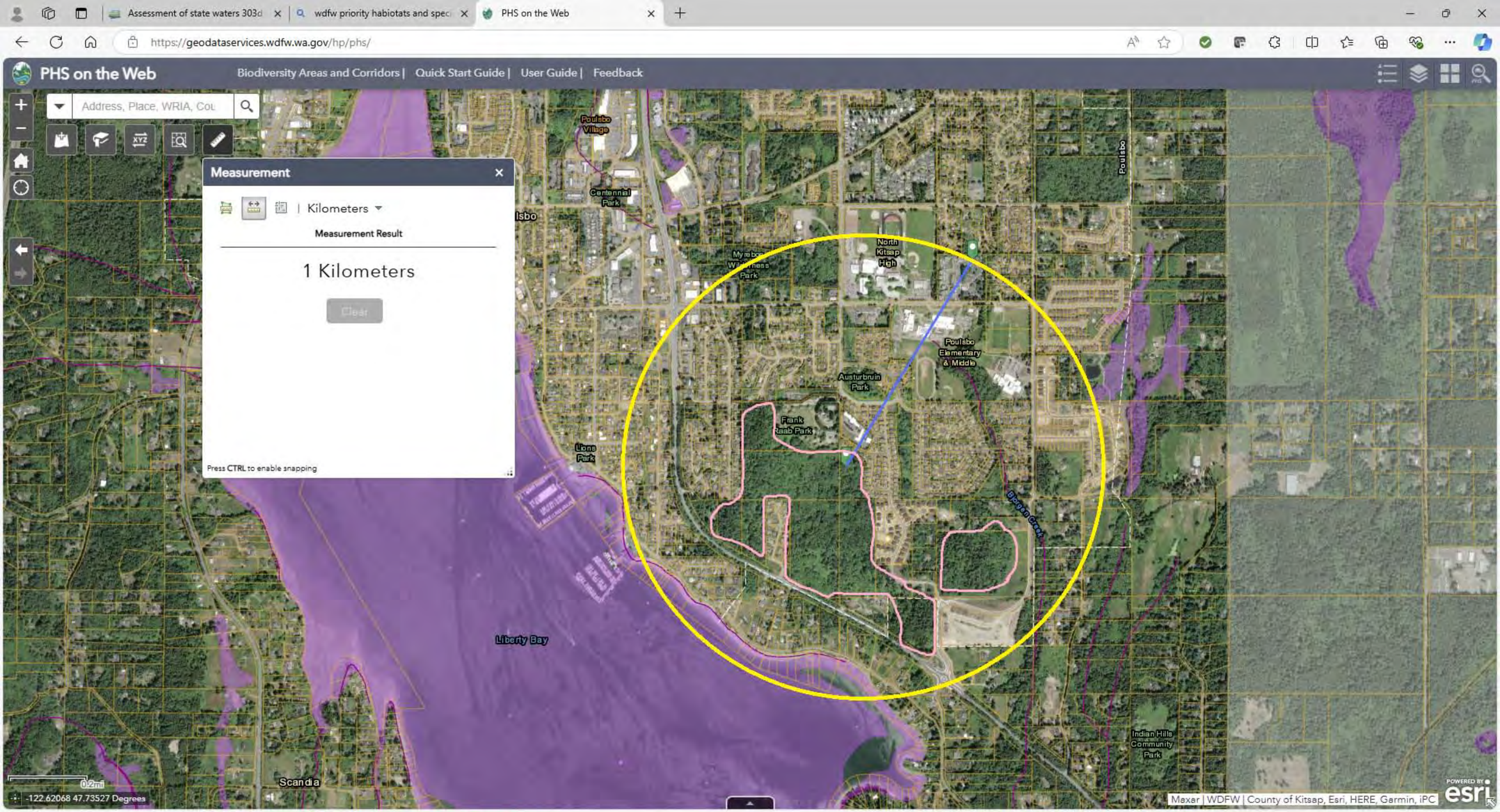
9/16/2024


Assessment of state waters 303d
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PHS on the Web
Biodiversity Areas and Corridors | Quick Start Guide | User Guide | Feedback
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Measurement
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Measurement Result
1 Kilometers
Clear
Press CTRL to enable snapping
Poulsbo Village
Centennial Park
Myrebo Wilderness Park
North Kitsap High
Poulsbo
Poulsbo Elementary & Middle
Austurbruin Park
Frank Raab Park
Lions Park
Liberty Bay
Scandia
Indian Hills Community Park
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-122.62068 47.73527 Degrees
Maxar | WDFW | County of Kitsap, Esri, HERE, Garmin, iPC
Type here to search
63°F Partly sunny
12:48 PM
9/16/2024

TECHNICAL MEMORANDUM

Prepared for: Nikole Coleman
Planning Manager
City of Poulsbo
200 NE Moe Street
Poulsbo, WA 98370

August 29, 2025

File No.: 3386-001.000 Task 15

Prepared by: Grette Associates, *a division of Farallon Consulting, L.L.C.*
2709 Jahn Ave. NW, Ste. H5
Gig Harbor, WA 98335

Re: Pinnacle at Liberty Bay: Third-Party Review

1 INTRODUCTION

The City of Poulsbo (City) is contracted with Farallon Consulting, L.L.C. dba Grette Associates (Grette) to assist in the review of a critical areas report and habitat management plan (the "Plan"; dated July 14, 2025) that was prepared by Sewall Wetland Consulting, Inc. (SWC) in support of the Pinnacle at Liberty Bay development project located off of Maple Hill Ave. NE (Kitsap County parcels 23222601-4-001-2009, 23222601-3-001-2008, 23222601-3-018-2001, and 23222601-3-005-2006) within the City of Poulsbo.

Based on the information provided, the Plan is intended to summarize the baseline environmental conditions within the project site and has been prepared to address a proposed stream crossing. The Plan also includes a proposed wetland buffer averaging plan.

2 METHODS

2.1 Site Visit

Grette completed a site visit on July 12, 2025, to assess the project site for consistency with the information contained in the Plan. All areas of the project site were physically assessed, including the inspection of soil profiles near the soil pit locations documented in the Plan. Vegetation communities and evidence of wetland hydrology within the project site were also evaluated. Using this information, the boundary lines delineated by SWC were assessed. Staff also evaluated the physical characteristics of the identified streams for consistency with the information contained in the Plan.

2.2 Document Review

Grette conducted a thorough review of the Plan. The review focused on verifying the accuracy of the descriptions within the document and compliance with the current version of Chapter 16.20 of the Poulsbo Municipal Code (PMC).

3 RESULTS

3.1 Site Review

Grette traversed the project site to identify any wetlands or fish and wildlife habitat conservation areas (FWHCAs) on or within 300 feet. In summary, Grette concurs with the extent of wetlands (Wetlands A, B, C, and D) within the project site (Attachment 1); however, staff did identify a linear offsite feature east of Lot 33 and along Maple Hill Ave. NE that appears to have been flagged by SWC. The boundary of this feature was flagged and labeled consistently with the onsite wetland features but the Plan does not provide a discussion describing the status of this feature. Per PMC 16.20.220, all wetlands within 300 feet of a proposed project shall be identified. Two stormwater ponds were also identified in the southeast corner of the project site which are situated south of Lots 1 and 2. Per PMC 16.20.155, artificial wetlands, such as stormwater detention facilities, are not a regulated wetland feature.

In addition to the identified wetlands, Grette identified four streams (Streams A, B, C, and D) within the project site (Attachment 1). Grette largely concurs with the mapped locations of these features. However, based on the site assessment Stream B appears to flow into Wetland B, which is not clearly shown on the delineation map or site plans.

3.2 Critical Areas Review

3.2.1 Wetlands

Per PMC 16.20.210, all wetlands shall be rated according to the Washington State Department of Ecology's (Ecology) *Washington State Wetland Rating System for Western WA – 2014 Update: Version 2* (Hruby and Yahnke 2023). The Plan uses the appropriate rating forms for the onsite wetlands for compliance with PMC 16.20.210 but did not include complete figure sets as required per Ecology's rating system. While Grette's review of the rating forms resulted in some minor deviations from the scores within some of the rating forms, Grette concurs with the overall categorizations for Wetlands A, B, C, and D (Table 1).

Per PMC 16.20.230, Category III wetlands with a moderate habitat score (6-7 points)[1] and proposed high impact land use are subject to a 150-foot buffer, whereas Category III wetlands with a low habitat score (3-5 points) are subject to an 80-foot buffer. Grette agrees with Wetland B's habitat score, however, disagrees with Wetland C's habitat score of 5 points. Grette's assessment of Wetland C included observing snags and logs within 330 feet of the wetland. A point was not given in question H3.1 of Wetland C's rating form to account for these habitat structures. Including this point results in a habitat score of 6 points. As such, the appropriate buffer width for Wetland C is 150 feet (Table 1).

[1] Per Ecology's guidance (https://ecology.wa.gov/water-shorelines/wetlands/tools-resources/rating-systems), a habitat score of 5 points is considered to provide low habitat functions. The buffer tables defined in PMC 16.20.230 have not been updated to reflect this change. As such, the buffer widths based on habitat score use the habitat score bins from Ecology's guidance as Best Available Science.

Table 1. Wetland Summary

Feature	HGM Class	Wetland Category	SWC's Habitat Score	Grette's Habitat Score	Buffer Width[1]
A	Slope	IV	4 points	5 points	50 ft.
B	Slope	III	6 points	6 points	150 ft.
C	Riverine	III	5 points	**6 points**	150 ft.[2]
D	Slope	IV	4 points	5 points	50 ft.

[1] Per PMC 16.20.230.
[2] Buffer based on Grette's habitat score.

All Category IV wetlands with proposed high land use are subject to a 50-foot buffer. As such, the difference in habitat scores for Wetlands A and D do not change the results of the applicable buffer width. The Plan accurately assigns a 50-foot buffer to Wetlands A and D.

3.2.2 Wetland Buffer Averaging

Per PMC 16.20.230(F), wetland buffer averaging may be allowed if it is adequately demonstrated that a proposed averaging plan complies with the requirements defined in said section of code. The Plan breaks down an individual summary for the proposed buffer averaging for Wetland A and Wetland B to demonstrate compliance with PMC 16.20.230(F). Provided below is a review of each summary.

Wetland A

Buffer averaging may be allowed, pending approval, if it will improve the protection of the wetland or if it is the only way to allow for reasonable use of the property (PMC 16.20.230). A reduction of buffer width is proposed north of Wetland A to address the alignment of the access road. In addition, a reduction is proposed southwest of Wetland A to facilitate a residential park. The Plan does not provide sufficient detail to support why these reductions are necessary. Furthermore, based on one of the figures provided in the plan (Attachment 1), it appears that the standard buffer is being applied to all of Wetland A which appears to show averaging is not necessary.

Another requirement defined in PMC 16.20.230(F) is that the increased buffer width be in area that provides higher function compared to the proposed area to be reduced. The Plan describes that the reduced areas are primarily overgrown with blackberry but only states that the increased buffer area is more heavily vegetated. This does not adequately describe compliance with this requirement.

With the exception of the two discrepancies summarized above, the proposed buffer averaging associated with Wetland A will not result in the buffer being reduced more than 25 percent and will not result in a net loss of total buffer area. This is consistent with the limitation requirements defined in PMC 16.20.230(F).

Wetland B

As noted above, averaging may be allowed if it is the only way to allow for reasonable use of the property. According to the Plan, Wetland B's buffer needs to be reduced in three locations and states that it is necessary because of existing slopes and to better fit several lots. No further explanation to describe site constraints or rationale as to why there are no other design alternatives.

Per PMC 16.20.230(F), the increased buffer shall be in area that provides higher function compared to the proposed area to be reduced. The Plan describes that the reduced buffer area is primarily shrubs and that the increased area is primarily mature native vegetation as well as states that the reduced area and the increased area currently provides similar function. Based on this summary, it is unclear that the increased buffer is in a higher quality area compared to where the reduction is proposed.

With the exception of the two discrepancies summarized above, the proposed buffer averaging associated with Wetland B will not result in the buffer being reduced more than 25 percent and will not result in a net loss of total buffer area. This is consistent with the limitation requirements defined in PMC 16.20.230(F).

3.2.3 Wetland Buffer Impacts

According to the site plans provided in the Plan, the project will include what is presumed to be a pedestrian recreation trail within buffer area associated with Wetlands B and C. The Plan does not include any information to demonstrate compliance with the project specific development standards defined in PMC 16.20.235 for trails and trail-related facilities. As proposed, the trail alignment within the wetland buffers is not compliant with PMC16.20.230. Per PMC 16.20.230(F), trails shall be positioned in the outer 25 percent of a wetland buffer. The current alignment shows portions of the trail well within the inner 75 percent of the wetland buffer.

3.2.4 Fish and Wildlife Habitat Conservation Areas

Fish and wildlife habitat conservation areas are those areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem. Specific FWHCAs include streams, lakes, and those other habitat areas defined in PMC 16.20.310.

3.2.4.1 Streams

Per PMC 16.20.315, streams shall be classified according to the criteria set forth in WAC 222-16-030. There are a total of four streams (Table 2) that are situated within the project site. Grette concurs with the classifications of Stream A as a Type Ns2. Those streams that are seasonal non-fish habitat streams that do not directly flow to a Type S (shoreline of the state), Type F (fish-habitat), or Type Np (perennial non-fish habitat) are classified as a Type Ns2 feature. Stream A appears to flow to a roadside ditch along Highway 305.

Based on site observations and the Washington Department of Fish and Wildlife's (WDFW) fish passage data[2], Stream D flows directly into Liberty Bay (Type S). More specifically, WDFW maps a culvert beneath Highway 305 and documents Stream D as a tributary to Liberty Bay. In addition, as noted below, the location of where Stream B flows into Stream C is in the vicinity of a stream type break from Type F to Np for Stream C. Per PMC 16.20.315, Type Ns1 streams

[2] https://geodataservices.wdfw.wa.gov/hp/fishpassage/index.html

include those streams that have a direct connection to a Type S, F, or Np. The Plan inaccurately classifies Streams B and D as Type Ns2 features.

The Plan describes the physical characteristics of Stream C (Barrante's Creek) as having a stream width ranging from 2 feet up to 6 feet and substrate consisting of mud, sand, and gravel. The Plan also states that Stream C may have perennial flow. Per PMC 16.20.310[3], the physical characteristics that define presumed fish use are those streams that are at least 2 feet wide and exhibit a gradient of 16 percent or less. Based on Grette's site observations and WDFW's fish passage data, Type F habitat conditions within Stream C extend to the vicinity where it flows near Wetland D and the confluence with Stream B. According to WDFW's data from the fish passage report for the culvert beneath Highway 305 (Site ID # 994328), upstream conditions contain a bankfull width of approximately 7 feet, an upstream gradient of six percent, and moderate spawning gravels for fish species. Additionally, WDFW's data for the culvert near the proposed road crossing (Site ID # 933725) records upstream conditions consisting of a bankfull width of approximately 4 feet, an upstream gradient of six percent, and moderate spawning gravels for fish species. The Plan inaccurately classifies Stream C as a Type Ns2.

Table 2. Stream Type Summary

Feature	Water Type SWC/Grette	Buffer[1]	Building Setbacks[2]
Stream A	**Ns2/Ns2**	50 ft.	25 ft.
Stream B	Ns2/**Ns1**	75 ft.	25 ft.
Stream C	Ns2/**F**	150 ft.	25 ft.
Stream D	Ns2/**Ns1**	75 ft.	25 ft.

[1] Buffers based on Grette's water type determination and PMC 16.20.315.
[2] Per PMC 16.20.315.

A 2024 City of Poulsbo report (the "BAS Report"; Grette Associates 2024) is inappropriately referenced in the Plan to dispute the physical characteristics of Stream C that were observed by SWC. This BAS Report was prepared for City planning purposes and for updating their Comprehensive Plan and was intended to summarize existing conditions of FWHCAs within the City. Per PMC 16.20.115(F), the locations and extent of all mapped critical areas shown on City maps are considered approximate and to be used as guidance and the type, extent, and boundaries of critical areas on a site shall be determined in the field by a qualified specialist according to the requirements of Chapter 16.20 of the PMC. As such, the information summarized in the BAS Report does not supersede the onsite physical stream characteristics and resulting classifications of those streams within the project site.

3.2.5 Stream Crossings

According to the information provided, the project proposes a road crossing along Stream C to provide secondary access to the project site. Chapter 16.20 of the PMC provides specific stream crossing requirements a project must demonstrate for compliance with the minimum development standards defined in PMC 16.20.320. While the Plan mentions that a culvert consistent with WDFW stream crossing guidelines will be installed, the Plan does not provide any information to

[3] Stream typing is defined in WAC 222-16-030 and the physical characteristics to define presumed fish habitat is defined in WAC 222-16-031.

demonstrate compliance with the stream crossing requirements defined in PMC 16.20.320 and for compliance with the habitat management plan requirements defined in PMC 16.20.755.

3.2.6 Stream and Stream Buffer Impacts

The Plan describes that there will be temporary impacts to Stream A and buffer impacts associated with Streams A and D. The Plan states that a detailed mitigation plan will be submitted to the City following approval of the conceptual items outlined in the Plan. Chapter 16.20 of the PMC does not define a process to submit a conceptual habitat management plan for preliminary review. The current information provided in the Plan does not provide sufficient details and analyses to demonstrate compliance with the project specific development standards defined in PMC 16.20.320 for the proposed utility crossings and for conformance with the habitat management plan requirements defined in PMC 16.20.755.

Plans show that the project will include a pedestrian recreational trail within buffer areas associated with Streams B and C. The Plan does not include any information to demonstrate compliance with the project specific development standards defined in PMC 16.20.320 for trails and trail-related facilities. As proposed, the trail alignment within the stream buffers is not compliant with PMC16.20.230. Per PMC 16.20.230(F), trails shall be positioned in the outer 25 percent of a stream buffer. The current alignment shows portions of the trail well within the inner 75 percent of the stream buffer.

4 SUMMARY

Upon thorough review, the Plan is not compliant with Chapter 16.20 of the PMC. Grette identified several deficiencies for compliance with Section 200 (wetlands) and Section 300 (FWHCAs) of Chapter 16.20 of the PMC. Provided below is a summary of Grette's review of the Plan.

- Per PMC 16.20.220, all wetlands within 300 feet of a proposed project shall be identified. Grette identified one offsite feature that appears to have been evaluated and flagged by SWC; however, the Plan does not provide a discussion describing this feature and how or if this feature meets the definition of wetland per PMC 16.20155. While any buffer associated with this potential wetland area would not extend onto the project site, additional information should be provided to explain why this area was flagged and not discussed in the Plan for compliance with PMC 16.20.220.
- Per PMC 16.20.210, all wetlands shall be rated according to Ecology's *Washington State Wetland Rating System for Western WA – 2014 Update: Version 2* (Hruby and Yahnke 2023). The Plan did not include complete figure sets as required per Ecology's rating system. Complete wetland rating figure sets, as defined in Ecology's rating system, should be provided for compliance with PMC 16.20.210.
- Per PMC 16.20.230, a point should be given to question H3 in Wetland C's rating form. Grette's site review included observations of snags and logs within 330 feet of the wetland. Including this additional point changes the overall habitat score from 5 points to 6 points.
- Per PMC 16.20.230, Category III wetlands with a moderate habitat score (6-7 points)[4] with a proposed high impact land use are subject to a 150-foot buffer. Based on the revised habitat

[4] Per Ecology's guidance (https://ecology.wa.gov/water-shorelines/wetlands/tools-resources/rating-systems), a habitat score of 5 points is considered to provide low habitat functions. The buffer tables defined in PMC 16.20.230 have not been updated to reflect this change. As such, this review is based on Ecology's guidance.

score, the appropriate buffer width for Wetland C is 150 feet. The Plan should be revised accordingly.

- Per PMC 16.20.230, buffer averaging may be allowed if it will improve the protection of the wetland or if it is the only way to allow for reasonable use of the property. The Plan does not provide sufficient detail to support why a reduction to Wetland A's buffer is necessary and prevents reasonable use of the project site to support the proposed alignment of the road and residential park. The Plan should be revised to include additional information to demonstrate there is no feasible alternative to reposition the access road and that reducing the park area would not provide feasible recreational use. Please note that based on one of the figures provided in the plan (Attachment 1), it appears that the standard buffer is being applied to all of Wetland A, which appears to show averaging is not necessary.
- PMC 16.20.230 requires that the increased wetland buffer be in areas that provide higher function compared to the proposed area to be reduced. The Plan describes that the reduced buffer area associated with Wetland A is primarily overgrown with blackberry but only states that the increased buffer area is more heavily vegetated. The Plan needs to be revised to further describe conditions for compliance with this requirement.
- Per PMC 16.20.230, averaging may be allowed if it is the only way to allow for reasonable use of the property. According to the Plan, Wetland B's buffer needs to be reduced in three locations and states that it is necessary because of existing slopes and to better fit several lots. No further explanation to describe site constraints or rationale as to why there are no other design alternatives. The Plan needs to be revised accordingly.
- Per PMC 16.20.230, the increased buffer shall be in area that provides higher function compared to the proposed area to be reduced. The Plan describes that the reduced buffer area associated with Wetland B is primarily shrubs and that the increased area is primarily mature native vegetation but also states that the reduced area and the increased area provide similar function. Based on this summary, it is unclear that the increased buffer is in a high quality area compared to where the reduction is proposed. The Plan needs to be revised to further describe conditions for compliance with this requirement.
- Per PMC 16.20.235, pedestrian trails and trail-related facilities may be allowed in wetland buffers, pending approval, when it is sufficiently demonstrated that those features were designed in compliance with the project specific development standards defined in PMC 16.20.235. The Plan does not include any information to demonstrate compliance with PMC 16.20.235. As proposed, the trail alignment within the wetland buffers is not compliant with PMC16.20.230. Per PMC 16.20.230(F), trails shall be positioned in the outer 25 percent of a wetland buffer. The current alignment shows portions of the trail well within the inner 75 percent of the wetland buffer. The Plan should be revised accordingly.
- Per PMC 16.20.310, Stream C meets the physical criteria to be defined as a Type F feature. While the Plan provides a discussion describing the characteristics of a Type F stream, the Plan refers to the BAS Report to dispute the physical characteristics observed onsite. The Plan inaccurately classifies Stream C as a Type Ns2. The Plan needs to be revised to classify Stream C as a Type F stream and provide information to determine the appropriate location for the type break to a Type Ns1 stream.

- Per PMC 16.20.315, Type F streams are subject to a 150-foot stream buffer and a 25-foot building setback. The Plan needs to be revised to reflect a 150-foot buffer for Stream C.
- Per PMC 16.20.315, Type Ns1 streams include those streams that have a direct connection to a Type S, F, or Np. The Plan inaccurately classifies Streams B and D as Type Ns2 features. Stream Bs and D meet the criteria to be defined as Type Ns1 features. Per PMC 16.20.315, Type Ns1 streams are subject to a 75-foot buffer and a 25-foot building setback. The Plan needs to be revised accordingly.
- Per PMC 16.20.320, a project must demonstrate compliance with the minimum development standards defined in PMC 16.20.320 for stream crossings. The Plan does not provide any information to demonstrate compliance with the stream crossing requirements defined in PMC 16.20.320 and for compliance with the habitat management plan requirements defined in PMC 16.20.755. The Plan should be revised accordingly.
- PMC 16.20.320 provides development standards to allow the placement of utilities within a FWHCA or its buffer if the project follows the standards defined in said section of code. The Plan does not provide sufficient details and analyses to demonstrate compliance with the project specific development standards defined in PMC 16.20.320.
- The Plan does not include any information to demonstrate compliance with the project specific development standards defined in PMC16.20.320 for trails and trail-related facilities within stream buffers. The Plan needs to be revised accordingly.
- A habitat management plan shall meet the minimum reporting requirements defined in PMC 16.20.755. While the Plan does provide sufficient detail for some of the general reporting requirements, the Plan does not provide sufficient information to address mitigation and monitoring or an analysis regarding potential water quality impacts associated with the proposed stormwater discharge and how those impacts will be mitigated. The information that is currently provided to address these examples largely consists of stating native vegetation will be planted in temporarily disturbed areas and that any proposed mitigation monitoring will be provided in more detail at a later time. The information provided that describes the stormwater discharge to the streams does not provide sufficient detail for this review to determine if adequate mitigation and best management practices are proposed to ensure no net loss of existing ecological functions of those FWHCAs for compliance with PMC 16.20.305.

Grette recommends that the issues described above be addressed prior to the City's acceptance of the Plan.

The review of the submitted document was conducted using the best available scientific information and methodologies and the best professional judgment of Grette Associates staff wetland biologists. Final acceptance and approval of the Plan is at the discretion of City staff.

If you have any questions regarding this review, please contact me at (253) 573-9300, or by email at chadw@gretteassociates.com.
Regards,

Grette Associates, a division of Farallon Consulting, L.L.C.



Chad Wallin, PWS
Project Biologist

References:

Grette Associates. 2024. City of Poulsbo – Wetland and Fish and Wildlife Habitat Conservation Areas Best Available Science Review and Recommended Protection Measures Report – Revised. Prepared for the City of Poulsbo. Revised Jone 2024.

Hruby, T. & Yahnke, A. 2023. Washington State Wetland Rating System for Western Washington: 2014 Update (Version 2). Publication #23-06-009. Washington Department of Ecology.

ATTACHMENT 1

SITE MAP

PINNACLE AT LIBERTY BAY PRD



ESM CONSULTING ENGINEERS LLC
33400 8th Ave South, Suite 205
Federal Way, WA 98003

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

November 19, 2025

Nikole Coleman
City of Poulsbo Planning and Economic Development
200 NE Moe Street
Poulsbo, Washington 98370

RE: Critical Area Report Addendum – Pinnacle at Liberty Bay
Poulsbo Subdivision #P-06-20-25-03
SWC Job #24-158

Dear Nicole,

This report describes our response to your September 8, 2025 "*Request for Revisions*" regarding the proposed Pinnacle at Liberty Bay development. This revision specifically addresses the comments in the peer review letter dated August 29, 2025 from Farallon Consulting/Grette Associates as follows;

• Per PMC 16.20.220, all wetlands within 300 feet of a proposed project shall be identified. Grette identified one offsite feature that appears to have been evaluated and flagged by SWC; however, the Plan does not provide a discussion describing this feature and how or if this feature meets the definition of wetland per PMC 16.20155. While any buffer associated with this potential wetland area would not extend onto the project site, additional information should be provided to explain why this area was flagged and not discussed in the Plan for compliance with PMC 16.20.220.

Response: It is unclear what feature the peer reviewer is discussing, as no off-site features were flagged by our company. However, the assumption is they are talking about a small depression along a private driveway that goes north off of Sunrise Roidge Road and east of the site. There was a blocked drain in this area and there were some random flags around it. It appears the owners of that property have cleared the blocked drain so it does not appear to be a wetland or any other critical area.

• Per PMC 16.20.210, all wetlands shall be rated according to Ecology's Washington State Wetland Rating System for Western WA – 2014 Update: Version 2 (Hruby and Yahnke 2023). The Plan did not include complete figure sets as required per Ecology's rating system. Complete wetland rating figure sets, as defined in Ecology's rating system, should be provided for compliance with PMC 16.20.210.

Response: A complete set of figures for all the wetlands on the site is attached to this addendum as requested. Vegetation density is not included as they cannot be seen on an aerial image and the same goes for hydrologic regime as they are all just saturated.

• Per PMC 16.20.230, a point should be given to question H3 in Wetland C's rating form. Grette's site review included observations of snags and logs within 330 feet of the wetland. Including this additional point changes the overall habitat score from 5 points to 6 points.

Response: We agree with this change and have revised our rating form (see attached).

• Per PMC 16.20.230, Category III wetlands with a moderate habitat score (6-7 points)4 with a proposed high impact land use are subject to a 150-foot buffer. Based on the revised habitat score, the appropriate buffer width for Wetland C is 150 feet. The Plan should be revised accordingly.

Response: The plan has been revised to show the 150' buffer off Wetland C as requested. The revised plan is attached.

• Per PMC 16.20.230, buffer averaging may be allowed if it will improve the protection of the wetland or if it is the only way to allow for reasonable use of the property. The Plan does not provide sufficient detail to support why a reduction to Wetland A's buffer is necessary and prevents reasonable use of the project site to support the proposed alignment of the road and residential park. The Plan should be revised to include additional information to demonstrate there is no feasible alternative to reposition the access road and that reducing the park area would not provide feasible recreational use. Please note that based on one of the figures provided in the plan (Attachment 1), it appears that the standard buffer is being applied to all of Wetland A, which appears to show averaging is not necessary.

Response: The proposed averaging of the buffer of Wetland A is shown on the north and west edge of the buffer. In this area the buffer is being reduced a total of 1,859sf with a minimum width of 37.5' which is 75% of the standard buffer as allowed by Code. The existing topography forces the city-required road connection (Road C) towards Wetland A. There is simply too much grade to make up between Road C and the Road A upslope. It's proposed location is intended to minimize grading adjacent to the wetland buffer. The road on the north requires a slope which will have this minor intrusion into the buffer. The road cannot be moved further north as it impacts the curve of the road which will impede traffic flow with a sharp curve. The area on the west is to make the small park area flat without a slope into the buffer. A total of 2,207sf of buffer will be added which is a net increase of 348sf of buffer area.

• PMC 16.20.230 requires that the increased wetland buffer be in areas that provide higher function compared to the proposed area to be reduced. The Plan describes that the reduced buffer area associated with Wetland A is primarily overgrown with blackberry but only states that the increased buffer area is more heavily vegetated. The Plan needs to be revised to further describe conditions for compliance with this requirement.

Response: As previously noted, the areas of the reduction include old logging road areas with heavy blackberry growth. The area to be added, particularly on the east is an area of native trees and shrubs which higher habitat value than the reduced, invasive blackberry areas. We believe the added areas are of higher functional value for habitat in particular, due to the increased native vegetation in these areas.

• Per PMC 16.20.230, averaging may be allowed if it is the only way to allow for reasonable use of the property. According to the Plan, Wetland B's buffer needs to be reduced in three locations and states that it is necessary because of existing slopes and to better fit several lots. No further explanation to describe site constraints or rationale as to why there are no other design alternatives. The Plan needs to be revised accordingly.

Response: The proposed averaging of the buffer of Wetland B is necessary to make efficient use of the site given the topographic constraints and grading necessitated by the City's maximum road grade of 12%. If we were permitted to create steeper roads, we could follow existing grades better and reduce the grading. But at 12%, we're chasing grades in a lot of places even with sizable walls (up to 20' in some locations). The reduced areas of buffer on the north are due to the fact that in order to utilize that narrow portion of the site and keep an access road to the lots, a minor amount of averaging will be required. The other two areas will require some grading in these areas due to the slope so averaging these will be required to allow lots on this area of the site.

• Per PMC 16.20.230, the increased buffer shall be in area that provides higher function compared to the proposed area to be reduced. The Plan describes that the reduced buffer area associated with Wetland B is primarily shrubs and that the increased area is primarily mature native vegetation but also states that the reduced area and the increased area provide similar function. Based on this summary, it is unclear that the increased buffer is in a high quality area compared to where the reduction is proposed. The Plan needs to be revised to further describe conditions for compliance with this requirement.

Response: In general, the reduced buffer areas are similar in vegetative character as the added areas. These buffer areas are generally above the slope and as such are generally just added areas of habitat along the buffer as the slope is a barrier to some functions. The proposed averaging reduces the buffer by 11,509sf in 4 areas and adds 11,857sf of

buffer in 3 areas. This is a net increase of 348sf of buffer/habitat area that increases the habitat function of this area.

• Per PMC 16.20.235, pedestrian trails and trail-related facilities may be allowed in wetland buffers, pending approval, when it is sufficiently demonstrated that those features were designed in compliance with the project specific development standards defined in PMC 16.20.235. The Plan does not include any information to demonstrate compliance with PMC 16.20.235. As proposed, the trail alignment within the wetland buffers is not compliant with PMC16.20.230. Per PMC 16.20.230(F), trails shall be positioned in the outer 25 percent of a wetland buffer. The current alignment shows portions of the trail well within the inner 75 percent of the wetland buffer. The Plan should be revised accordingly.

Response: The trail has been removed from the buffer so there are no impacts from a trail at this time.

• Per PMC 16.20.315, Type F streams are subject to a 150-foot stream buffer and a 25-foot building setback. The Plan needs to be revised to reflect a 150-foot buffer for Stream C.

Response: SWC disagrees that Stream C should be classified as a Type F (fish-bearing) water. It is classed by Washington State Department of Natural Resources (DNR) mapping as a Type N stream, which mapping governs stream types under City of Poulsbo critical areas regulations, as discussed below.

City of Poulsbo critical areas regulations define stream types to mean the water typing system established by Washington State DNR in WAC 222-16-030 and 222-16-031. PMC 16.20.155. The City code incorporates these DNR WACs in their entirety, which therefore includes the DNR process, criteria, and definitions for stream typing. Under the DNR water-typing regulations, the DNR maps prepared under WAC 222-16-030 are the controlling reference to establish stream type. The DNR stream-typing protocol under -030 is specific and involves a cooperative approach between DNR, Washington State Fish & Wildlife, and Ecology, and in consultation with affected Indian tribes, to classify streams. Once the maps are established, except for scheduled updates, “on-the ground observations of fish or habitat characteristics will generally not be used to adjust mapped water types.” WAC 222-16-030. Accordingly, DNR water-type mapping is the appropriate source for designating a stream type under city regulations. The peer reviewer states that under PMC 16.20.310, Stream C meets the physical criteria to be defined as a Type F stream. However, the cited section simply establishes that Type F, Np and Ns waters under the criteria of WAC 222-16-030 are regulated as Fish and Wildlife Habitat Conservation Areas (FWHCA) under the City’s

CAO, which is not contested. As a type N water, Stream C is a regulated FWHCA. As to which type of stream Barrantes Creek is, City code provides specific stream typing direction at PMC 16.20.155, addressed above. WAC 222-16-300 provides the criteria that are used for the mapping, and once established, the maps control. DNR's Fpars water-typing map establishes Stream C as Type N. Under the City-adopted DNR process and criteria for stream types, it is not appropriate for the applicant or city peer reviewer to independently adjust the mapped stream type. SWC appropriately relied upon the DNR mapping to identify Stream C as Type N. (Note, however, if a stream has not been typed under WAC 222-16-030, then the interim stream typing provisions of WAC 222-16-031 would continue to be used for site-specific stream typing, as is the case for Stream D, addressed in section 2 below. See WAC 222-16-030.)

SWC prepared a Habitat Assessment Report and Management Plan (the "Plan"), submitted by the applicant. SWC's Plan identifies that the DNR Fpars mapping shows the stream crossing the western side of the site (Stream C, aka Barrantes Creek) to be a Type N water. Under the regulatory framework, the applicant may rely on the current DNR Fpars map for the area, which establishes Barrantes Creek as Type N, as the controlling stream-type designation under City regulations. Our report also correctly identifies that the City of Poulsbo Wetlands and Fish and Wildlife Habitat Report, prepared by Farallon Consulting and Grette Associates (Rev. June 2024) (hereafter "City's BAS Report") also specifically identifies Barrantes Creek, which passes along the west side of the site, as a Type N stream. The peer reviewer argues that the Plan inappropriately references the City's BAS Report to dispute the physical characteristics of Stream C. The Plan references the BAS Report for its consistency with the Fpars map from DNR. While the Plan notes some stream characteristics that pertain to stream typing, we did not provide a complete stream typing analysis, because under the City's regulations, the DNR mapping controls. In a complete stream-typing analysis, the Plan would include, for instance, site-specific surveys that show that the stream bed gradient of Barrantes Creek exceeds 20% on a portion of the project site, in addition to numerous fish blockages that exist on site and between the southern property boundary and Liberty Bay. Please see that attached Barrantes Creek profile sheet as a part of this addendum. The steep stream gradient also supports the Stream type N classification. SWC stands by the Plan assessment that Stream C best meets the criteria of Ns1 under City code.

We have attached the WADNR and WDFW maps that specify this is a Type N stream to this addendum.

Per PMC 16.20.315, Type Ns1 streams include those streams that have a direct connection to a Type S, F, or Np. The Plan inaccurately classifies Streams B and D as Type Ns2 features. Stream Bs and D meet the criteria to be defined as Type Ns1 features. Per PMC 16.20.315, Type Ns1 streams are subject to a 75-foot buffer and a 25-foot building setback. The Plan needs to be revised accordingly.

Response: SWC disagrees that Stream D should be classified as a Type Ns1 stream. Our Plan identifies Stream D as a Type Ns2 stream, that is, a non-fish bearing, seasonal stream without a direct connection to a type S, F, or Np water. The City's peer reviewer states that Stream D should be classified as a Ns1 stream, because "[p[er PMC 16.20.315, Type Ns1 streams include those streams that have a direct connection to a Type S, F, or Np." The peer reviewer's determination was based on site observations and the Washington Department of Fish and Wildlife's WDFW) fish passage data, which it claims establishes that Stream D flows directly into Liberty Bay, a Type S water. The DNR WACs referenced in the City's stream typing definition provide that Type Ns waters are "all segments of natural waters within the bankfull width of the defined channels that are not Type S, F, or Np waters…Ns Waters must be physically connected by an above-ground channel system to Type S, F, or Np Waters." Based upon the language of PMC, a review of Stream D physical characteristics, and WDFW reports, SWC disagrees that Stream D should be reclassified as Type Ns1.

Stream D exits the project site and then travels across other properties and into a culvert that passes under Highway 305. Thereafter Stream D descends through yards via narrow ditches and/or french drains along the west property line of a large house under construction and then drops into the roadside ditch on the uphill side of Lemolo. That ditch then appears to drain to the west about 60' in the roadside ditch to a culvert into a manhole, which then dumps across the street in a 24" culvert and drops about 3-4' into the Sound. So while water from Stream D does ultimately reach Liberty Bay, that occurs through a combination of roadside ditches and manmade features, and not directly to the sound in its own defined channel. The stream channel is not demonstrated to meet the "direct connection" or "above-ground channel" criteria to be a Type Ns1 creek. SWC does not agree that the physical characteristics of Stream D discharge meet the applicable criteria to be classified as Ns1.

• Per PMC 16.20.320, a project must demonstrate compliance with the minimum development standards defined in PMC 16.20.320 for stream crossings. The Plan does not provide any information to demonstrate compliance with the stream crossing requirements defined in PMC 16.20.320 and for compliance with the habitat management plan requirements defined in PMC 16.20.755. The Plan should be revised accordingly.

Response: The following are the criteria for stream crossings per PMC16.20.320;

A. Stream Crossings. Any private or public road expansion or construction which is allowed and must cross streams classified within this chapter shall comply with the following minimum development standards:

1. Bridges or bottomless culverts shall be required for all streams which support fish life, unless a habitat management plan is submitted which demonstrates that other alternatives would not result in significant impacts to the fish and wildlife habitat conservation area and as determined appropriate through the Hydraulic Project Approval process administered by the Washington State Department of Fish and Wildlife;

Response: The road crossing is being required by the city for the applicant to have an access to the site from the west. This is a City requirement. Therefore, there is no other option as there is no way to access the site without crossing the stream. The culvert design for the crossing will be designed to meet WDFW HPA stream crossing requirements. The exact design and sizing of the culvert is currently being worked on and will be coordinated with WDFW to meet their criteria.

2. Crossings shall not occur in salmonid spawning areas unless no other feasible crossing site exists. For new development proposals, if existing crossings are determined to adversely impact salmon spawning or passage areas, new or upgraded crossings shall be located as determined necessary through coordination with the Washington Department of Fish and Wildlife;

Response: The stream is a Type N stream with no fish use or areas of spawning gravel on the site or in the proposed crossing area.

3. Bridge piers or abutments shall not be placed in either the floodway or between the ordinary high water marks unless no other feasible alternative placement exists;

Response: Not applicable, no work shall be placed in a floodway or between the OHW of the creek in the proposed crossing.

4. Crossings shall not diminish flood-carrying capacity;

Response: The crossing will not diminish flood carrying capacity of the stream and will be designed to allow sediment and debris to pass through it.

5. Crossings shall serve multiple properties whenever possible;

Response: The crossing will provide access to the proposed development as well as home and properties to the east of the site which will be able to pass through the sites road system.

6. Publicly owned or maintained road or street crossing shall provide for other purposes, such as utility crossing, pedestrian or bicycle easements, viewing points, whenever possible;

Response: Utilities will cross through the roads as well as a sidewalk for pedestrians.

7. Where there is no reasonable alternative to providing a conventional culvert, the culvert shall be the minimum length necessary to accommodate the permitted activity. If located on a stream containing fish and wildlife habitat per WAC 222-16-030, the culvert shall be designed in accordance with the Washington Department of Fish and Wildlife's 2013 Water Crossing Guidelines (or as amended).

Response: The culvert will be designed to be the minimum length needed for the crossing and will incorporate retaining walls etc to minimize the stream crossing width. The design will meet all WDFW requirements.

The following are the criteria for stream crossings per PMC16.20.755;

A. When intrusions, reductions, alterations or impacts to a fish and wildlife habitat conservation area is proposed, or when otherwise required, a habitat management plan shall be prepared. The habitat management plan shall identify how the development impacts from the proposed project will be mitigated. The Washington Department of Fish and Wildlife Priority Habitat and Species Management Recommendations, dated May 1991, or bald eagle protection rules outlined in WAC 220-610-100, as now or hereafter amended, may serve as guidance for this report. The recommendations in Washington Department of Fish and Wildlife Priority Habitat and Species Management Recommendations found at http://wdfw.wa.gov/conservation/phs/ mgmt_recommendations/ may serve as guidance for habitat management plans created to regulate the design, construction, and operation of projects that affect fish and wildlife conservation areas.

B. The habitat management plan shall contain a map prepared at an easily readable scale, showing:

1. The location of the proposed development site;

Response: The final design of the stream crossing of Stream C (Barrantes Creek) has not been finalized. Once that design is finalized a detailed impact and mitigation plan will be submitted to the City for review and approval. The current site plan does depict the location of the crossing.

2. The relationship of the site to surrounding topography, water features, and cultural features;

Response: The current site plan depicts the location of the crossing in relation to the surrounding topography and other features of the site

3. Proposed building locations and arrangements; and

Response: The current site plan has no buildings near the crossing, there is only the proposed road. All other features are located outside the stream buffer.

4. A legend which includes a complete legal description, acreage of the parcel, scale, north arrow, and date of map revision.

Response: The current site plan features these items.

C. The habitat management plan shall also contain a report which describes:

1. The nature and intensity of the proposed development;

2. An analysis of the effect of the proposed development, activity or land use change upon the wildlife species and habitat identified for protection, including impacts on buffer and building setbacks.

3. An analysis of any special management recommendations that will be implemented to ensure protection of the species and/or habitat.

4. A plan which identifies how the applicant proposes to mitigate any adverse impacts to wildlife habitats created by the proposed development. Mitigation measures are required where buffer reduction or intrusions into building setbacks are proposed, and shall include buffer enhancement.

Response: The July 4, 2025 Pinnacle at Liberty Bay Critical Area Report & Habitat Management Plan addresses these criteria.

5. Assessment and evaluation of the effectiveness of the mitigation measures proposed.

Response: The July 4, 2025 Pinnacle at Liberty Bay Critical Area Report & Habitat Management Plan addresses these criteria. The proposed mitigation for the stream crossing will be an additional 7,246sf of buffer added east of the stream as well as removal of the existing old culvert and abandoned road crossing located north of the proposed crossing.

6. Assessment and evaluation of ongoing management practices which will protect fish and wildlife habitat conservation areas after development of the project site, including monitoring and maintenance programs, and operation constraints.

Response: The July 4, 2025 Pinnacle at Liberty Bay Critical Area Report & Habitat Management Plan addresses these criteria. The details of the maintenance and monitoring will be provided in the detailed mitigation plan once the final road crossing design is finalized.

7. Assessment of project impact or effect on water quality upon SF Dogfish Creek or any regulated stream, and any proposed methods or practices to avoid degradation of water quality.

Response: Not applicable.

• PMC 16.20.320 provides development standards to allow the placement of utilities within a FWHCA or its buffer if the project follows the standards defined in said section of code. The Plan does not provide sufficient details and analyses to demonstrate compliance with the project specific development standards defined in PMC 16.20.320.

Response: The details of the crossing design are not finalized. When this is complete, it will meet the criteria of PMC 16.20.320 as detailed previously in the addendum.

• The Plan does not include any information to demonstrate compliance with the project specific development standards defined in PMC16.20.320 for trails and trail-related facilities within stream buffers. The Plan needs to be revised accordingly.

Response: Not applicable, the trail has been removed from the stream buffers.

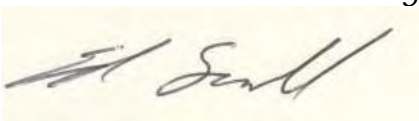
A habitat management plan shall meet the minimum reporting requirements defined in PMC 16.20.755. While the Plan does provide sufficient detail for some of the general reporting requirements, the Plan does not provide sufficient information to address mitigation and monitoring or an analysis regarding potential water quality impacts associated with the proposed stormwater discharge and how those impacts will be mitigated. The information that is currently provided to address these examples largely consists of stating

native vegetation will be planted in temporarily disturbed areas and that any proposed mitigation monitoring will be provided in more detail at a later time. The information provided that describes the stormwater discharge to the streams does not provide sufficient detail for this review to determine if adequate mitigation and best management practices are proposed to ensure no net loss of existing ecological functions of those FWHCAs for compliance with PMC 16.20.305.

Response: When the current site plan is approved the details of the mitigation areas will be provided in a detailed mitigation plan for the City to review and approve.

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

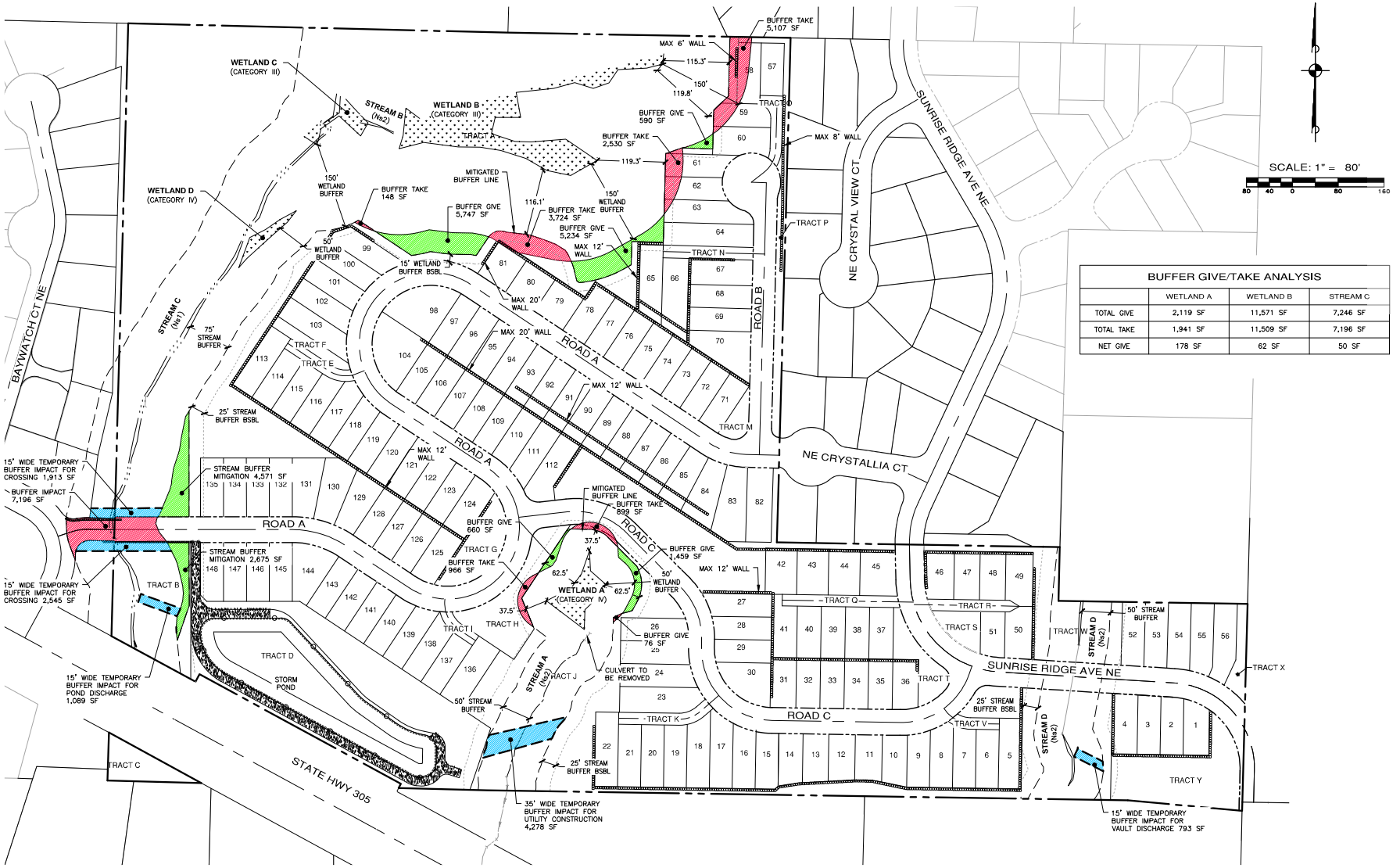
Sincerely,
Sewall Wetland Consulting, Inc.



Ed Sewall
Senior Wetlands Ecologist PWS #212

Attached: Current Site/Buffer Averaging Plan
Barrantes Creek Profile Sheet
Revised Wetland C rating Form
All figures for Rating Forms
DNR Fpars Map for site (screenshot)
Fish & Wildlife HCA Map/DNR Hydrology Water Type Map (City of Poulsbo)

A PORTION OF THE SE 1/4 OF SECTION 23, TWP. 26 N., RGE. 1 E.,WM



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SCALE: 1" = 80'

80 40 0 80 160

BUFFER GIVE/TAKE ANALYSIS

	WETLAND A	WETLAND B	STREAM C
TOTAL GIVE	2,119 SF	11,571 SF	7,246 SF
TOTAL TAKE	1,941 SF	11,509 SF	7,196 SF
NET GIVE	178 SF	62 SF	50 SF

REVISIONS

NO.	DESCRIPTION/DATE	BY

12/01/2025

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
(253) 838-6113
(425) 297-9900
FEDERAL WAY
LYNNWOOD
www.esmcivil.com
Civil Engineering
Public Works
Land Planning
Landscape Architecture
Land Surveying
Project Management

MONTEBANC MANAGEMENT, LLC

PINNACLE AT LIBERTY BAY SUBDIVISION

BUFFER MITIGATION PLAN

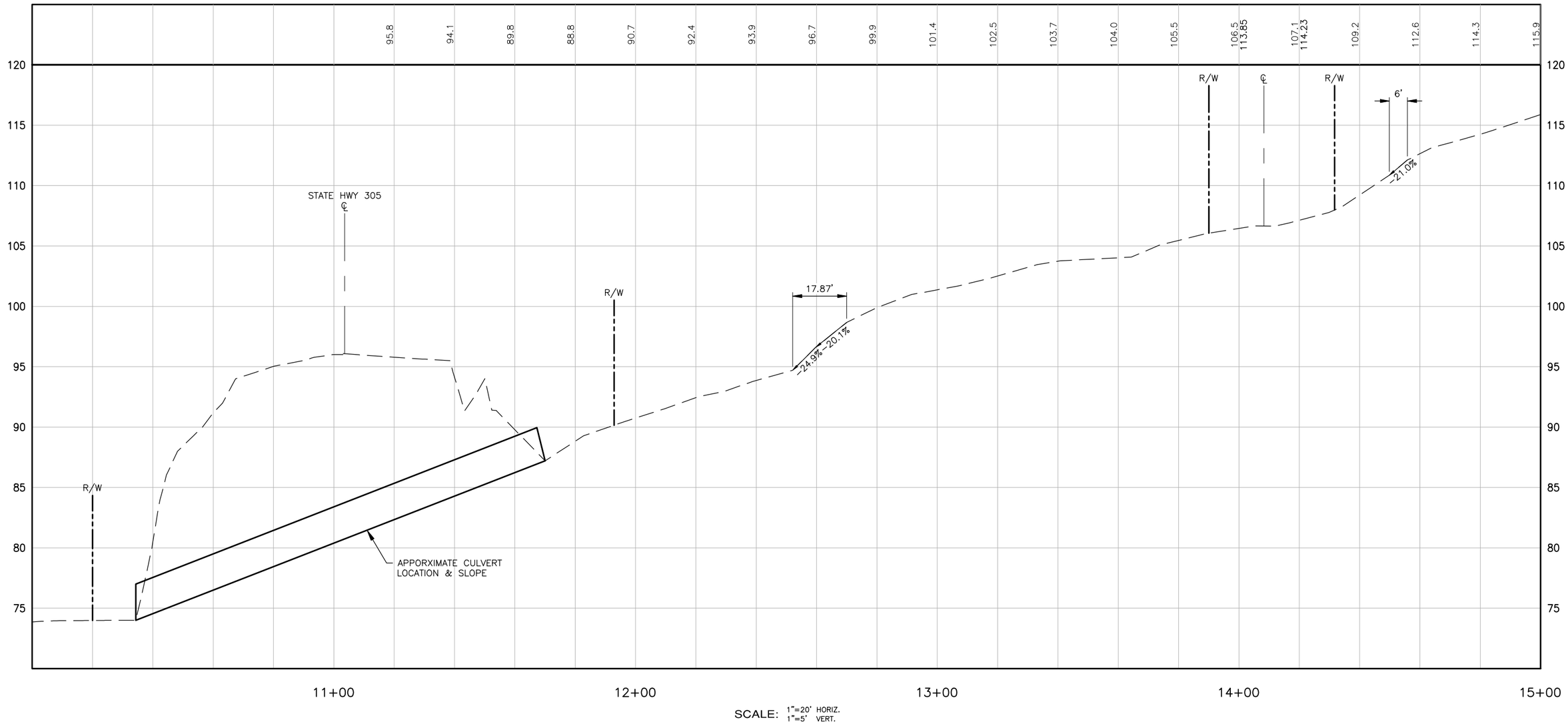
CITY OF POULSBO WASHINGTON

JOB NO.:	2090-004-022
DWG. NAME:	PP-06
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
DATE:	11/26/2025
DATE OF PRINT:	

PP-06

6 OF 32 SHEETS

File: \\esm#\comp\ESM-JOBS\2090\004\022\P-plot\Plots\PP-06.dwg
Plotted: 11/26/2025 4:50 PM
Plotted By: Connie Garrett



SCALE: 1"=20' HORIZ.
1"=5' VERT.

Wetland name or number C

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Matthews - Wet C Date of site visit: 7-6-25

Rated by SJ Sand Trained by Ecology? ✓ Yes ___ No Date of training 2017

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

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

Source of base aerial photo/map _____

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

1. Category of wetland based on FUNCTIONS

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

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

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

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	Circle the appropriate ratings			
Site Potential	H (M) L	H (M) L	H (M) L	
Landscape Potential	H (M) L	(H) M L	H M (L)	
Value	H (M) L	H M (L)	(H) M L	TOTAL
Score Based on Ratings	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	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	✓

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

Wetland name or number C

HGM Classification of Wetlands in Western Washington

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

___The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheet flow, or in a swale without distinct banks,

___The water leaves the wetland **without being impounded**.

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

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

Wetland name or number C

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

   NO – go to 6 **YES** – The wetland class is **Riverine**

   NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? This means that any outlet, if present, is higher than the interior of the wetland.

   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched but has no obvious natural outlet.

   NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

   NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

Wetland name or number C

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS

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

R 1.0. Does the site have the potential to improve water quality?		
R 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event:		
Depressions cover >3/4 area of wetland	points = 8	
Depressions cover > ½ area of wetland	points = 4	
Depressions present but cover ≤ ½ area of wetland	points = 2	
No depressions present	points = 0	4
R 1.2. Structure of plants in the wetland (areas with >90% cover at person height, **not** Cowardin classes)		
Trees or shrubs > 2/3 area of the wetland	points = 8	
Trees or shrubs > 1/3 area of the wetland	points = 6	
Herbaceous plants (> 6 in. high) > 2/3 area of the wetland	points = 6	
Herbaceous plants (> 6 in. high) > 1/3 area of the wetland	points = 3	6
Trees, shrubs, and ungrazed herbaceous < 1/3 area of the wetland	points = 0	
Total for R 1 — Add the points in the boxes above		10

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

R 2.0. Does the landscape have the potential to support the water quality function of the site?		
R 2.1. Is the wetland within an incorporated city or within its UGA?	Yes = 2 No = 0	2
R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area?	Yes = 1 No = 0	1
R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years?	Yes = 1 No = 0	0
R 2.4. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	0
R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4? Other sources _____	Yes = 1 No = 0	0
Total for R 2 — Add the points in the boxes above		3

Rating of Landscape Potential If score is: **3-6 = H** **1 or 2 = M** **0 = L** *Record the rating on the first page*

R 3.0. Is the water quality improvement provided by the site valuable to society?		
R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?	Yes = 1 No = 0	1
R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens?	Yes = 1 No = 0	0
R 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (Answer YES if there is a TMDL in development or in effect for the drainage in which the unit is found.)	Yes = 2 No = 0	0
Total for R 3 — Add the points in the boxes above		1

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

Wetland name or number C

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS

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

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

R 4.1. Characteristics of the overbank storage the wetland provides: Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average width of stream between banks). If the ratio is more than 20	points = 9	
If the ratio is 10-20	points = 6	
If the ratio is 5-<10	points = 4	
If the ratio is 1-<5	points = 2	2
If the ratio is < 1	points = 1	
R 4.2. Characteristics of plants that slow down water velocities during floods: Treat large woody debris as forest or shrub. Choose the points appropriate for the best description (polygons need to have >90% cover at person height. These are NOT Cowardin classes). Forest or shrub for $>^1/_3$ area OR emergent plants $>^2/_3$ area	points = 7	
Forest or shrub for $>^1/_{10}$ area OR emergent plants $>^1/_3$ area	points = 4	4
Plants do not meet above criteria	points = 0	
Total for R 4	Add the points in the boxes above	6

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

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

R 5.1. Is the stream or river adjacent to the wetland downcut?	Yes = 0 No = 1	1
R 5.2. Does the upgradient watershed include a UGA or incorporated area?	Yes = 1 No = 0	1
R 5.3. Is the upgradient stream or river controlled by dams?	Yes = 0 No = 1	1
Total for R 5	Add the points in the boxes above	3

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

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

R 6.1. Distance to the nearest areas downstream that have flooding problems? Choose the description that best fits the site. The sub-basin immediately downgradient of the wetland has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds)	points = 2	
Surface flooding problems are in a sub-basin farther downgradient	points = 1	
No flooding problems anywhere downstream	points = 0	0
R 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0	0
Total for R 6	Add the points in the boxes above	0

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

Wetland name or number C

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

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

If the unit has a Forested class, check if:

___The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/groundcover) that each cover 20% within the Forested polygon

1

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland if the unit is < 2.5 ac, or ¼ ac if the unit is at least 2.5 ac to count (see text for descriptions of hydroperiods).

___Permanently flooded or inundated	4 or more types present: points = 3
___✓Seasonally flooded or inundated	3 types present: points = (2)
___Occasionally flooded or inundated	2 types present: points = 1
___✓Saturated only	1 type present: points = 0
___Permanently flowing stream or river in, or adjacent to, the wetland	
___✓Intermittently or seasonally flowing stream in, or adjacent to, the wetland	
___**Lake Fringe wetland**	**2 points**
___**Freshwater tidal wetland**	**2 points**

2

H 1.3. Richness of plant species

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

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

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

1

H 1.4. Interspersion of habitats

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

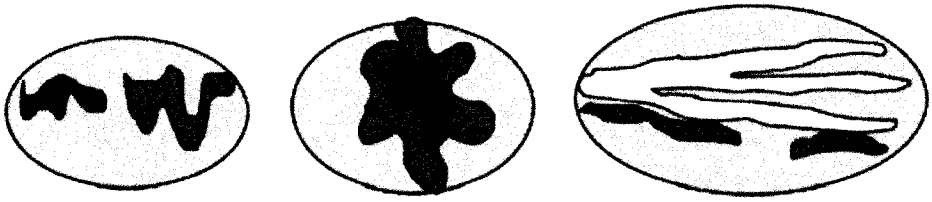


None = 0 points

Low = 1 point

Moderate = 2 points

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



1

Wetland name or number C

5

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
___✓ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long).	
____ Standing snags (dbh > 4 in.) within the wetland	
____ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extend at least 3.3 ft (1 m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	
____ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)	
____ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)	
___✓ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)	2
Total for H 1 — Add the points in the boxes above	7

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

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland.	
Calculate: % relatively undisturbed habitat 13 + [(% moderate and low intensity land uses)/2] C = 13 %	
Total accessible habitat is:	
> 1/3 (33.3%) of 1 km Polygon — points = 3	
20-33% of 1 km Polygon — points = 2	
10-19% of 1 km Polygon — points = 1	1
< 10% of 1 km Polygon — points = 0	
H 2.2. Total habitat in 1 km Polygon around the wetland.	
Calculate: % relatively undisturbed habitat 20 + [(% moderate and low intensity land uses)/2] 2 = 22 %	
Total habitat > 50% of Polygon — points = 3	
Total habitat 10-50% and in 1-3 patches — points = 2	
Total habitat 10-50% and > 3 patches — points = 1	1
Total habitat < 10% of 1 km Polygon — points = 0	
H 2.3. Land use intensity in 1 km Polygon:	
> 50% of 1 km Polygon is high intensity land use — points = (2)	2
≤ 50% of 1 km Polygon is high intensity — points = 0	
Total for H 2 — Add the points in the boxes above	0

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

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

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

Wetland name or number C

WDFW Priority Habitats

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

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

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

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

— **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.

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

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

— **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).

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

— **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. Do not select if Fresh Deepwater habitat is also present.

— **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.

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

[133] http://wdfw.wa.gov/publications/00165/wdfw00165.pdf

Wetland name or number C

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, WDFW's Management Recommendations for Oregon White Oak[134] provides more detail for determining if they are Priority Habitats

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

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

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

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

[134] https://wdfw.wa.gov/publications/00030/wdfw00030.pdf

Wetland name or number C

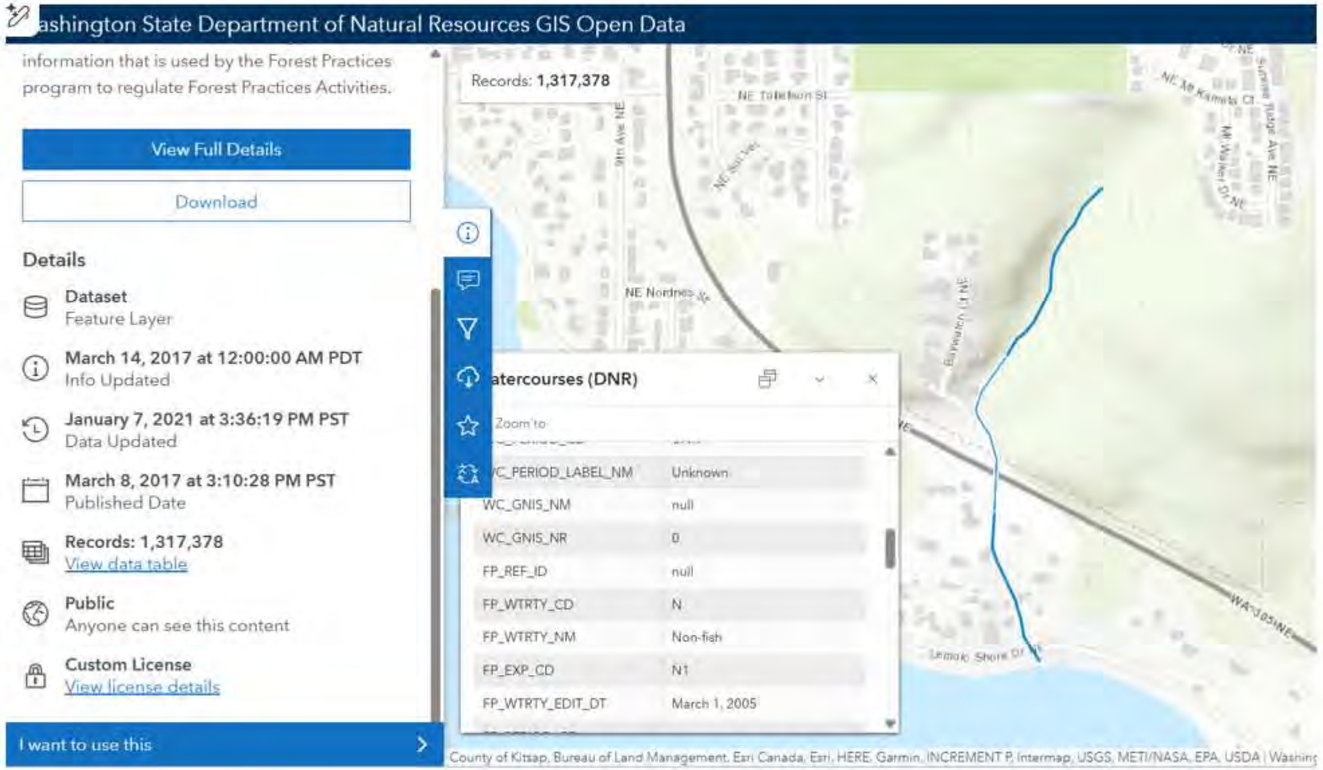
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes – Go to **SC 1.1** No= **Not an estuarine wetland**	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = **Category I** No – Go to **SC 1.2**	**Cat. I**
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species. If non-native species are *Spartina*, see chapter 4.8 in the manual. — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?[135] Yes = **Category I** No – Go to **SC 2.2** SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements. Yes – Submit data to WA Natural Heritage Program for determination,[136] Go to **SC 2.3** No = **Not a WHCV** SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria? Yes = **Category I** No = **Not a WHCV**	**Cat. I**
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below.* ***If you answer YES, you will still need to rate the wetland based on its functions.*** SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in. or more of the first 32 in. of the soil profile? Yes – Go to **SC 3.3** No – Go to **SC 3.2** SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in. deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to **SC 3.3** No = **Not a bog** SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = **Category I bog** No – Go to **SC 3.4** **NOTE:** If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in. deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = **Category I bog** No = **Not a bog**	**Cat. I**

[135] https://www.dnr.wa.gov/NHPdata
[136] https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

Wetland name or number C

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? ***If you answer YES, you will still need to rate the wetland based on its functions.*** — **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in. (81 cm) or more. — **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in. (53 cm). Yes = **Category I** No = **Not a forested wetland for this section**	**Cat. I**
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* — The lagoon retains some ~~of its surface water at low tide during~~ spring tides Yes – Go to **SC 5.1** No = **Not a wetland in a coastal lagoon** SC 5.1. Does the wetland meet ~~all of the following three conditions?~~ — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species in H 1.5 in the manual). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2) Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer YES, you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. Yes – Go to **SC 6.1** No = **Not an interdunal wetland for rating** SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = **Category I** No – Go to **SC 6.2** SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = **Category II** No – Go to **SC 6.3** SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = **Category III** No = **Category IV**	**Cat I** **Cat. II** **Cat. III** **Cat. IV**
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	NA


ashington State Department of Natural Resources GIS Open Data
information that is used by the Forest Practices program to regulate Forest Practices Activities.
View Full Details
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Dataset
Feature Layer
March 14, 2017 at 12:00:00 AM PDT
Info Updated
January 7, 2021 at 3:36:19 PM PST
Data Updated
March 8, 2017 at 3:10:28 PM PST
Published Date
Records: 1,317,378
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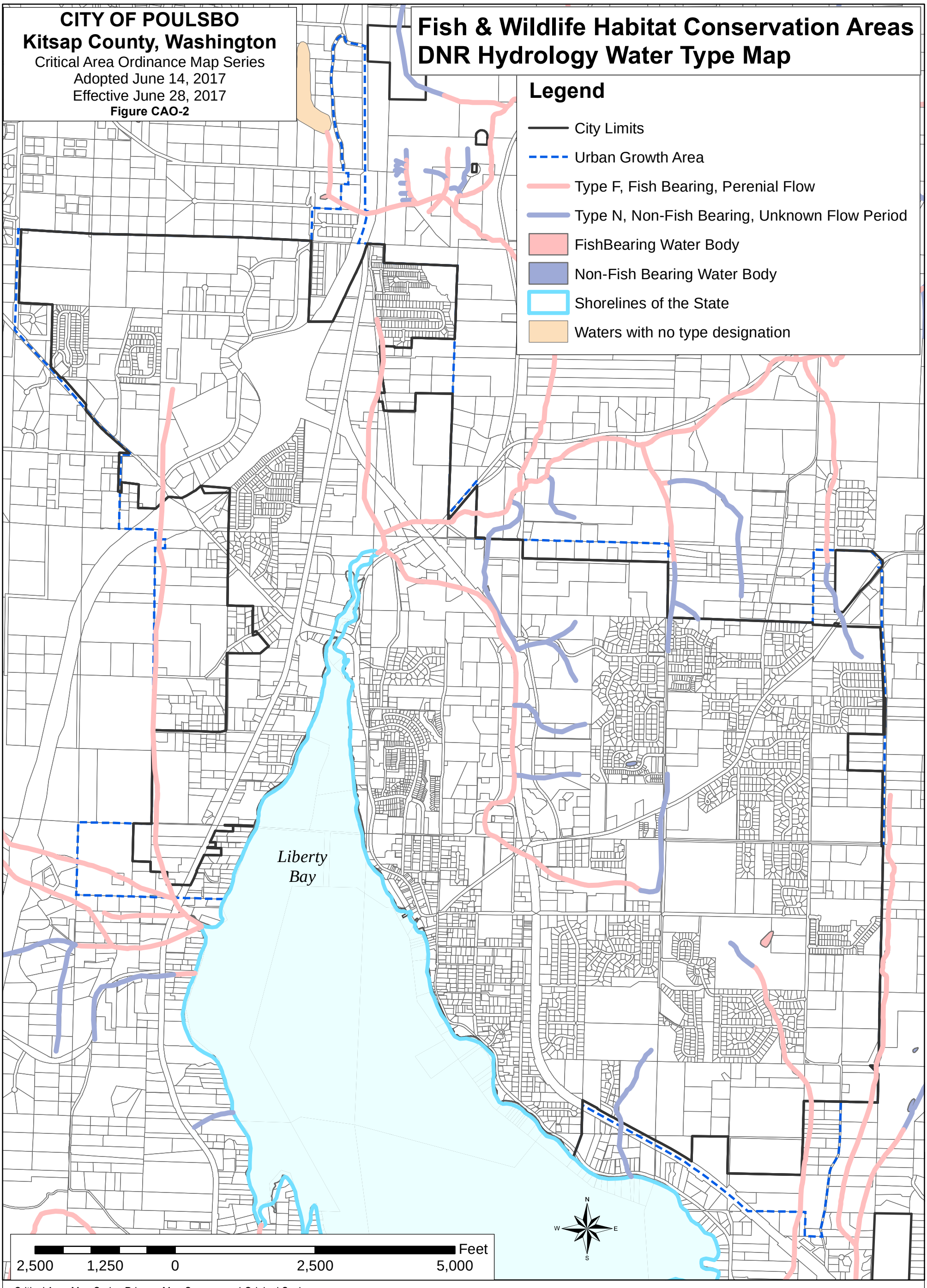
County of Kitsap, Bureau of Land Management, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA | Washing

CITY OF POULSBO
Kitsap County, Washington
Critical Area Ordinance Map Series
Adopted June 14, 2017
Effective June 28, 2017
Figure CAO-2

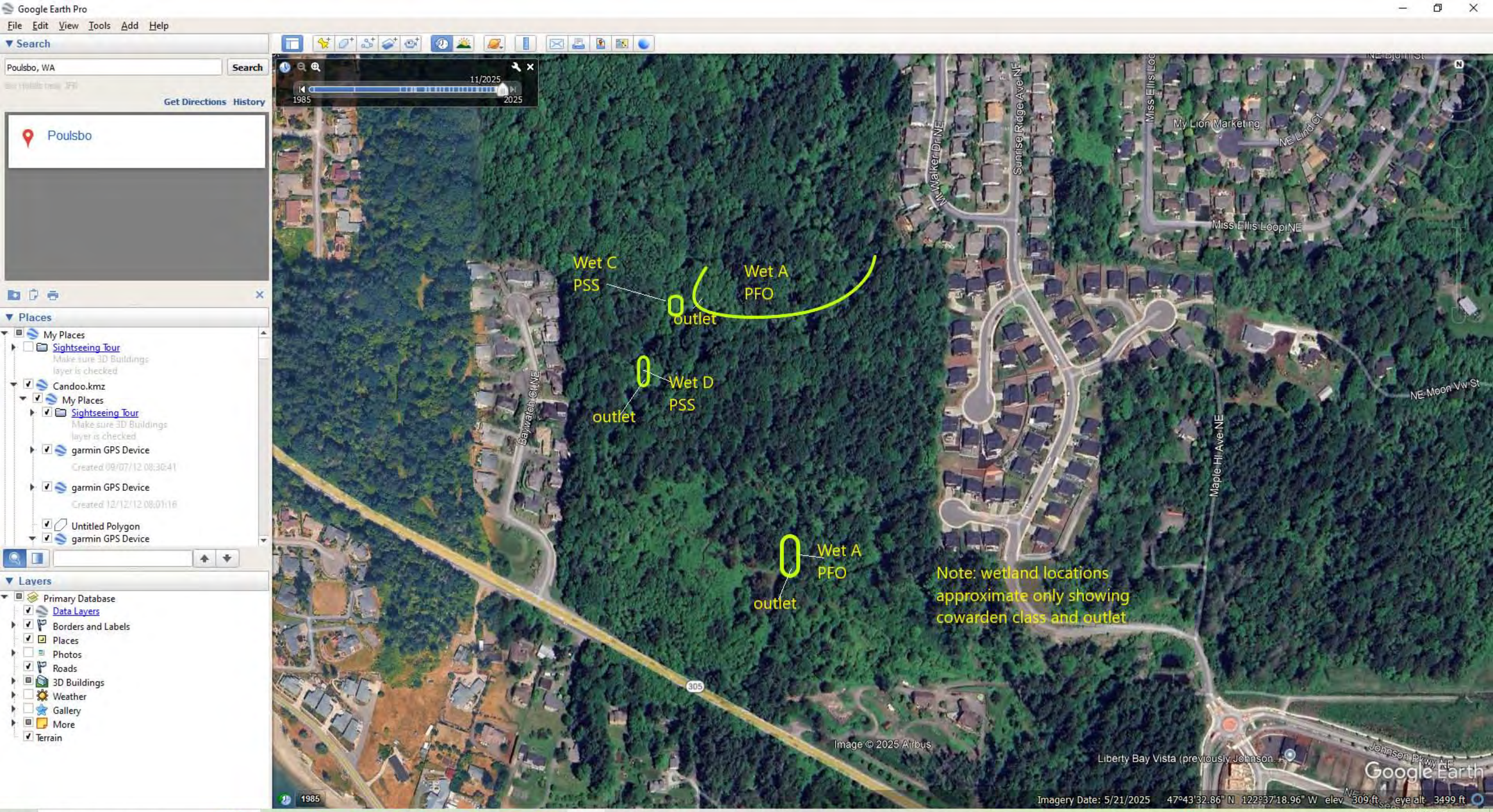
Fish & Wildlife Habitat Conservation Areas
DNR Hydrology Water Type Map



Critical Area Map Series Primary Map Sources and Original Scales:
Delineated Wetlands compiled using Plat Maps from the City of Poulsbo Planning Department.
Hydric Soils United States Department of Agriculture, Soil Conservation Service in cooperation with the Washington State Department of Natural Resources and Washington State University Agricultural Research Center 1977 1:24,000
W.S.D.N.R. Hydrography, Washington State Department of Fish and Wildlife 1:24,000
Deeter, J. 1979, Quaternary Stratigraphy of Kitsap County Appendix III, p 149-159 and Plate 9
Welch, W.B., Frans, L.M., and Olsen, T.D., 2014, Hydrogeologic framework, groundwater movement, and water budget of the Kitsap Peninsula, west-central Washington: U.S. Geological Survey Scientific Investigations Report 2014-5106, 44 p., http://dx.doi.org/10.3133/sir20145106. Prepared in cooperation with the Kitsap Public Utility District.
Kitsap County Assessor's Tax Maps 1:12,000 (Kitsap County IT, GIS Division)
* Note: Saltwater wetlands are not represented on this map, however, they are of concern within the Shoreline Management Act.

This critical area map series is intended for general critical area planning. These maps are schematic representations of physical features, infrastructure, and land ownership boundaries. The map information was derived from available public records and existing sources, not from surveys. Studies may be necessary with project review to verify information.

City of Poulsbo Planning Department GIS
June 14, 2017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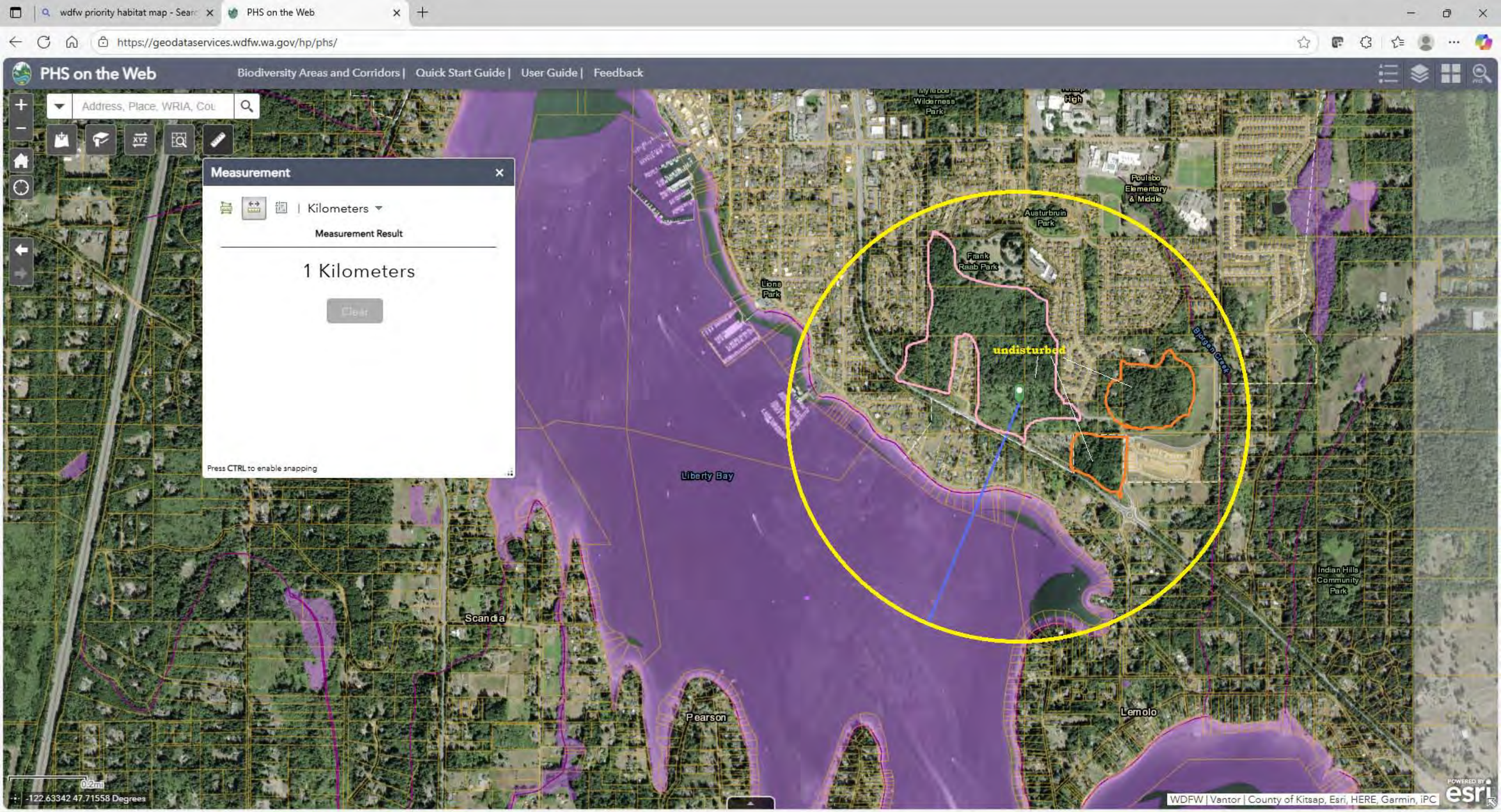
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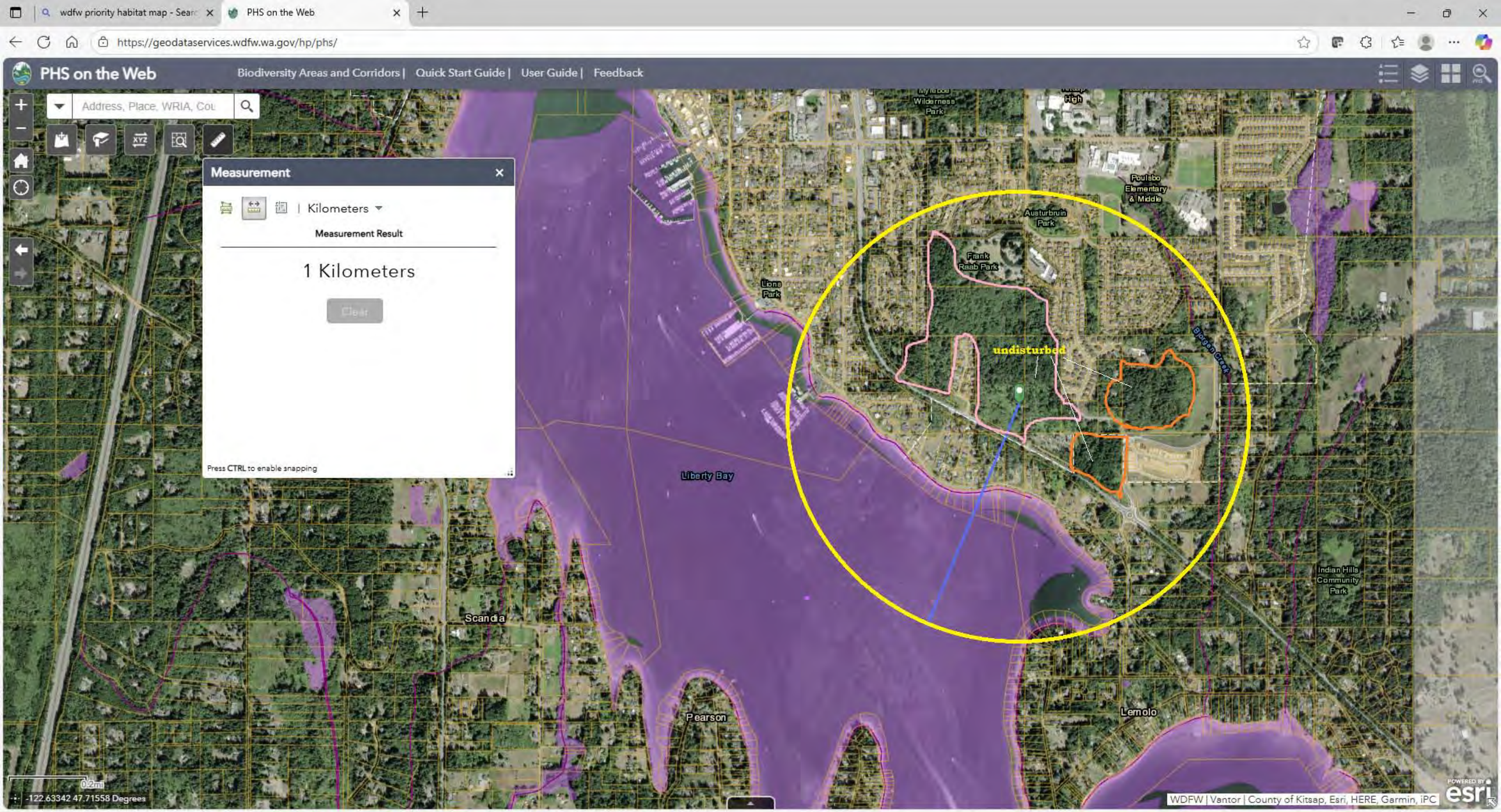
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Assessment of state waters 303d | Water Quality Atlas - Map

https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&BBox=-14338616,5395963,-12562831,6503994&RT=0&Layers=27&Filters=y,n,n,n,n,n&F1.4=n,n,n,n,n,y

DEPARTMENT OF ECOLOGY
State of Washington

Water Quality Atlas Map

Legend | Filter | Zoom | **Tools**

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

Basic

Drawing

Other

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

Usage:

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

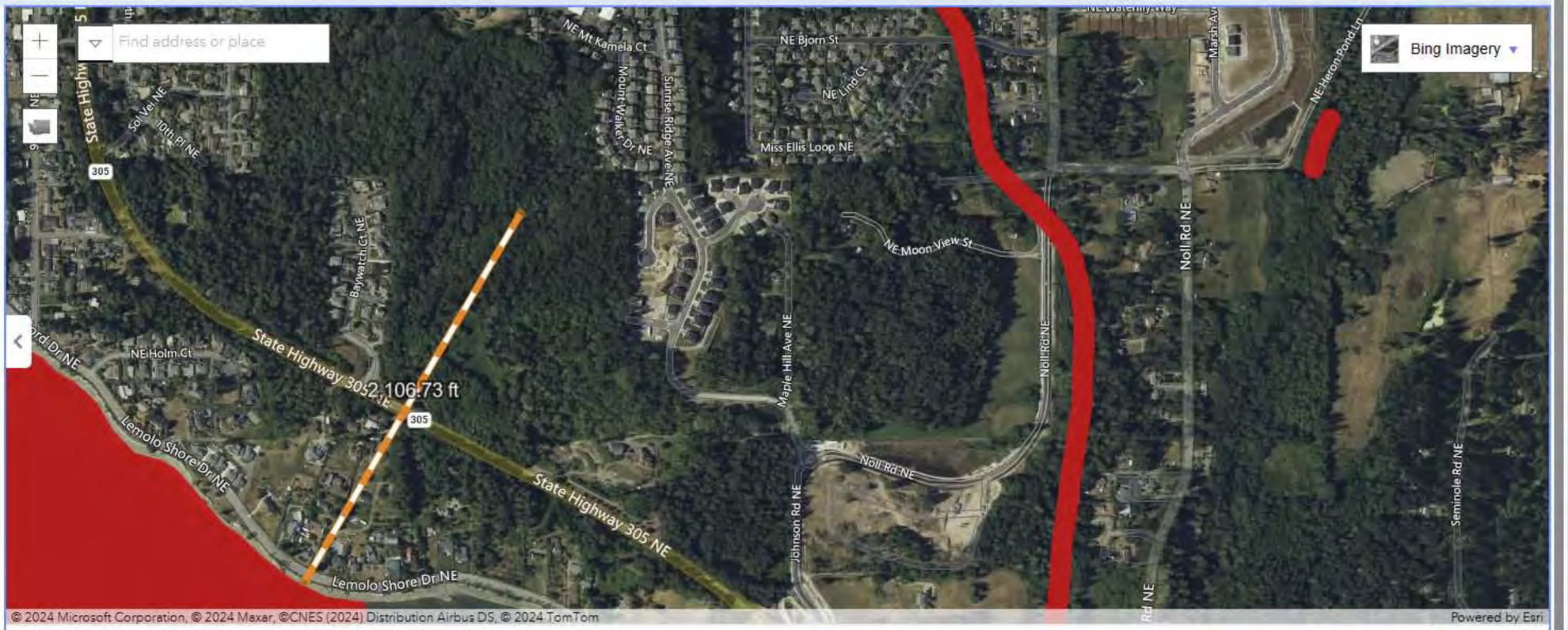
Unit

Feet

Distance

2,106.73 ft

New measurement



Assessed Water/Sediment | Filter Applied | Clear filters | Zoom to selection | Table to CSV

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details
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	3726	17030003000236_001_001	5	Water	Temperature	View
	3727	17030001000538_001_001	5	Water	Temperature	View

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

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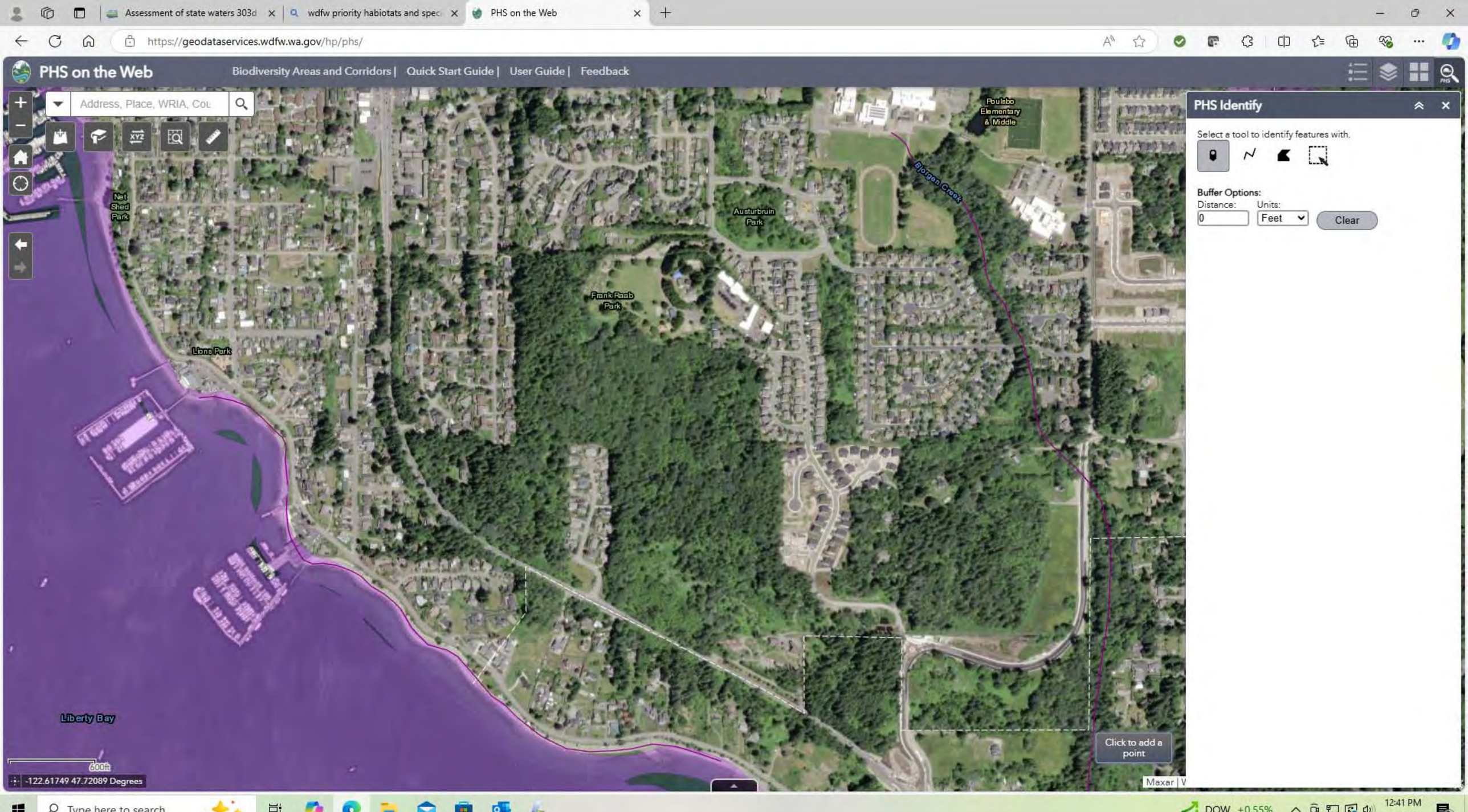
Assessment of state waters 303d
wdfw priority habiotats and spec
PHS on the Web
https://geodataservices.wdfw.wa.gov/hp/phs/
PHS on the Web
Biodiversity Areas and Corridors |
Quick Start Guide |
User Guide |
Feedback
Address, Place, WRIA, Cou
Net Shed Park
Lions Park
Frank Raab Park
Austurbruin Park
Poulsbo Elementary & Middle
Bjorgen Creek
Liberty Bay
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PHS Identify
Select a tool to identify features with.
Buffer Options:
Distance:
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Feet
Clear
Click to add a point
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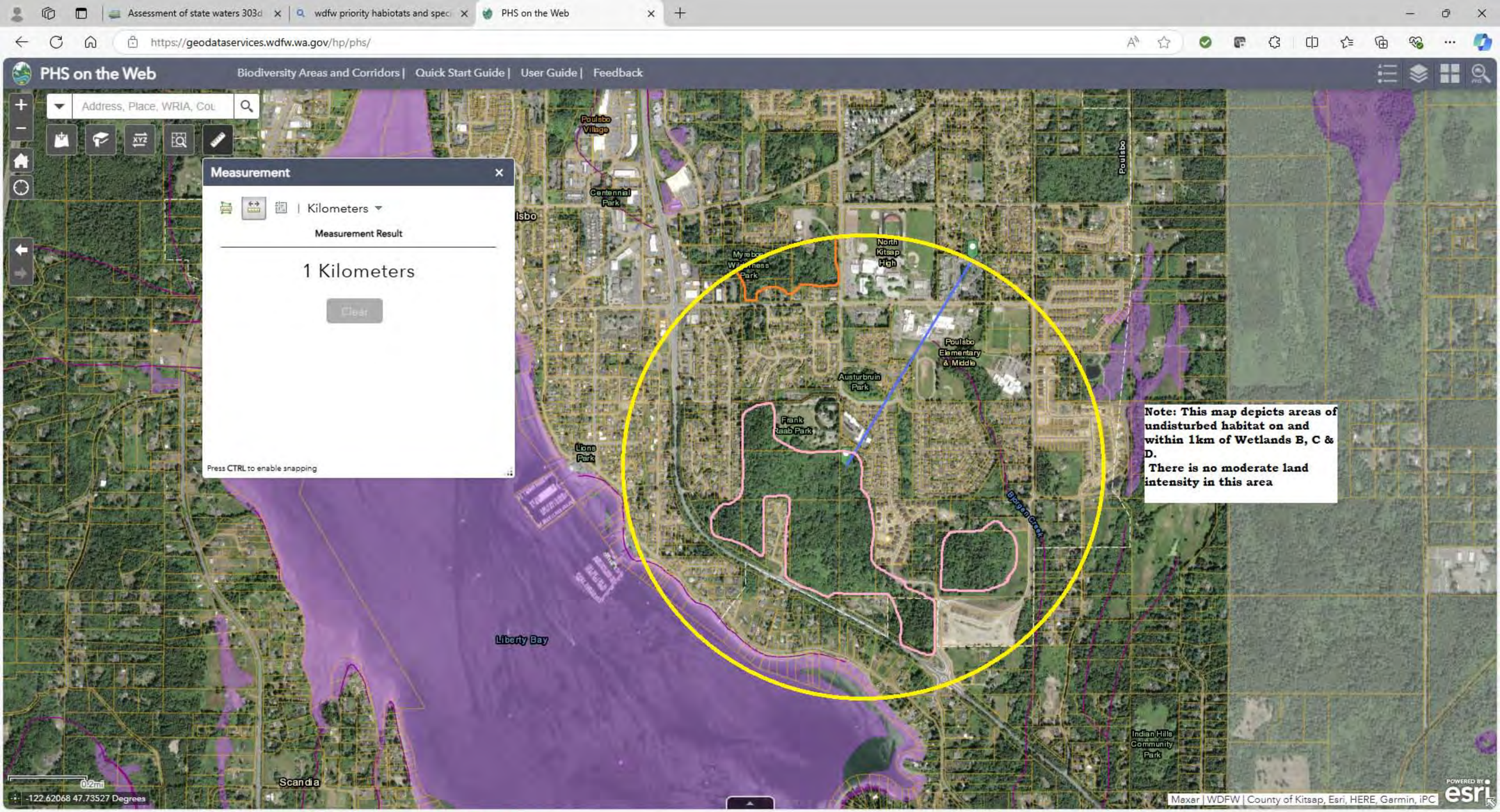
9/16/2024


Assessment of state waters 303d
wdfw priority habiotats and spec
PHS on the Web
https://geodataservices.wdfw.wa.gov/hp/phs/
PHS on the Web
Biodiversity Areas and Corridors | Quick Start Guide | User Guide | Feedback
Address, Place, WRIA, Cou
Measurement
Kilometers
Measurement Result
1 Kilometers
Clear
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Poulsbo Village
Centennial Park
North Kitsap High
Poulsbo Elementary & Middle
Austurbruin Park
Frank Raab Park
Lions Park
Liberty Bay
Scandia
Indian Hills Community Park
Note: This map depicts areas of undisturbed habitat on and within 1km of Wetlands B, C & D.
There is no moderate land intensity in this area
0.2mi
-122.62068 47.73527 Degrees
Maxar | WDFW | County of Kitsap, Esri, HERE, Garmin, iPC
POWERED BY esri
Type here to search
63°F Partly sunny
12:48 PM
9/16/2024

To:	Nikole Coleman	**Date:**	December 4, 2025
	Planning Manager	**Project Number:**	3386-002.001 Task 3
	City of Poulsbo 200 NE Moe Street Poulsbo, Washington 98370 Phone (360) 394-9737	**Project Name:** **Project Manager:**	Pinnacle 2: Critical Areas Review Chad Wallin

SCOPE OF WORK

Task 1: Document Review and Technical Memorandum
Estimated Budget: $3,619

Farallon Consulting, L.L.C. (Farallon) dba Grette Associates (Grette), will review the Critical Area Report Addendum, dated November 19, 2025, that was prepared by Sewall Wetland Consulting, Inc. This document was prepared to address Grette's August 29, 2025 third-party review of the Critical Areas Report and Habitat Management Plan, dated July, 2025, that was submitted to the City in support of the Pinnacle at Liberty Bay development project summarize.

This document will be reviewed for completeness, accuracy, and compliance with the standards of the current version of Chapter 16.20 the City of Poulsbo's Municipal Code (PMC) and against Grette's August 2025 review comments.

Grette will prepare a Technical Memorandum describing the results from the review, detailing any missing or inaccurate information. The applicant will be responsible for providing any corrections or additional required information not contained in the application materials. If consensus cannot be reached, a third party of the City of Poulsbo's choosing may be contacted to provide an additional professional opinion.

The estimated budget includes time to complete a review of the document in possession of Grette at the time of task order scoping. Review of additional or revised documents may require a new task order. Grette will seek written authorization from the City of Poulsbo prior to providing any additional review services that will exceed the estimated budget.

CLIENT AUTHORIZATION

Grette will conduct the scope of work described above in accordance with the terms and conditions of the Professional Services Contract dated September 29, 2025. To authorize the scope of work and cost estimate presented herein, please sign and return this client authorization.

This task order will expire if it remains unexecuted for 90 days after the above listed date. If the City of Poulsbo wishes to pursue this work after 90 days, Grette Associates staff may issue a new task order based on current workload availability and rate status.

Authorization to Proceed

Nikole Coleman Date

Planning Manager _____ _____

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

April 6, 2026

Nicole Coleman
City of Poulsbo Planning and Economic Development
200 NE Moe Street
Poulsbo, Washington 98370

RE: Critical Area Report Addendum #2– Pinnacle at Liberty Bay
Poulsbo Subdivision #P-06-20-25-03
SWC Job #24-158

Dear Nicole,

This report describes our response to your December 31, 2025 "*Request for Revisions*" regarding the proposed Pinnacle at Liberty Bay development. This revision specifically addresses the comments in the peer review letter dated January 8, 2026 from Farallon Consulting/Grette Associates as follows;

- *Per PMC 16.20.230, Category III wetlands with a moderate habitat score (6-7 points)[3] with a proposed high impact land use are subject to a 150-foot buffer. Based on the revised habitat score, the appropriate buffer width for Wetland C is 150 feet. The Plan should be revised accordingly.*

The site plan provided in the addendum includes a 150-foot buffer for Wetland C; however, the site plan also contains a callout for a "148 feet of buffer take" adjacent to Lot 99. No further information regarding this additional buffer averaging was provided. The buffer averaging outlined in the Plan needs to be revised to address this additional buffer reduction area shown on the updated site plan.

Response: The site plan has been revised (see attached) and there is no longer any proposed impact in this area.

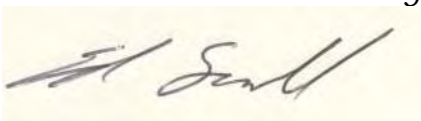
- *Per PMC 16.20.230, buffer averaging may be allowed if it will improve the protection of the wetland or if it is the only way to allow for reasonable use of the property. The Plan does not provide sufficient detail to support why a reduction to Wetland A's buffer is necessary and prevents reasonable use of the project site to support the proposed alignment of the road and residential park. The Plan should be revised to include additional information to demonstrate there is no feasible alternative to reposition the access road and that reducing the park area would not provide feasible recreational use. Please note that based on one of the figures provided in the plan (Attachment 1), it appears that the standard buffer is being applied to all of Wetland A, which appears to show averaging is not necessary.*

The addendum provides a sufficient explanation describing that existing topography provides constraints with respect to road design requirements and the buffer modifications proposed within the northern portion of Wetland A's buffer. However, Grette does not concur with the rationale associated with the proposed buffer modifications that would occur to the western portion of the wetland buffer. The addendum states the intent of the proposed western buffer reduction is to make the park area flat. No other information is provided to show that this is necessary. As noted previously, the Plan included a site plan showing the project adhering to the standard wetland buffer in this location which appears to show averaging is not necessary to create a suitable park area. As such, there appears to be a reasonable alternative to the site design that could be accomplished without buffer averaging and standard buffer can be applied.

Response: The site plan has been revised and now the proposed averaging in this area is all related to getting the proper grades for the roads and not the park itself.

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

Sincerely,
Sewall Wetland Consulting, Inc.



Ed Sewall
Senior Wetlands Ecologist PWS #212

Attached: Current Site/Buffer Averaging Plan

A PORTION OF THE SE 1/4 OF SECTION 23, TWP. 26 N., RGE. 1 E.,WM



BUFFER GIVE/TAKE ANALYSIS		
	WETLAND A	WETLAND B
TOTAL GIVE	1,581 SF	12,930 SF
TOTAL TAKE	1,309 SF	11,702 SF
NET GIVE	272 SF	1,228 SF

REVISIONS

NO.	DESCRIPTION/DATE	BY

BRANDON MICHAEL LOUCKS
STATE OF WASHINGTON
50085
REGISTERED
PROFESSIONAL ENGINEER

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33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
LYNNWOOD (425) 297-9900
www.esmcivil.com
Civil Engineering
Public Works
Land Surveying
Project Management
Land Planning
Landscape Architecture

MONTEBANC MANAGEMENT, LLC

PINNACLE AT LIBERTY BAY SUBDIVISION

BUFFER MITIGATION PLAN

CITY OF POULSBO WASHINGTON

JOB NO.:	2090-004-022
DWG. NAME:	PP-06
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
DATE:	04/03/2026
DATE OF PRINT:	

PP-06

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TECHNICAL MEMORANDUM

TO: Nikole Coleman, Planning Manager – City of Poulsbo

FROM: Chad Wallin, Grette Associates, a division of Farallon Consulting, L.L.C.

DATE: April 27, 2026

RE: PINNACLE AT LIBERTY BAY
THIRD-PARTY CRITICAL AREAS REVIEW
FARALLON PN: 3386-002.001 TASK 3

INTRODUCTION

The City of Poulsbo (City) contracted with Grette Associates (Grette), a division of Farallon Consulting, L.L.C., to assist in the review of the critical areas report addendum (Addendum 1; dated November 19, 2025)[1] that was prepared by Sewall Wetland Consulting, Inc. (SWC) in response to Grette's August 29, 2025 review.[2]

In summary of Grette's January 8, 2026 review of Addendum 1,[3] Addendum 1 addressed all but two of Grette's August 2025 comments for compliance with Chapter 16.20 of the Poulsbo Municipal Code (PMC). Grette recommended that the two outstanding comments from the August 2025 review be addressed prior to the City's acceptance of the submitted materials.

SWC provided the City a revised critical areas report addendum (Addendum 2; dated April 6, 2026)[4] in response to Grette's January 2026 review. Provided below is a summary of Grette's review comments followed by Grette's response upon review of Addendum 2. Please note that this review is limited to evaluating SWC's response to Grette's wetland

[1] Sewall Wetland Consulting, Inc. Critical Areas Report Addendum – Pinnacle at Liberty Bay. Addressed to the City of Poulsbo Planning and Economic Development. November 19, 2025.
[2] Grette Associates. 2025. Pinnacle at Liberty Bay: Third-Party Review. Prepared for the City of Poulsbo. Technical Memorandum. August 29, 2025.
[3] Grette Associates. 2026. Pinnacle at Liberty Bay: Third-Party Review. Prepared for the City of Poulsbo. Technical Memorandum. January 8, 2026..
[4] Sewall Wetland Consulting, Inc. Critical Areas Report Addendum #2 – Pinnacle at Liberty Bay. Addressed to the City of Poulsbo Planning and Economic Development. April 6, 2026.

comments with respect to compliance with Section 200 (Wetlands) of Chapter 16.20 of the PMC. Those comments Grette provided in the August 2025 review that are associated with Section 300 (Fish and Wildlife Habitat Conservation Areas) of Chapter 16.20 of the PMC will be addressed under a sperate review.

August 2025 Comment - Per PMC 16.20.230, Category III wetlands with a moderate habitat score (6-7 points)[5] with a proposed high impact land use are subject to a 150-foot buffer. Based on the revised habitat score, the appropriate buffer width for Wetland C is 150 feet. The Plan should be revised accordingly.

> *January 2026 Review Response - The site plan provided in the addendum (Addendum 1) includes a 150-foot buffer for Wetland C; however, the site plan also contains a callout for a "148 square feet of buffer take" adjacent to Lot 99. No further information regarding this additional buffer averaging was provided. The buffer averaging outlined in the Plan needs to be revised to address this additional buffer reduction area shown on the updated site plan.*

Addendum 2 states that the site plan has been revised and that there are no longer any proposed impacts to this area. The site plan provided in Addendum 2 has been revised and no longer shows the 148 square feet of buffer take adjacent to Lot 95 (previously labeled as Lot 99).

This site plan also includes revised quantifications of the other three buffer take areas associated with Wetland B compared to what was shown in the site plan provided in Addendum 1. More specifically, the buffer take areas totaling 3,724 square feet and 2,530 square feet shown on Addendum 1's site plan were increased to 4,181 square feet and 2,734 square feet, respectively. See attached for comparison. The third area of buffer take (5,107 square feet) shown on Addendum 1's site plan next to Lot 56 (previously labeled as Lot 58) was decreased to 4,607 square feet.

Based on Grette's calculations, the total take area of Wetland B's buffer is 11,702 square feet, and the total buffer give area is 12,930 square feet, which meets the requirement of the total area of buffer after averaging is equal to the buffer area without averaging as defined in PMC 16.20.230(E). As described in Grette's January 2026 review, Addendum 1 provided a

[5] Per Ecology's guidance (https://ecology.wa.gov/water-shorelines/wetlands/tools-resources/rating-systems), a habitat score of 5 points is considered to provide low habitat functions. The buffer tables defined in PMC 16.20.230 have not been updated to reflect this change. As such, this review is based on Ecology's guidance.

sufficient summary to describe details regarding existing slope constraints and how those conditions require buffer averaging for the project to meet other design requirements. Addendum 2 does not provide any explanation for why these increases are necessary compared to what is provided in Addendum 1. Comparing the Addendum 1 and Addendum 2 site plans, it appears there were design changes that occurred in response to buffer width changes associated with Stream C. The Addendum 1 site plan assigns Stream C a 75-foot buffer, whereas the Addendum 2 site plan shows a 150-foot stream buffer. Given this information, the change in stream buffer width appears to explain why quantifications changed to the three buffer take areas associated with Wetland B.

August 2025 Comment - Per PMC 16.20.230, buffer averaging may be allowed if it will improve the protection of the wetland or if it is the only way to allow for reasonable use of the property. The Plan does not provide sufficient detail to support why a reduction to Wetland A's buffer is necessary and prevents reasonable use of the project site to support the proposed alignment of the road and residential park. The Plan should be revised to include additional information to demonstrate there is no feasible alternative to reposition the access road and that reducing the park area would not provide feasible recreational use. Please note that based on one of the figures provided in the plan (Attachment 1), it appears that the standard buffer is being applied to all of Wetland A, which appears to show averaging is not necessary.

> *January 2026 Review Response - The addendum provides a sufficient explanation describing that existing topography provides constraints with respect to road design requirements and the buffer modifications proposed within the northern portion of Wetland A's buffer. However, Grette does not concur with the rationale associated with the proposed buffer modifications that would occur to the western portion of the wetland buffer. The addendum states the intent of the proposed western buffer reduction is to allow for the park area to be flat. No other information is provided to show that this is necessary. As noted previously, the Plan included a site plan showing the project adhering to the standard wetland buffer in this location which appears to show averaging is not necessary to create a suitable park area. As such, there appears to be a reasonable alternative to the site design that could be accomplished without buffer averaging, and the standard buffer could be applied.*

Addendum 2 states that the site plan has been revised to show the proposed averaging in this area is all related to getting the proper grades for the roads and not the park itself. The buffer take area along the western portion of Wetland A's buffer has been reduced from 966

square feet to 460 square feet which appears to be what is necessary to support the construction of the road. For example, the revised buffer take area is limited to an area parallel to Road D and is linear in shape. As such, the 460 square feet of buffer take appears to be related to establishing the appropriate grades to construct the road.

Based on Grette's calculations, the total take area of Wetland A's buffer is 1,232 square feet and the total buffer give area is 1,581 square feet, which meets the requirement of the total area of buffer after averaging is equal to the buffer area without averaging as defined in PMC 16.20.230(E).

In closing, Addendum 2 has addressed the two comments from Grette's January 2026 review; however, prior to the City's acceptance, Grette recommends that the City verify with SWC that the reasoning for the changes to the buffer take areas associated with Wetland B are in response to the updated lot configuration to address Stream C's buffer changing from 75 feet to 150 feet. Once this is verified, Grette recommends the City accept Addendum 2.

If you have any questions regarding this memorandum, please contact me at (253) 573-9300, or by email at chadw@gretteassociates.com.

Grette Associates, a division of Farallon Consulting L.L.C.

Regards,

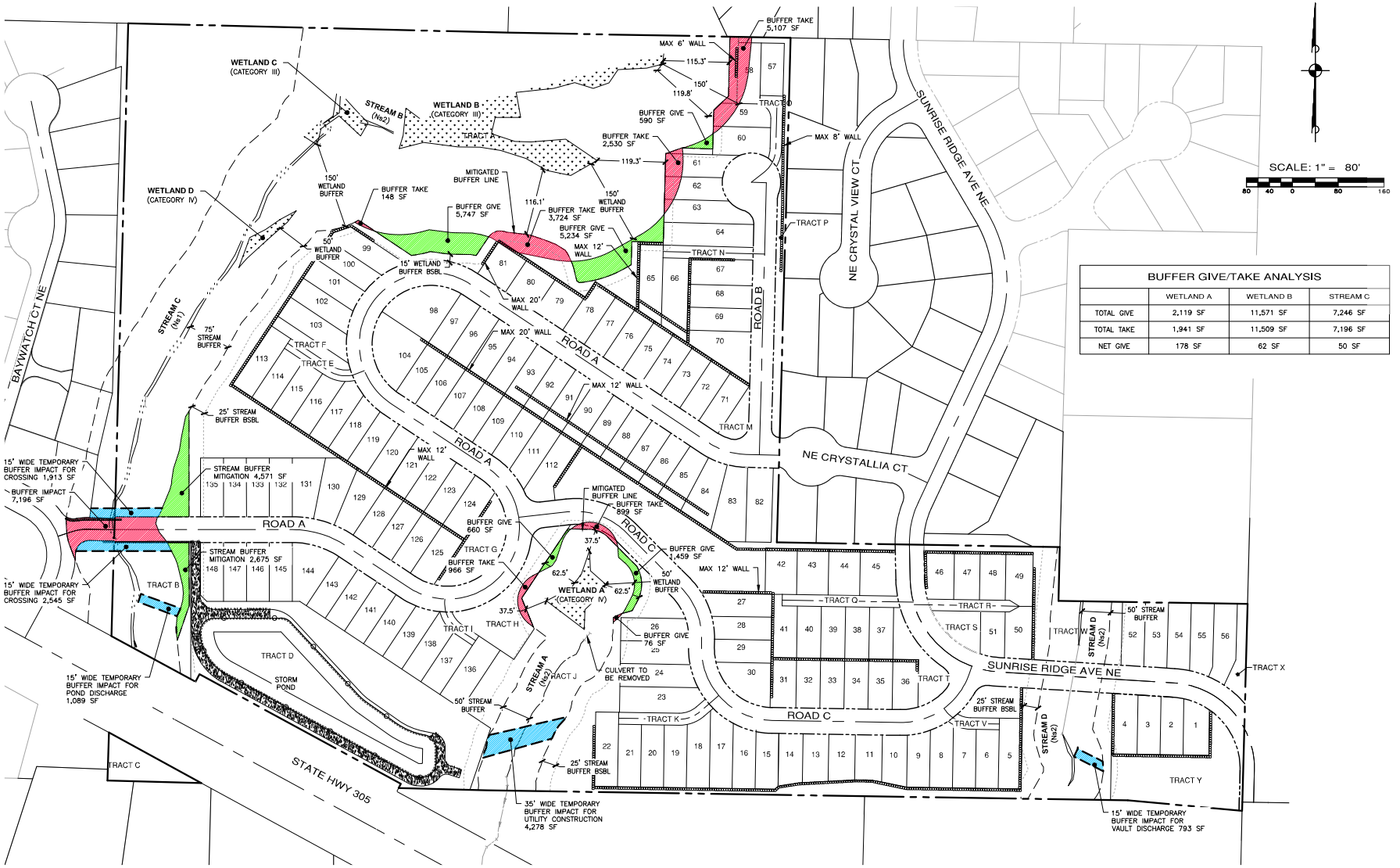


Chad Wallin, PWS
Associate Biologist

ATTACHMENT A
SITE PLANS

PINNICALE AT LIBERTY BAY
Third-Party Critical Area Review
Farallon PN: 3386-002.001 Task 3

A PORTION OF THE SE 1/4 OF SECTION 23, TWP. 26 N., RGE. 1 E.,WM



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SCALE: 1" = 80'

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BUFFER GIVE/TAKE ANALYSIS

	WETLAND A	WETLAND B	STREAM C
TOTAL GIVE	2,119 SF	11,571 SF	7,246 SF
TOTAL TAKE	1,941 SF	11,509 SF	7,196 SF
NET GIVE	178 SF	62 SF	50 SF

REVISIONS

NO.	DESCRIPTION/DATE	BY

12/01/2025

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
(253) 838-6113
(425) 297-9900
FEDERAL WAY
LYNNWOOD
www.esmcivil.com
Civil Engineering
Public Works
Land Planning
Landscape Architecture
Land Surveying
Project Management

MONTEBANC MANAGEMENT, LLC

PINNACLE AT LIBERTY BAY SUBDIVISION

BUFFER MITIGATION PLAN

CITY OF POULSBO WASHINGTON

JOB NO.:	2090-004-022
DWG. NAME:	PP-06
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
DATE:	11/26/2025
DATE OF PRINT:	

PP-06

6 OF 32 SHEETS

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Plotted By: Connie Garrett

A PORTION OF THE SE 1/4 OF SECTION 23, TWP. 26 N., RGE. 1 E.,WM



BUFFER GIVE/TAKE ANALYSIS		
	WETLAND A	WETLAND B
TOTAL GIVE	1,581 SF	12,930 SF
TOTAL TAKE	1,309 SF	11,702 SF
NET GIVE	272 SF	1,228 SF

REVISIONS

NO.	DESCRIPTION/DATE	BY

BRANDON MICHAEL LOUCKS
STATE OF WASHINGTON
50085
REGISTERED
PROFESSIONAL ENGINEER

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BUFFER MITIGATION PLAN

CITY OF POULSBO WASHINGTON

JOB NO.:	2090-004-022
DWG. NAME:	PP-06
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DATE:	04/03/2026
DATE OF PRINT:	

PP-06

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September 16, 2026 Job No. 2090-004-022

Mr. Joshua M. Ranes
City of Poulsbo Engineering Department
200 NE Moe St
Poulsbo, WA 98370

RE: Technical Justification for Vertical Roadway Geometry Failures at Stream C Crossing (Pinnacle at Liberty Bay Preliminary Plat and Planned Residential Development) P-06-20-25-03

PURPOSE

The purpose of this letter is to provide City staff with a technical evaluation of the geometric and regulatory constraints associated with a proposed roadway crossing of Stream C (Barrantes Creek) extending from Baywatch Court NE. This narrative serves as a technical companion to the enclosed Engineering Exhibit (Figure 2), which maps the dimensional conflicts of this crossing.

ALTERNATE ROAD ALIGNMENT ANALYSIS

An analysis was conducted to determine whether an alternative roadway alignment could be provided along the west side of the project. Based on the existing parcel layout, built infrastructure, and adjacent critical areas, there are no available alternative access corridors to the property. The proposed location is the only viable access point to the project site.

Alternative Road Locations

As shown in Figure 1 – Alternative Access Locations Analysis, the west side of the project site is constrained by existing physical conditions.

Southern Boundary (SR 305 Frontage): Direct vehicular access to the south is not permitted due to state highway access control regulations along State Route 305.
Southwestern Boundary (Existing Infrastructure): The presence of an established detention pond creates an unbuildable constraint along the southwestern corner of the property.
Western Boundary (Built Environment): The western property line is bordered by an existing residential plat, leaving no practical opportunity to establish a new public right-of-way.
Sole road location: The existing Right-of-Way (ROW) stub at Baywatch Ct NE is the single point of connection. Because the stream channel runs parallel to this western boundary, any road extending from the ROW stub must cross the stream even before entering the project parcel.

Alignment Optimization at Existing ROW Stub

Because a stream crossing is necessary at the existing ROW stub, the alignment review focused on minimizing the vertical conflict at the crossing.

Intersection Angle Limit: City of Poulsbo Street Standards Section 2, Item 12 prohibits public streets from intersecting at angles of less than 60 degrees. To start the new road at the highest practical elevation, the proposed alignment uses this minimum 60-degree angle. Rather than connecting perpendicular to Baywatch Ct NE, the angled intersection moves the connection farther uphill. This provides more vertical room as the road extends into the ravine and helps maximize clearance over the stream.

Superelevated Road: The road cross-slope is intentionally superelevated (instead of a typical crown layout) to lift the north side of the roadway profile as high as possible, representing in effort to clear the crossing structure.

GEOMETRIC ANALYSIS OF CITY AND FIRE STANDARDS

Design Factors

The following criteria were used to evaluate the feasibility of a potential stream crossing road profile given the optimized road alignment.

Crossing Clearance Standard: Per the City's finding that Stream C is fish-bearing, the crossing must comply with WAC 220-660-190 and WDFW 2013 Guidelines. Because the stream channel is located within a confined ravine, the standard recommended clearance of 3.0 feet above the ordinary high-water mark (OHWM)/top of bank was assumed as the minimum required vertical clearance to the bottom of the crossing structure to safely accommodate debris and sediment transport.

Additionally, it is assumed that the crossing structure will be placed parallel to the longitudinal slope of the stream to maintain approximately 3 feet of freeboard across the full width of the channel. In other words, the top of the culvert is assumed to be sloped to minimize the overall crossing culvert height above the channel.

Maximum Grade: Per City of Poulsbo Construction Standards and Fire Standards, the maximum allowable grade for a road within the City is 12%.

Intersection Landing per King County Road Standard Figure 2-013. This City adopted King County figure establishes the geometric profile tolerances for intersection landings, requiring a flat approach zone extending 20 feet for residential streets from the major road's right-of-way line. Within this defined landing zone, the vertical profile is controlled to a 1-foot maximum variation from the finished grade to eliminate abrupt transitions before vehicles enter the primary travel way.

Fire Truck Considerations: Poulsbo E-One Pumper (Length: 30 feet, Width: 8.33 feet, Ground Clearance: 1.1 feet)

Fire Access Standards: Maximum Grade: 12%, Maximum Approach: 6%

Crossing Structure and Structural Cover: For this evaluation, we assumed a 12-foot-wide, low-profile bottomless arch culvert. The span allows the concrete footings to remain entirely outside the active channel and ordinary high water mark (OHWM), while clearing the stream banks and accommodating the channel's natural skew. A structural plate arch was selected because its low-profile shape reduces the depth needed between the stream and the roadway.

To support standard AASHTO HL-93 highway loading, the arch requires a minimum of 1.5 to 2.0 feet of structural cover and pavement above its crown. Keeping this cover to the minimum required depth helps maintain the lowest practical driving-surface elevation, which is necessary to stay within the 6.0% maximum approach grade for emergency fire apparatus.

Roadside Geometry. The road section used for the analysis is based on a Collector classification. This includes two 11-foot lanes, curb & gutter, parking, and sidewalk on both sides all within a 50-foot ROW. City staff have supported the idea of a reduced ROW to make the stream crossing more feasible. At a minimum, the section requires one sidewalk, curb and gutter, and two 11-foot travel lanes.

Guardrail and Wall Clearances: The vertical drop to the stream requires both a retaining wall and a guardrail. Approximately 6 feet of horizontal clearance is needed between the back of the sidewalk and the face of the retaining wall to accommodate the wall, guardrail, and the required 2- to 3-foot deflection zone for a W-beam guardrail system.

RESULTING ANALYSIS

This analysis demonstrates that a code-compliant roadway crossing over Stream C is likely a physical impossibility as depicted in the enclosed Figure 2.

To satisfy the fire engine's physical front bumper overhang constraints and limit the approach grade change to the max allowed of 6.0%, a minimum sag vertical curve length of 25.7 feet is necessary (K=1.31). The vertical curve has been placed such that it stays within the City's intersection landing criteria per the City's vertical curve criteria memo dated April 29, 2014.

While this profile prevents the emergency vehicle from bottoming out on paper, it triggers other physical and legal conflicts:

Inadequate Stream Clearance: As shown on the North Side of Road Profile on Figure 2, the incoming roadway profile along the north is forced down so low by the intersection landing constraints that the pavement surface sits almost on the top of the arch culvert.

Property Line & Retaining Wall Conflicts: The constrained topography necessitates an 8-to 10-foot retaining wall on the north side of the road. There is inadequate space (only 3 feet) to construct this retaining wall between the road and the neighbor's property line along parcel 5146-000-001-003. Constructing this wall would require grading encroachments and a temporary construction easement from the adjacent neighbor, which cannot be obtained. Furthermore, the required wall alignment conflicts with an existing gas main and other utilities in the adjacent utility easement.

Critical Area Disturbance: A roadway crossing in this location would still require a significant disturbance within the stream buffer. Even if vertical retaining walls were used to narrow the road footprint, the bridge or culvert, wall foundations, guardrail, and utility easements would all need room. In practical terms, a crossing that meets City and fire access standards would extend all the way through the protected 150-foot stream buffer and would impact the stream corridor.

CONCLUSION

As demonstrated by the attached exhibits, there is no apparent solution that satisfies the crossing clearances while also meeting City standards for road grade and emergency vehicle access. Incorporating the required retaining walls, guard rails, and dry utility easements further expands the disturbance footprint, causing direct conflicts with existing utilities and neighboring property lines that cannot be mitigated.

It has been determined that a roadway crossing at this location is technically and legally infeasible and will not be proposed as part of the Pinnacle at Liberty Bay development.

Respectfully,

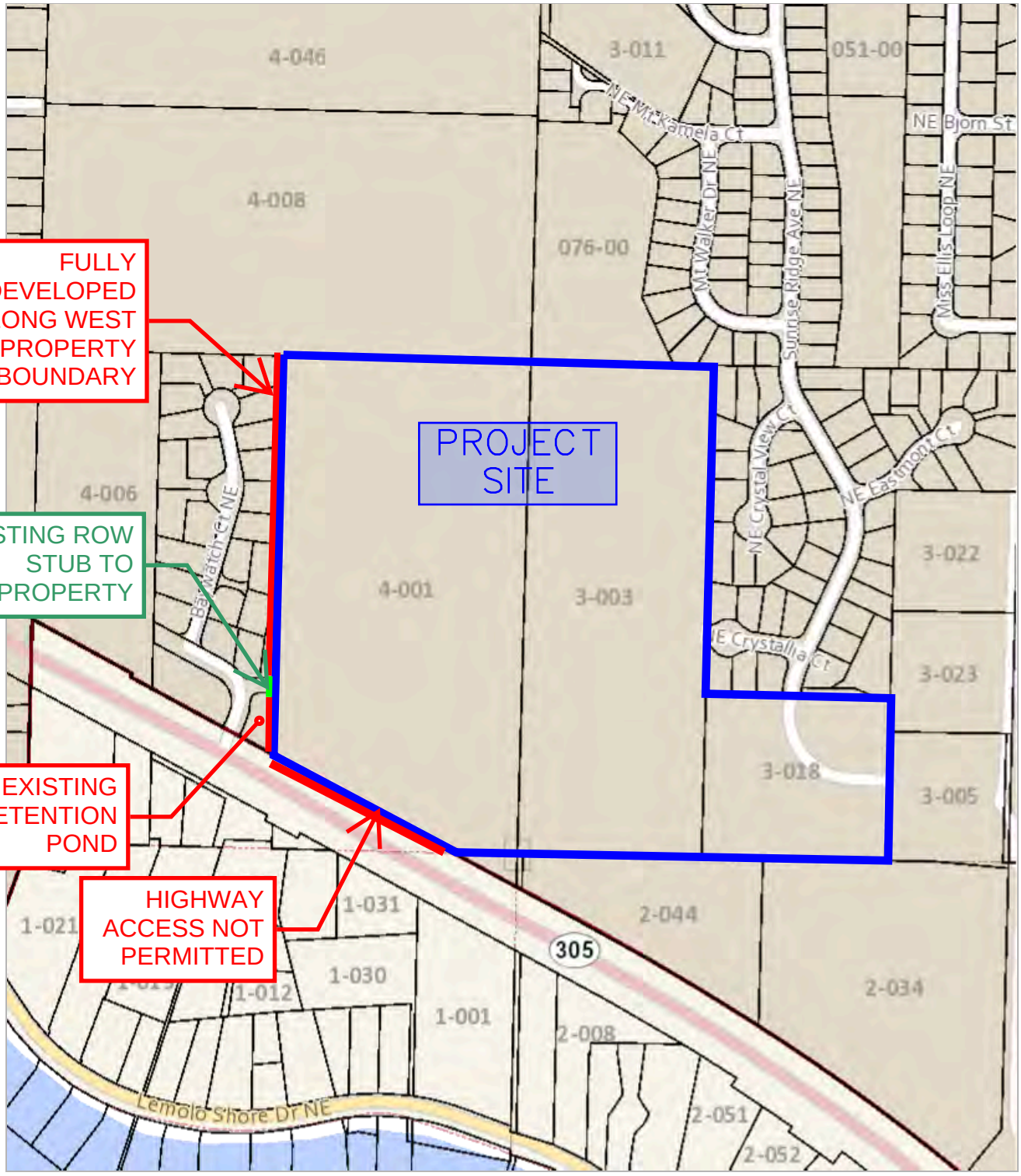
ESM CONSULTING ENGINEERS, LLC

BRANDON LOUCKS, P.E.
Project Manager

Encl. Figure 1, Figure 2
\\esm8\engr\esm-jobs\2090\004\022\document\letter-011-2.docx

Map Scale: 1 : 4,800

Printed: Sunday. Jul 19, 2026



** This map is not a substitute for field survey **

500 ft

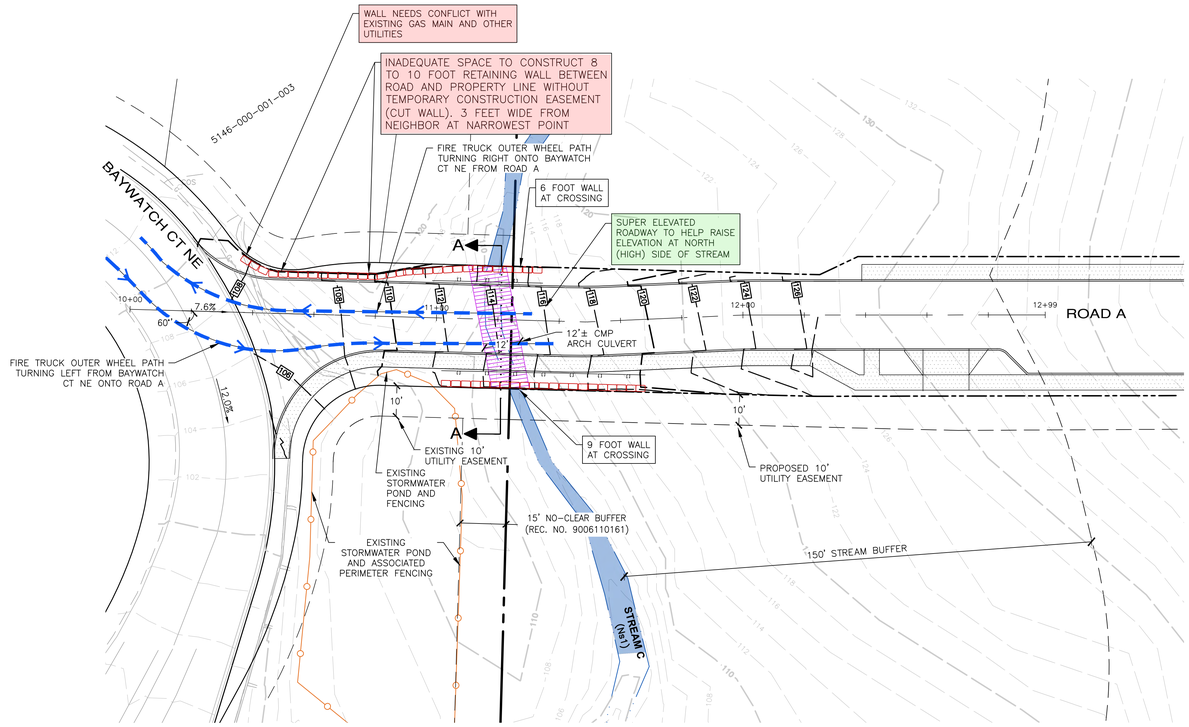
FIGURE 1 - Alternative Access Locations Analysis

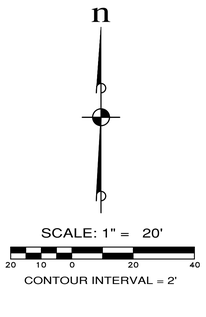
N

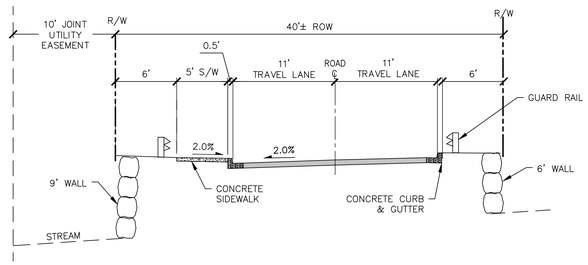
W E

S

A PORTION OF THE SE 1/4 OF SEC 23, TWP 26 N, RGE 1 E, W.M.



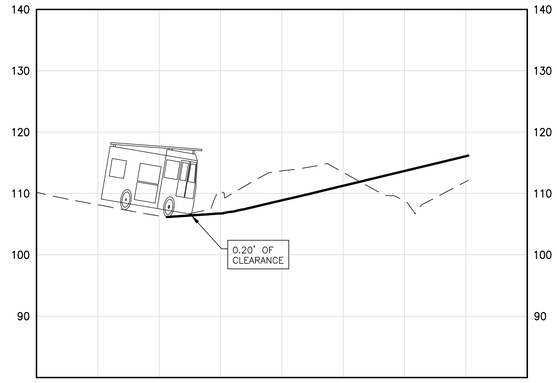




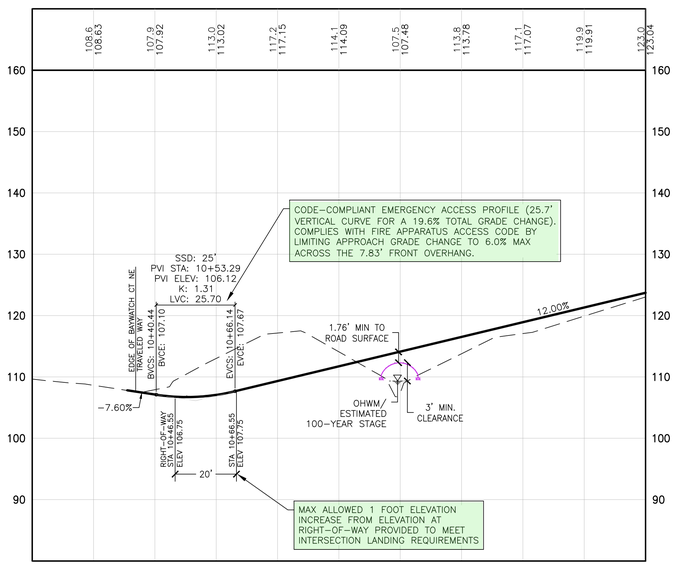
A-A ROAD SECTION AT STREAM
MODIFIED COLLECTOR
SCALE: 1"=6'

POULSBO EONE PUMPER

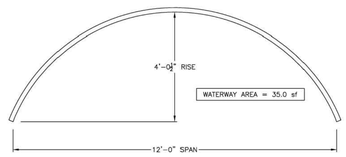
OVERALL LENGTH:	30 FEET
OVERALL WIDTH:	8.33 FEET
OVERALL BODY HEIGHT:	7.5 FEET
MIN GROUND CLEARANCE:	1.1 FEET



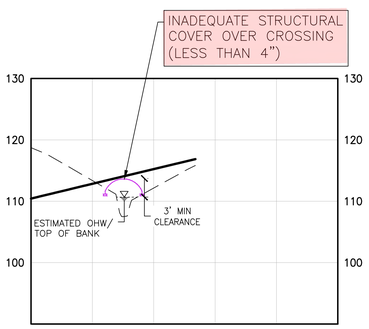
FIRE TRUCK OUTER WHEEL PATH TURNING LEFT FROM BAYWATCH CT NE ONTO ROAD A
SCALE: 1"=20' HORIZ. 1"=10' VERT.



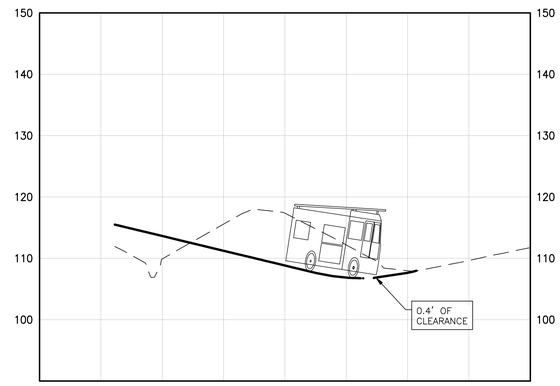
ROAD A
SCALE: 1"=20' HORIZ. 1"=10' VERT.



ESTIMATED CULVERT DIMENSIONS
SCALE: NTS



NORTH SIDE OF ROAD
SCALE: 1"=20' HORIZ. 1"=10' VERT.



FIRE TRUCK OUTER WHEEL PATH TURNING RIGHT ONTO BAYWATCH CT NE FROM ROAD A
SCALE: 1"=20' HORIZ. 1"=10' VERT.

REVISIONS		
NO.	DESCRIPTION/DATE	BY

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ESM
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Public Works
Land Planning
Landscape Architecture
Land Surveying
Project Management

MONTEBANC MANAGEMENT, LLC

PINNACLE AT LIBERTY BAY SUBDIVISION

STREAM C & ROAD A CROSSING FEASIBILITY EXHIBIT

CITY OF POULSBO WASHINGTON

JOB NO.	2090-004-022
DWG. NAME	EN-35
DESIGNED BY:	
DRAWN BY:	DCL
CHECKED BY:	
DATE:	09/03/2026

EN-35

1 OF 1 SHEETS

File: \\esm8\ENGR\ESM - JOBS\2090\004\022\exhibit\EN-35-Working-7_recover.dwg
Plotted: 9/16/2026 1:39 PM
Plotted By: Brendon Locke

Grette Associates
A DIVISION OF FARALLON CONSULTING

T E C H N I C A L M E M O R A N D U M

TO: Nikole Coleman, Planning Manager – City of Poulsbo

FROM: Chad Wallin, PWS, Associate Biologist

DATE: October 14, 2026

RE: PINNACLE AT LIBERTY BAY
THIRD-PARTY CRITICAL AREAS REVIEW
FARALLON PN: 3386-002.001 TASK 3

INTRODUCTION

The City of Poulsbo (City) contracted with Grette Associates (Grette), a division of Farallon Consulting, L.L.C., to assist in the review of a third addendum to the critical areas report (Addendum 3, dated September 15, 2026);[1] that was prepared by Sewall Wetland Consulting, Inc. (SWC) in support of the Pinnacle at Liberty Bay development project.

Prior to this review, Grette performed a review of a critical area report addendum (Addendum 1; dated November 19, 2025)[2] followed by the review of a second addendum (Addendum 2; dated April 6, 2026)[3] which concluded that Addendum 2 was compliant with the wetland buffer averaging requirements defined in Chapter 16.20 of the Poulsbo Municipal Code (PMC).

Please note that the reviews of Addendum 1 and Addendum 2 were limited to evaluating SWC's response to Grette's wetland comments with respect to compliance with Section 200 (Wetlands) of Chapter 16.20 of the PMC. The comments Grette provided in the August

[1] Sewall Wetland Consulting, Inc. Critical Areas Report Addendum #3 – Pinnacle at Liberty Bay. Addressed to the City of Poulsbo Planning and Economic Development. September 15, 2026.
[2] Sewall Wetland Consulting, Inc. Critical Areas Report Addendum – Pinnacle at Liberty Bay. Addressed to the City of Poulsbo Planning and Economic Development. November 19, 2025.
[3] Sewall Wetland Consulting, Inc. Critical Areas Report Addendum #2 – Pinnacle at Liberty Bay. Addressed to the City of Poulsbo Planning and Economic Development. April 6, 2026.

2025 review that were associated with Section 300 (Fish and Wildlife Habitat Conservation Areas) of Chapter 16.20 of the PMC were to be addressed under a sperate review.

METHODS

The purpose of this review is to verify whether the changes outlined in Addendum 3 remain consistent with the wetland buffer averaging requirements defined in PMC 16.20.230.E, and that the temporary stream and buffer impacts associated with the proposed utilities are consistent with the development standards defined in PMC 16.20.320.G.

As requested by the City, this review is focused on project elements associated with Wetlands A and B along with elements associated with Streams A and D. This review does not address any project elements associated with Stream C or its buffer.

RESULTS

According to the information provided in Addendum 3, there are two modifications to the proposed buffer averaging plan that have changed from what is outlined in Addendum 2. Addendum 3 also provides information regarding temporary impacts to Stream A and its buffer along with temporary impacts to the buffer of Stream D. Provided below is a summary of these changes.

WETLANDS

Wetland A – Buffer Averaging

Addendum 1 proposed a total of 1,865 square feet of buffer take and proposed a total of 2,119 square feet of additional buffer for compliance with PMC 16.20.230.E. Addendum 2 outlined that the total buffer take areas were reduced to 1,232 square feet and that the added buffer area was adjusted to a total of 1,581 square feet for compliance with PMC 16.20.230.E.

The site plan provided in Addendum 3 shows a revised buffer averaging plan that proposes a total of 856 square feet of buffer take and an added buffer area total of 1,018 square feet. The narrative provided in Addendum 3 states that the buffer take was reduced to 781 square feet, but the summary table and site plan both show 856 square feet of take. It is assumed that the narrative is in error and that the accurate take area is consistent with the site plan. Based on Grette's review, it appears the 781 square feet mentioned in the

narrative excluded the 75 square feet of take area shown on the site plan. When included, the total take area is 856 square feet.

Addendum 3 provides an analysis to demonstrate compliance with the buffer averaging requirements defined in PMC 16.20.230.E. This analysis is consistent with those analyses provided in Addendum 1. Per PMC 16.20.230.E, the narrowest portion of the reduced buffer width shall be no less than 75 percent of the standard buffer width. In this case, the minimum buffer width is 37.5 feet. The site plan in Addendum 3 shows a minimum buffer width for Wetland A of 37.5 feet, in compliance with PMC 16.20.230.E. Additionally, per PMC 16.20.230.E, buffer averaging requires no net loss of total buffer area. Addendum 3 is compliant with this requirement. The total buffer take area is 856 square feet and the total added buffer area is 1,018 square feet.

In summary, Addendum 3 has further reduced the need for buffer averaging compared to what was originally proposed in Addendum 1. Apart from the reduction in buffer averaging, Grette did not identify anything else that deviates from what was outlined in the previous addendums.

Wetland B – Buffer Averaging

Addendum 1 proposed a total of 11,509 square feet of buffer take and a total of 11,571 square feet of additional buffer area for compliance with PMC 16.20.230.E. Addendum 2 outlined that the total buffer take areas were adjusted to 11,702 square feet and the added buffer area was adjusted to a total of 12,930 square feet for compliance with PMC 16.20.230.E.

The site plan provided in Addendum 3 has a revised buffer averaging plan that proposes a total of 10,895 square feet of buffer take and a total of 11,511 square feet of added buffer. The narrative provided in Addendum 3 notes 10,833 square feet of buffer take; however, the table in Addendum 3 along with the table in the site plan note 10,895 square feet of buffer take. It is assumed that the correct buffer take area is 10,895 square feet which is based off the areas called out in the tables. Based on Grette's review, it appears the 10,833 square feet mentioned in the narrative excluded the 62 square feet of buffer take area shown on the site plan. When included, the total take area is 10,895 square feet.

Upon review of the buffer averaging analysis provided in Addendum 3, the buffer averaging plan remains consistent with the requirements defined in PMC 16.20.230.E. In addition, per PMC 16.20.230.E, the narrowest portion of the reduced buffer width shall be no less

than 75 percent of the standard buffer width and no net loss of buffer area shall occur. In this case, the minimum buffer width is 112.5 feet for Wetland B when applying buffer averaging. Based on the site plan, the minimum buffer width that would be established through averaging is 115.5 feet. In addition, a total of 11,511 square feet of buffer will be added in response to the 10,895 square feet of buffer take for compliance with PMC 16.20.230.E.

In summary, apart from the minor modifications in buffer averaging, Grette did not identify anything else that deviates from what was outlined in Addendum 2.

FISH AND WILDLIFE HABITAT CONSERVATION AREAS

As noted above, Grette's January and April 2026 reviews did not include an evaluation of SWC's response to Grette's FWHCA comments provided in Grette's August 2025 review. These comments included discrepancies with the characterization of Stream D as a Type Ns2 (non-fish habitat, seasonal stream) and deficiencies with compliance with the development standards defined in PMC 16.20.230 with respect to the proposed utility crossing associated with Stream A and the stormwater outfall proposed within the buffer of Stream D. The site plans provided in Addendum 3 show Stream D as a Type Ns1 stream which is consistent with Grette's determination outlined in the August 2025 review.

Provided below is a summary of Grette's review of the proposed utility crossing and stormwater outfall based on the guidance provided by the City. Please note, it is Grette's understanding that future coordination with the City will occur for review of an appropriate mitigation plan for this proposed work.

Stream A – Utility Crossing

PMC 16.20.320.G provides development standards to allow the placement of utilities within a FWHCA or its buffer if a project follows the standards defined in said section of code. Addendum 3 provides a brief narrative that describes that approximately 4,100 square feet of temporary buffer impacts will occur along with temporary disturbance to the stream channel during the installation of the underground utilities. The addendum notes that all disturbed areas will be restored upon completion of the work and will follow the requirements defined in the Hydraulic Project Approval (HPA) issued by the Department of Fish and Wildlife (WDFW).

Except for noting that the temporary disturbances will be restored, no additional information is provided to demonstrate compliance with PMC 16.20.320.G. As such, Grette cannot

determine whether the proposed utility crossing is compliant with the standards defined in PMC 16.20.230.G and that appropriate measures will be implemented to ensure no adverse impacts will result from the associated construction activities that would occur to install the proposed utilities.

Per PMC 16.20.320.G, in addition to providing the appropriate analysis to demonstrate compliance with said section of code, a habitat management plan shall be prepared that meets the requirements defined in PMC 16.20.775. This plan should include, but is not limited to, demonstration of mitigation sequencing, a stream and buffer restoration plan, monitoring plan and maintenance plan, and performance standards.

Stream B – Stormwater Outfall

According to Addendum 3, 1,200 square feet of temporary impacts will occur within the buffer of Stream D to install the proposed stormwater outfall.

PMC 16.20.320.G provides development standards to allow the placement of utilities within a FWHCA or its buffer if a project follows the standards defined in said section of code. Addendum 3 provides an analysis to address PMC 16.20.320.G.5 (i.e., easement criteria) but does not provide any other analyses to demonstrate compliance with other applicable criteria defined in PMC 16.20.320.G. The analysis provided in response to PMC 16.20.320.G.5, concludes that the proposed easement and corridor is compliant with these standards given the existing conditions within the proposed easement and the corridor are devoid of vegetation. Based on aerial imagery, Grette disagrees. The buffer in this general area appears to be intermixed with a shrub and forested vegetation community and there does not appear to be any clear indication that the existing conditions are devoid of vegetation.

Per PMC 16.20.320.G, in addition to providing the appropriate analysis to demonstrate compliance with said section of code, a habitat management plan shall be prepared that meets the requirements defined in PMC 16.20.775. This plan should include, but is not limited to, demonstration of mitigation sequencing, a stream and buffer restoration plan, monitoring plan and maintenance plan, and performance standards.

CONCLUSION

Upon review of Addendum 3, the modifications associated with the proposed buffer averaging plan remain consistent with the buffer averaging requirements defined in PMC

16.20.230.E; however, the information provided in Addendum 3 to address the proposed utilities for compliance with PMC 16.20.320.G is incomplete.

It is Grette's understanding that a mitigation plan is forthcoming and will be submitted to the City to address the applicable mitigation requirements defined in PMC 16.20.755. It is also Grette's understanding that this plan is anticipated to provide elements that would include a restoration plan, planting schedule, performance standards, and monitoring plan.

While it does appear that the utilities crossing Stream A and its buffer are necessary and will be restored, Addendum 3 does not provide any information to demonstrate compliance with PMC 16.20.320.G for Grette to recommend approval even with the understanding that a mitigation plan would be submitted to the City at a later date. This determination also applies to the proposed utility easement and corridor within the buffer of Stream D. While the easement and corridor appear necessary, the existing conditions do not appear to be accurately described, and the analysis provided does not address the applicable criteria defined in PMC 16.20.320.G for Grette to recommend approval.

In conclusion, Grette recommends that an appropriate code compliance narrative similar to what was provided in response to the proposed buffer averaging be prepared. In Grette's opinion, pending approval, this would provide the City with sufficient information to approve these temporary disturbances while coordination occurs with the applicant to address the outstanding mitigation plan that would be prepared to address these project activities.

If you have any questions regarding this memorandum, please contact me at (253) 573-9300, or by email at chadw@gretteassociates.com.

Grette Associates, a division of Farallon Consulting L.L.C.

Regards,



Chad Wallin, PWS
Associate Biologist