



July 3, 2026

TO: Leah Forbes
Skagit County
Tel: (360) 416-1337
leahf@co.skagit.wa.us

FROM: Nicholas Denk, PWS
Wetland Scientist
Hamer Environmental
Tel (Cell): (360) 899-8846
nick@hamerenvironmental.com

SUBJECT: P15425; Valentine Road Property – Response to Skagit County Critical Areas and Site Plan Comments

This memorandum is a response to Skagit County's emails dated March 27, 2026, and June 17, 2026, with comments on the Mitigation Plan and site plan.

Response to Comments:

Hamer Environmental's responses below address the comments made by Skagit County in their March 27, 2026, and June 17, 2026, emails. Original County comments in *italics* with Hamer responses below.

1. *It is well established that the wetlands and associated buffers encumber the western half of the parcel. I don't see in the report that Hamer made a determination on whether the eastern portion of the site is similarly encumbered. That portion of the parcel does not need to be formally delineated, but we do need a statement based on best professional judgement that there is not a place onsite that can accommodate the proposed shop that would not require a variance..*

An additional site visit was completed on May 15, 2026, to collect additional data to represent the conditions of the eastern half of the parcel. Several sample plots were recorded to demonstrate wetland conditions in the eastern half of the parcel. See report & appendixes for additional information.

2. *The code requires that the project minimize impacts to the wetlands and their associated buffers. Moving the shop north to the minimum required 8-foot side setback appears to provide a bit more space between it and Wetland C.*

The report has been revised to reflect this change. The building and associated ambulance turnaround were moved to the north to the maximum extent possible. Impacts

proposed and mitigation prescribed were updated to reflect the new site plan. See report & appendixes for additional information.

Additional Changes to Note:

During the May 15, 2026, site visit, clearing in the approximate area of the proposed project was observed and documented. Observed clearing outside the limits of the proposed project are proposed for restoration as a part of the mitigation plan. Between the buffer restoration, buffer enhancement, and wetland enhancement prescribed in the mitigation plan, no net loss of function onsite is excepted.

We believe that the revisions explained in this memorandum should bring the Critical Areas Report & Mitigation Plan and site plan into compliance with the Skagit County Code. Please let us know if you have any questions or require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Nicholas Denk', is written over a light blue rectangular background.

Nicholas Denk, PWS
Wetland Scientist
Hamer Environmental L.P.

SKAGIT COUNTY

Critical Areas Report & Mitigation Plan

Dixon Property
Valentine Rd
Mount Vernon, WA 98273
Skagit Tax Parcel Number:
P15425

Prepared by



1023 S 3rd Street
Mount Vernon, WA 98273
(360) 899-5156
www.hamerenvironmental.com

**Revised July 3, 2026
(March 26, 2025)**

Prepared for:

Paul Dixon
16825 Calhoun Rd
Mount Vernon, WA 98273
(360)708-8140
Prdixon63@gmail.com

Prepared by:

Nicholas Denk, PWS, Wetland Scientist
Tel (Cell): 360.899.8846
nick@hamerenvironmental.com

Contact:

Hamer Environmental, Wetland and Fisheries Division
1023 S 3rd Street
Mount Vernon, WA 98273
Tel (Office): 360.899.5156
Fax: 360.899.5146

Table of Contents

Statement of Qualifications	vi
Executive Summary.....	vii
Chapter 1. Introduction	1
1.1 Scope and Purpose.....	1
1.2 Project Location.....	1
Chapter 2. Methods.....	3
2.1 Definitions	3
2.2 Wetland Identification, Delineation, and Classification.....	4
2.3 Regulatory Requirements.....	5
2.3.1 Skagit County Critical Areas Ordinance (SCC Chapter 14.24)	5
Chapter 3. Desktop Review.....	6
3.1 Landscape Setting	6
3.2 Climate and Precipitation	6
3.3 Watershed Description.....	6
3.4 Soils	7
3.5 State Priority Habitat and Species.....	8
3.6 Federally Threatened and Endangered Species.....	8
3.7 Fish and Wildlife Habitat Conservation Areas.....	9
Chapter 4. Existing Conditions.....	10
4.1 Wetlands	12
4.1.1 Wetland A.....	12
4.1.2 Wetland B.....	13
4.1.3 Wetland C.....	14
4.1.4 Wetland Mosaic (D, E, F, G).....	15
4.1.5 Wetland H.....	16
4.1.6 Wetland I	17
4.2 Uplands	17
Chapter 5. Functions & Values	19
5.1 Functions Provided by Wetlands and Buffers	19
5.2 Functional Assessment.....	19
Chapter 6. Mitigation Sequencing Analysis	20
6.1 Mitigation Sequence.....	20
6.1.1 Avoiding and Minimizing the Impact	20
6.1.2 Rectification	22
6.1.3 Reduction & Elimination	22
6.1.4 Compensation	22
Chapter 7. Mitigation Installation	25
7.1 Site Preparation.....	25
7.2 Recommended Plant Species and Installation.....	25
7.2.1 Planting locations	26
7.2.2 Installation of Plants	27
7.2.3 Mulch	27
7.2.4 Fencing.....	27

7.2.5 As-Built Report	27
Chapter 8. Mitigation Monitoring & Maintenance.....	29
8.1 Performance Standards	29
8.2 Maintenance & Monitoring Schedule.....	29
8.3 Monitoring Reports.....	31
8.4 Monitoring Methods.....	31
8.4.1 Plant Survival Sampling Technique	31
8.4.2 Native Plant Coverage Sampling Techniques	31
8.4.3 Photo Documentation	32
8.4.4 Monitoring Inspection Checklist.....	32
8.5 Maintenance.....	32
Chapter 9. Mitigation Completion.....	34
9.1 Notification of Completion	34
9.2 County Confirmation.....	34
9.3 Contingency Plan and Measures	34
References.....	36
Appendix A – Existing Conditions Map	
Appendix B – Supplementary Documents	
Appendix C – Wetland Data Forms	
Appendix D – Wetland Rating Forms.....	
Appendix E – Impact & Mitigation Maps.....	
Appendix F – Bond Quantity Worksheet	

Figures

Figure 1. Approximate property boundary (red) (Google Earth 2024).	2
Figure 2. Mapped NWI surface waters and wetlands – approximate property boundary (blue) (USFWS 2024).	7
Figure 3. Study area existing conditions overview (see also Appendix A).	10
Figure 4. Parcel existing conditions overview (see also Appendix A).	11
Figure 5. Wetland A photographed from the southwest facing northeast (October 22, 2024). ...	13
Figure 6. Wetland B photographed from the southeast facing northwest (October 22, 2024). ...	14
Figure 7. Wetland C photographed from the north facing southeast (October 22, 2024).	15
Figure 8. A portion of Wetland Mosaic (D, E, F, & G) (October 22, 2024).	16
Figure 9. Wetland H photographed from the north facing southeast (October 22, 2024).	17
Figure 10. Upland forest conditions (October 22, 2024).	18
Figure 11. Cleared upland forest conditions (May 15, 2026).	18
Figure 12. Proposed shop location alternatives analysis.	21
Figure 13. Proposed impacts map (Appendix F).	22
Figure 14. Proposed mitigation map (Appendix E).	24

Tables

Table 1. Rainfall during 3 months prior to site visit.	6
Table 2. Summary of mapped soil types within the approximate study area (Custom Soil Resources Report, USDA, NRCS 2024).	8
Table 3. Federally listed T&E species with potential to be in and near the study area.	9
Table 4. Summary of critical areas.	12
Table 5. Summary of impacts & mitigation recommendations.	23
Table 6. Recommended species list for buffer enhancement (16,669 sf).	25
Table 7. Recommended species list for wetland enhancement (3,184 sf).	26
Table 8. Recommended species list for buffer restoration (7,843 sf).	26
Table 8. Mitigation monitoring schedule.	30
Table 9. Summary of maintenance tasks.	33

Acronyms and Abbreviations

BMP	best management practice
CAO	critical areas ordinance
County	Skagit County
CWA	Clean Water Act
DNR	Washington Department of Natural Resources
Ecology	Washington State Department of Ecology
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
GPS	global positioning system
Hamer	Hamer Environmental
HCA	habitat conservation area
HGM	hydrogeomorphic
HUC	hydrologic unit code
IPaC	information for planning and consultation
Lidar	light detection and ranging
NHP	Washington Natural Heritage Program
NOAA	National Oceanic and Atmospheric Administration
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NWI	national wetlands inventory
PCA	Protected Critical Area
PHS	Priority Habitat and Species
RCW	Revised Code of Washington
SCC	Skagit County Code
SWIFD	statewide integrated fish distribution
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington State Department of Fish and Wildlife
WQI	water quality improvement
WRIA	water resource inventory area

LIMITATIONS

This report is based upon information collected in the field and obtained from resources provided by Federal, State, and Local agencies. Conclusions are the professional opinion of the authors based on the information and conditions at the time of the survey and are subject to verification and approval by the appropriate agencies.

Statement of Qualifications

Nicholas Denk, PWS, B.S., Wetland Scientist

Nicholas Denk earned his Bachelor of Science in Environmental Science from Western Washington University. He has over 6 years of experience in environmental consulting for public, private, and tribal entities. He also has a year of wetland and stream restoration installation/maintenance experience through the Washington Conservation Corps. Nicholas currently works in the Wetland and Fisheries Division at Hamer Environmental as a Wetland Scientist. Here he focuses on delineating wetlands, mapping regulated features, collecting field data, and preparing associated critical areas reports/mitigation plans in accordance with local, state, and federal requirements. He also prepares regulatory compliance documentation and permit applications. Nicholas has been trained by the Washington State Department of Ecology in the following courses: Using the Western Washington Wetland Rating System, Determining an Ordinary High-Water Mark, Grass/Sedge/Rush Identification for Western WA Puget Lowland Habitats, Navigating SEPA, Riparian and Wetland Plant Identification in Central and Eastern Washington, Designing and Installing Wetland Mitigation and Restoration Projects, How to Conduct a Forage Fish Survey, and Using Field Indicators for Hydric Soils. Nicholas Denk earned his Professional Wetland Scientist certification (#4080) in September 2025 from the Society for Wetland Scientists Professional Certification Program (SWSPCP).

Executive Summary

The subject parcel (Skagit County Tax Parcel P15425) is approximately 5.13 acres in size. The parcel is entirely forested and undeveloped. It is accessible via the shoulder of Valentine Rd. The neighboring property to the south was clear cut sometime between 2021 and 2022, resulting in a large number of blown down trees along the southern portion of the subject property. Clearing occurred onsite sometime between 2024 and 2026 as well. The proposed project includes the installation of a gravel access drive with culvert from Valentine Rd and a shop. This report was revised in September 2025 and July 2026 to address the comments provided by Skagit County.

On October 22, 2024, Hamer Environmental Scientists completed a site assessment of the proposed project area and 200 ft outside of the proposed development, hereafter referred to as the “study area”. During the site assessment, five wetlands and one wetland mosaic were observed in the study area. The offsite wetland portions were approximated using Light Detection and Ranging (LiDAR), visual observations, and aerial imagery. Wetlands were rated according to the current Washington State Department of Ecology *Wetland Rating System for Western Washington* (Hruby & Yahnke 2023). All wetlands were determined to be Category III. Per the County Critical Areas Ordinance under a moderate land use intensity, these wetlands will require 110 ft protective buffer.

On May 15, 2026, Hamer Environmental Scientists completed an additional site visit to perform a reconnaissance level assessment of the eastern half of the property, outside the more detailed 200 ft study area. During this assessment seven small depressional wetlands were observed onsite. One wetland was also observed on the neighboring property to the south. The approximated wetlands were mapped using visual observations, LiDAR, and aerial imagery. U.S. Army Corps of Engineers wetland determination data forms were completed with field observations for the majority of these approximated wetlands to document evidence of wetland conditions in the eastern half of the property. Since conditions for these approximate wetlands are similar to those rated on the western half of the parcel, they are assumed to be Category III with 110 ft protective buffers.

The property is entirely encumbered by wetlands and buffers, in such a way that would deny all economic use of the parcel. Therefore, it is recommended that a Hearing Examiner variance be sought out from the Skagit County Hearing Examiner. This variance is subject to the requirements outlined in SCC 14.24.140. There are 11,511 sf of buffer impacts proposed for the project in addition to the 7,843 sf of buffer clearing impact around the proposed project. To mitigate the existing and proposed impacts, a combination of 3,184 sf of wetland enhancement (1:1), 16,669 sf of buffer enhancement (2:1), and 7,843 sf of buffer restoration (1:1) is proposed. The site plan has been planned in a way that has the least impact on wetlands or their buffers. This mitigation plan addresses the buffer impacts associated with the proposed project and existing clearing impacts.

Chapter 1. Introduction

1.1 Scope and Purpose

The proposed project includes the installation of a gravel access drive with culvert from Valentine Rd and a shop in Skagit County, Washington. The subject parcel (Skagit County Tax Parcel P15425) is approximately 5.13 acres in size. The study area is within unincorporated Skagit County (County) and is therefore subject to Skagit County Code (SCC) regulations. The SCC requires that all land use development permit applicants comply with the County Critical Areas Ordinance (CAO), Chapter 14.24 of the SCC (Skagit County 2024). This critical areas assessment report has been prepared to satisfy the requirements of the County CAO for wetlands and HCAs within the study area.

On October 22, 2024, Hamer Environmental (Hamer) scientists completed a site assessment of the subject parcel, and the surrounding 200 ft, hereafter referred to as the “study area.” On May 15, 2026, Hamer scientists completed an additional site visit to perform a reconnaissance level assessment of the eastern half of the property, outside the more detailed 200 ft study area. Information gathered in this report is intended to assist project designers in avoiding and/or minimizing impacts on sensitive areas and species and provide information for regulatory reviewers. The report is anticipated to support review by the County, U.S. Army Corps of Engineers (USACE), Washington State Department of Ecology (Ecology), Washington State Department of Fish and Wildlife (WDFW), and/or tribes.

1.2 Project Location

The study area is located in unincorporated Skagit County on Pleasant Ridge. The property is unaddressed along Valentine Road (Figure 1). The legal geographic location is Section 05, Township 33 North, Range 03. The approximate GPS coordinates for the center of the study area are latitude 48.381848° and longitude -122.447580°.



Figure 1. Approximate property boundary (red) (Google Earth 2024).

Chapter 2. Methods

2.1 Definitions

Fish and wildlife habitat conservation: “Land management for maintaining populations of species in suitable habitats within their natural geographic distribution so that the habitat available is sufficient to support viable populations over the long term and isolated subpopulations are not created. This does not mean maintaining all individuals of all species at all times, but it does mean not degrading or reducing populations or habitats so that they are no longer viable over the long term...Fish and wildlife habitat conservation areas contribute to the state’s biodiversity and occur on both publicly and privately owned lands.” (WAC 365-190-130).

Limits of jurisdiction in nontidal waters:

- in the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark;
- when adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands;
- when the Water of the United States consists only of wetlands, the jurisdiction extends to the limit of the wetland (33 CFR, Part 328.3).

Ordinary high water mark: “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.” (U.S. Congress 1986). ii.) “Presence and action of waters... mark upon the soil... in respect to vegetation... distinct from that of the abutting upland...” (Washington State Department of Ecology 2016).

Waters of the United States: from 33 CFR, Part 328, Section 328.3 (as of today’s date)

(a) *Waters of the United States* means:

(1) Waters which are:

- (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (ii) The territorial seas; or
- (iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:

- (i) Waters identified in paragraph (a)(1) of this section; or
- (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;
- (5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

(b) The following are not “waters of the United States” even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

- (1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the

requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

“Adjacent” is defined as “having a continuous surface connection”.

Wetlands: “Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” (40 CFR, Part 120).

2.2 Wetland Identification, Delineation, and Classification

Hamer scientists delineate wetlands according to local, state, and federal guidelines. Wetland resources are delineated using guidelines and methods described in the *U.S. Army Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) as amended with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast (Version 2.0)* (USACE 2010). Wetland boundaries are surveyed using a Juniper GNSS Geode unit.

Scientists use several tools to identify and classify plants and soils examined within the study area. Plant indicator status and scientific plant names are identified using the *National Wetland Plant List: 2020 Update of Wetland Ratings* (Lichvar et al. 2014) and any updates to the *National Wetland Plant List* (USACE 2020). Soil characteristics are recorded and classified using the *Field Book for Describing and Sampling Soils* (USDA, NRCS 2012). Hydric soil conditions are assessed using *Field Indicators of Hydric Soils in the United States, Version 8.2* (USDA, NRCS 2018).

Delineated wetlands are classified according to federal, state, and local systems. The *Classification of Wetlands and Deepwater Habitats of the United States* [Federal Geographic Data Committee (FGDC) 2013] is a descriptive classification, based on physical attributes (i.e., plant community, soils, and water regime). Wetlands perform a variety of biological, physical (hydrologic), and chemical (water quality) functions. Wetlands are assigned a hydrogeomorphic (HGM) classification to more accurately assess the functions and values of each wetland.

2.3 Regulatory Requirements

2.3.1 Skagit County Critical Areas Ordinance (SCC Chapter 14.24)

The purpose of the County CAO is to carry out the goals of the County comprehensive plan and the State of Washington Growth Management Act by designating and classifying critical areas and protecting the functions and values of critical areas and the ecological processes that sustain them. Critical areas regulated under the CAO include geologically hazardous areas, frequently flooded areas, critical aquifer recharge areas, wetlands, and fish and wildlife habitat conservation areas (HCA). Any land use activity that can impair the functions and values of critical areas or their buffers through a development activity is required to have a critical areas review and written authorization that the activity complies with the CAO chapter (SCC 14.24.060). Wetlands/waters of the state are under the jurisdiction of the USACE, state, and local agencies. The USACE has the authority to determine whether a wetland or stream is a water of the U.S. and thus federally regulated under Section 404 of the Clean Water Act (CWA). Impacts to wetlands and streams (including the riparian area) also necessitates state permitting through the Washington State Department of Ecology (Section 401 Water Quality Certification) and the Washington State Department of Fish and Wildlife Hydraulic Project Approval (HPA).

In addition to the reporting requirements outlined in SCC Chapter 14.24, the County regulates Fish and Wildlife Habitat conservation areas (HCA), according to their CAO. Habitat conservation areas are those identified as being of critical importance to the maintenance of certain fish, wildlife and/or plant species. Any land use activity that can impair the functions and values of critical areas or their buffers through a development activity is required to have critical areas review and written authorization that the activity complies with the CAO chapter 14.24.530. Riparian buffers apply only to streams and rivers. The intention of riparian buffers is to protect five basic riparian forest functions that influence in-stream and near-stream habitat quality (SCC 14.24.530). If the County determines that critical area indicators are present, a critical areas site assessment, prepared by a qualified professional is required.

Chapter 3. Desktop Review

Prior to conducting fieldwork, Hamer scientists conducted a desktop review of the study area and vicinity. Information was gathered in October/November 2024 from local, state, and federal sources to form a comprehensive view of the area’s natural resources and ecological processes.

3.1 Landscape Setting

The study area is in northwest Washington on Pleasant Ridge. It is situated approximately two miles east of La Conner and five miles southwest of Mount Vernon. Pleasant Ridge is a high ridge/plateau in the Skagit River Valley surrounded by the low elevation floodplain. The landscape of Pleasant Ridge features coniferous forest with steep slopes around the edges. The study area is zoned as RRv (Rural Reserve).

3.2 Climate and Precipitation

Precipitation conditions were wetter than normal during the three months prior to the October site visit. The normal precipitation range for the area was determined using the Natural Resources Conservation Service (NRCS) Climate Analysis for Wetlands Tables, also known as WETS Tables (NOAA 2024). Precipitation data was obtained from the Sedro-Woolley, WA WETS Sation (Table 1).

Table 1. Rainfall during 3 months prior to site visit.

Previous 3 Months to Site Visit	Actual Rainfall (inches)	Average Rainfall for Month (inches)	30% chance rainfall will be less than	30% chance rainfall will be more than	Dry, Normal, Wet	Condition Value	Month Weight Value	Product of previous two columns
October 2024	6.82	5.10	3.78	5.99	Wet	3	3	9
September 2024	2.17	2.89	1.56	3.53	Normal	2	2	4
August 2024	2.91	1.29	0.49	1.56	Wet	3	1	3
Note: If sum is 6-9 = period has drier than normal conditions 10-14 = period has normal conditions 15-18 = period has wetter than normal conditions							SUM:	16

3.3 Watershed Description

The study area is within the Water Resources Inventory Area (WRIA) 3 Lower Skagit - Samish. The sub-watershed is Skagit Delta - Frontal Skagit Bay (HUC 171100070204). There are two approved water quality improvement (WQI) projects in the watershed; the Lower Skagit Basin Bacteria TMDL and the Lower Skagit River Tributaries Temperature TMDL. The nearest 303(d) water body is an unnamed ditch (tributary to Skagit Bay) approximately 0.9 miles east of the subject parcel. The parameters listed for this waterbody are temperature, bacteria (fecal coliform), and dissolved oxygen (Ecology 2024).

A ditch was observed flowing south along Valentine Rd. The general topography of the property is highest in the central portion, sloping downward to the east and west from there. The lowest area of the parcel is along the southern edge. Surface water from the clearcut parcel to the south

likely collects at the southern edge of the property in the low areas. The National Wetlands Inventory Map (NWI) shows no wetlands within the study area (Figure 2).

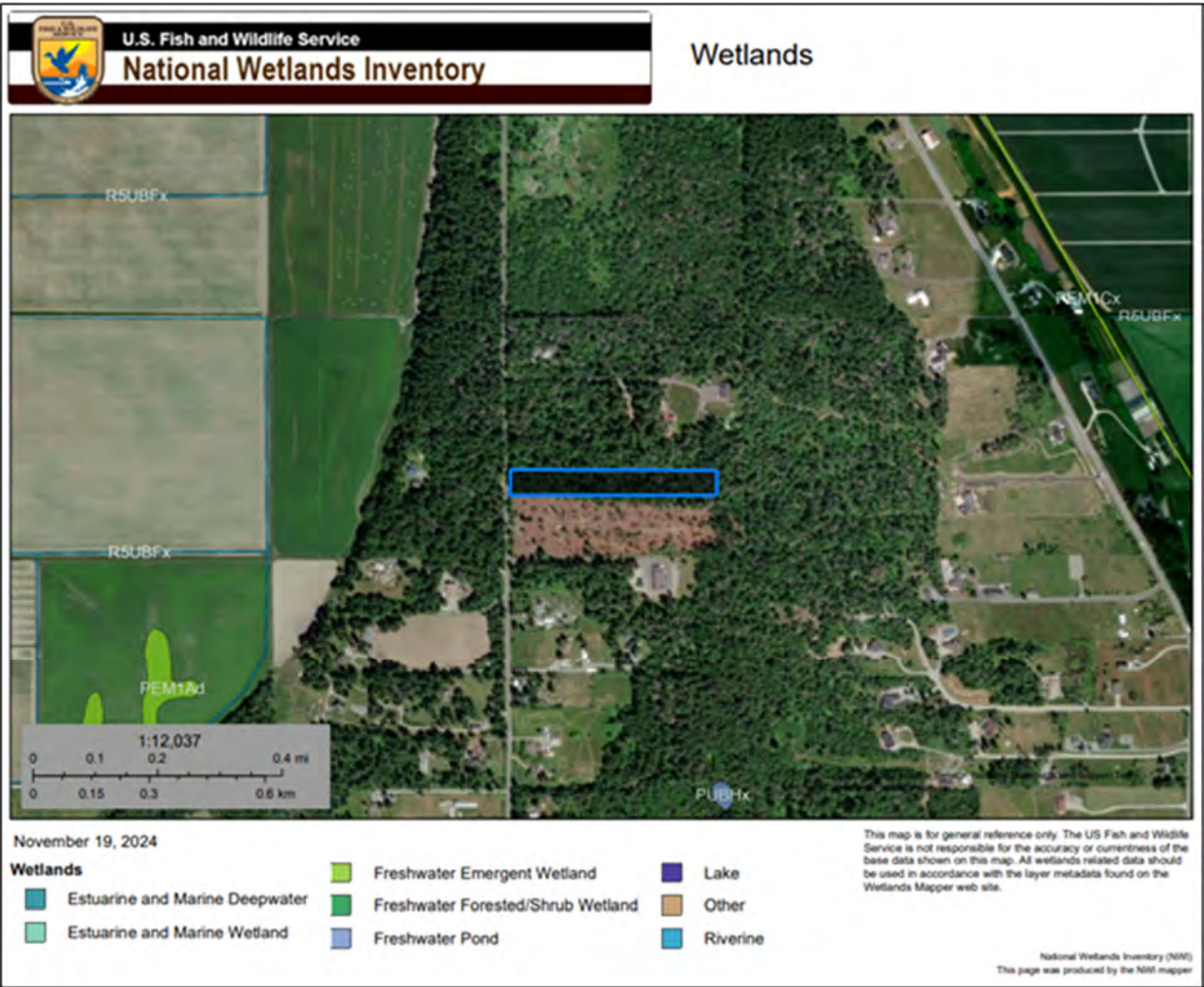


Figure 2. Mapped NWI surface waters and wetlands – approximate property boundary (blue) (USFWS 2024).

3.4 Soils

The local soil survey identifies two soil types within the approximate parcel boundaries. Table 2 summarizes the study area's Natural Resources Conservation Service (NRCS) custom soil resource report (USDA, NRCS. 2024). The soil map for the approximate parcel is attached in Appendix B. NRCS provides high-level soil mapping and is not considered a substitute for hydric soil assessment in the field.

Table 2. Summary of mapped soil types within the approximate study area (Custom Soil Resources Report, USDA, NRCS 2024).

Map Unit	Map Unit Name	Percent of Parcel	Hydric Soil	Typical Profile	Properties
17	Bow gravelly loam, 3 to 8 percent slopes	90.3	Yes	<u>Bow (95%):</u> 0 to 7 inches: gravelly ashy loam 7 to 17 inches: very gravelly ashy loam 17 to 31: clay loam 31 to 60 inches: silty clay	Landform: Hillslopes, terraces. Parent Material: Volcanic ash, glaciolacustrine deposits, and glacial drift. 6 to 18 inches to water table. Somewhat poorly drained. High available water supply.
85	Laconner very gravelly loamy sand, 0 to 8 percent slopes	9.7	No	<u>Laconner (90%):</u> 0 to 6 inches: very gravelly loamy sand 6 to 19 inches: very gravelly loamy sand 19 to 38 inches: very gravelly sand 38 to 60 inches: very gravelly sandy loam	Landform: Hillslopes, terraces. Parent Material: Volcanic ash and glacial drift. 20 to 30 inches to water table. Moderately well drained. Very low available water supply.

3.5 State Priority Habitat and Species

The Washington Department of Fish and Wildlife (WDFW) manages state Priority Habitat and Species (PHS). The PHS report for the approximate study area is attached in Appendix B (WDFW 2024a). Little brown bat (*Myotis lucifugus*) is mapped as occurring at the township level. No priority habitats besides the wetlands as shown by the NWI were mapped.

3.6 Federally Threatened and Endangered Species

Listed Threatened and Endangered (T & E) species under the ESA and their critical habitat are managed by the United States Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA). Table 3 summarizes the species listed by USFWS as potentially affected by activities within the study area (USFWS 2024b).

Table 3. Federally listed T&E species with potential to be in and near the study area.

Common Name	Scientific Name	ESA Status	Jurisdiction	Critical Habitat Present
Mammals				
North American Wolverine	<i>Gulo gulo luscus</i>	Threatened	USFWS	No critical habitat designated
Birds				
Marbled Murrelet	<i>Brachyramphus marmoratus</i>	Threatened	USFWS	No
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Threatened	USFWS	No
Fishes				
Bull Trout	<i>Salvelinus confluentus</i>	Threatened	NMFS	No
Dolly Varden	<i>Salvelinus malma</i>	PSAT	NMFS	No critical habitat designated
Insects				
Monarch Butterfly	<i>Danaus plexippus</i>	Candidate	USFWS	No critical habitat designated

Source: U.S. Fish & Wildlife Service (USFWS 2024b) IPaC.

Marine species, including mammals and fishes (and anadromous fishes), are under the jurisdiction of the National Marine Fisheries (NMFS) division of NOAA. A review of the Statewide Washington Integrated Fish Distribution (SWIFD) did not identify any fish-bearing streams within the study area (WDFW 2024d).

3.7 Fish and Wildlife Habitat Conservation Areas

Habitat Conservation Areas (HCA) are those areas identified as being of critical importance to the maintenance of certain fish, wildlife, and/or plant species. Designation of HCAs are identified by USFWS, NMFS, Washington DNR, Washington Natural Heritage Program (NHP), and Skagit County (through their listed habitats and species of local importance) (Skagit County 2024).

Chapter 4. Existing Conditions

On October 22, 2024, Hamer Environmental (Hamer) Scientists completed an assessment of the parcel, easement, and 200 ft surrounding. During the site assessment, five wetlands and one wetland mosaic were observed within the study area. On May 15, 2026, Hamer Environmental Scientists completed an additional site visit to perform a reconnaissance level assessment of the eastern half of the property, outside the more detailed 200 ft study area. During this assessment seven small depressional wetlands were observed onsite. One wetland was also observed on the neighboring property to the south. The offsite portions of wetlands were approximated using LiDAR, visual observations, and aerial imagery. USACE wetland determination data forms were completed with field observations for sampling plots within the parcel boundaries (Appendix C). Wetland categories were determined for wetlands identified within the 200 ft study area using the current Ecology rating system (Hruby & Yahnke 2023) (Appendix D). Wetland buffers were determined for wetlands identified within the 200 ft study area based on the protection standards of County regulations (Table 4, Figure 3, Figure 4, & Appendix A).

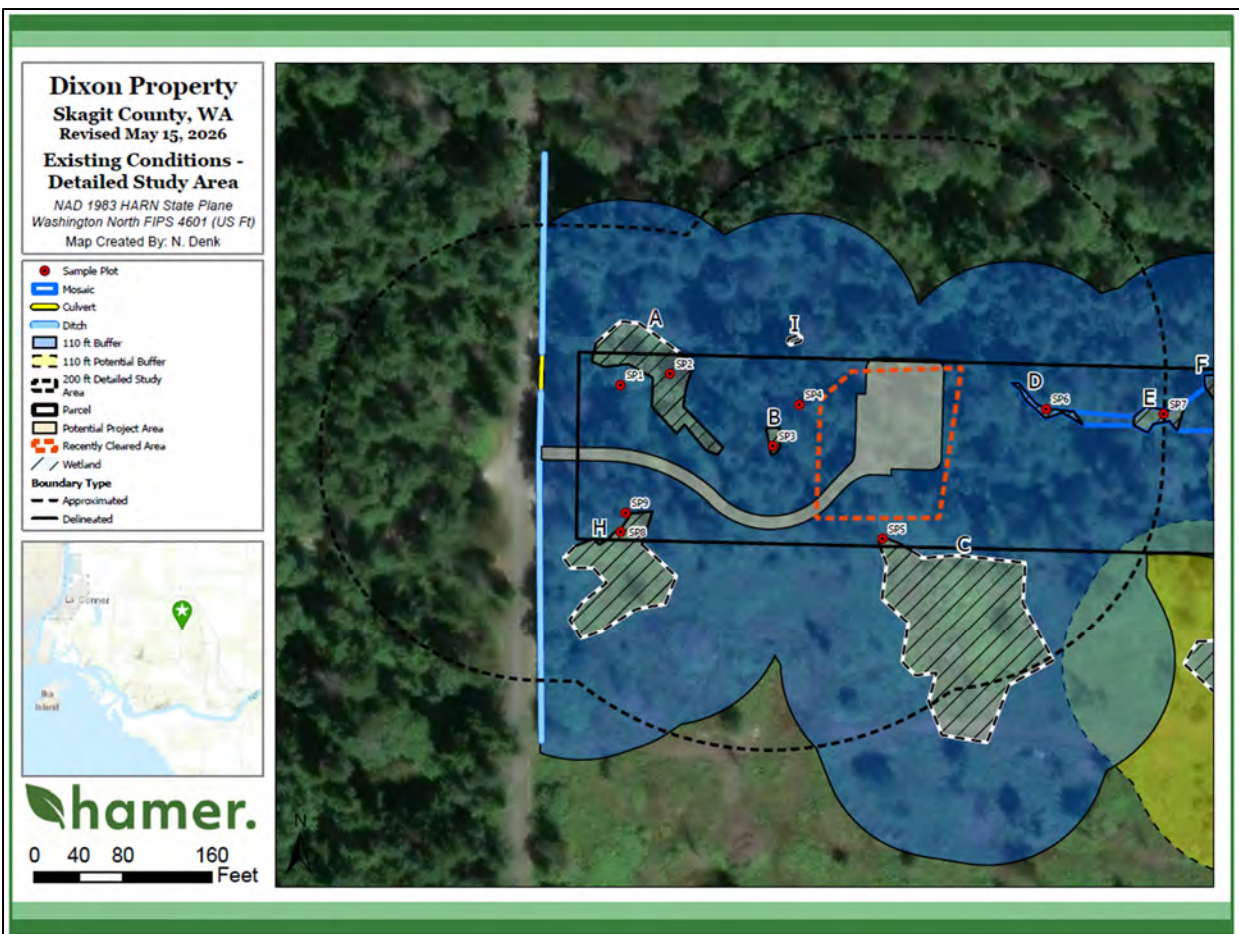


Figure 3. Study area existing conditions overview (see also Appendix A).



Figure 4. Parcel existing conditions overview (see also Appendix A).

Table 4. Summary of critical areas.

Critical Area	Wetland Classification			Size ³ (Acre)	Habitat Score	Land Use Intensity	Proposed Buffer Width (ft) ⁴
	FGDC ¹	HGM	Category ²				
Wetland A	PEM/SS/ FOE	Slope Depressional	III	0.10	7	Moderate	110
Wetland B	PEMC	Depressional	III	0.01	6	Moderate	110
Wetland C	PEM/SS E	Depressional	III	0.39	6	Moderate	110
Wetland Mosaic (D, E, F, G)	PEM/SS/ FOE	Depressional	III	0.07	7	Moderate	110
Wetland H	PEME	Depressional	III	0.13	6	Moderate	110
Wetland I	PEMC	Depressional	III	0.00	6	Moderate	110
Approximated Wetlands	-	Depressional	III	-	-	Moderate	110

¹FGDC 2013 (formerly Cowardin) or NWI Class based on vegetation. PEM/SS/FOE = palustrine emergent/scrub shrub/forested seasonally flooded/saturated. PEMC = palustrine emergent seasonally flooded. PEM/SSE = palustrine emergent/scrub shrub seasonally flooded/saturated. PEME = palustrine emergent seasonally flooded/saturated.

²Wetlands rated according to Ecology (Hruby & Yahnke 2023) and County CAO.

³Boundaries of some wetlands were not delineated to their full extent, wetland size is an estimate based on field observations, aerial imagery, LiDAR, and information provided by the owner of the northeast neighboring parcel.

⁴Standard buffer width applied per SCC. Standard buffers represent moderate-level land use intensity.

4.1 Wetlands

4.1.1 Wetland A

Wetland A is a slope depressional wetland located in the northwest portion of the parcel that continues offsite to the north. Trees observed included red alder (*Alnus rubra*). Shrubs observed were Himalayan blackberry (*Rubus armeniacus*), and salmonberry (*Rubus spectabilis*). Herbs observed were reed canary grass (*Phalaris arundinacea*), common rush (*Juncus effusus*), sword fern (*Polystichum munitum*), trailing blackberry (*Rubus ursinus*), and stinging nettle (*Urtica dioica*). Indicators of hydrology High Water Table (A2) and Saturation (A3) were observed. Indicator of hydric soils Depleted Below Dark Surface (A11) was observed. Per the current Ecology (2023) rating system, the wetland was determined to be Category III. According to the SCC, a Category III wetland with a habitat score between 5-7 under moderate land use impact requires a 110-ft buffer (Figure 5).



Figure 5. Wetland A photographed from the southwest facing northeast (October 22, 2024).

4.1.2 Wetland B

Wetland B is a depressional wetland located in the central western portion of the parcel. Trees observed included red alder. Shrubs observed were Himalayan blackberry and salmonberry. Herbs observed were black bent (*Agrostis gigantea*), slender-foot sedge (*Carex leptopoda*), cleavers (*Galium aparine*), trailing blackberry, bull thistle (*Cirsium vulgare*), and sword fern. Indicators of hydrology High Water Table (A2), Saturation (A3), and Geomorphic Position (D2) were observed. Indicator of hydric soils Depleted Matrix (F3) was observed. Per the current Ecology (2023) rating system, the wetland was determined to be Category III. According to the SCC, a Category III wetland with a habitat score between 5-7 under moderate land use impact requires a 110-ft buffer (Figure 6).



Figure 6. Wetland B photographed from the southeast facing northwest (October 22, 2024).

4.1.3 Wetland C

Wetland C is a depressional wetland located along the southern parcel boundary that continues offsite to the south. Shrubs observed were Himalayan blackberry, salmonberry, and clustering rose (*Rosa pisocarpa*). Herbs observed were fringed willowherb (*Epilobium ciliatum*), herb Robert (*Geranium robertianum*), trailing blackberry, and sword fern. Indicators of hydrology High Water Table (A2) and Saturation (A3) were observed. Indicator of hydric soils Depleted Below Dark Surface (A11) was observed. Per the current Ecology (2023) rating system, the wetland was determined to be Category III. According to the SCC, a Category III wetland with a habitat score between 5-7 under moderate land use impact requires a 110-ft buffer (Figure 7).



Figure 7. Wetland C photographed from the north facing southeast (October 22, 2024).

4.1.4 Wetland Mosaic (D, E, F, G)

Wetlands D, E, F, and G comprise a mosaic of depressional wetlands just east of the study area onsite. Trees observed in the wetland areas were red alder. Shrubs observed were salmonberry. Herbs observed were creeping buttercup (*Ranunculus repens*), lady fern (*Athyrium filix-femina*), piggyback plant, slender-foot sedge, trailing blackberry, and stinging nettle. Indicators of hydrology Surface Water (A1), High Water Table (A2), and Saturation (A3) were observed. Indicator of hydric soils Depleted Below Dark Surface (A11) was observed. Per the current Ecology (2023) rating system, the wetland was determined to be Category III. According to the SCC, a Category III wetland with a habitat score between 5-7 under moderate land use impact requires a 110-ft buffer (Figure 8).



Figure 8. A portion of Wetland Mosaic (D, E, F, & G) (October 22, 2024).

4.1.5 Wetland H

Wetland H is a depressional wetland located along the southern parcel boundary that continues offsite to the south. Shrubs observed were Himalayan blackberry and evergreen blackberry (*Rubus laciniatus*). Herbs observed were fringed willowherb, reed canary grass, trailing blackberry, slough sedge (*Carex obnupta*), common rush (*Juncus effusus*), and velvet grass (*Holcus lanatus*). Indicators of hydrology High Water Table (A2) and Saturation (A3) were observed. Indicator of hydric soils Depleted Matrix (F3) was observed. Per the current Ecology (2023) rating system, the wetland was determined to be Category III. According to the SCC, a Category III wetland with a habitat score between 5-7 under moderate land use impact requires a 110-ft buffer (Figure 9).



Figure 9. Wetland H photographed from the north facing southeast (October 22, 2024).

4.1.6 Wetland I

Wetland I is a depressional wetland located north of the property within the study area. Shrubs observed were salmonberry. Common rush and piggyback plant. Indicator of hydrology Surface Water (A1) was observed. Soil was not examined because the wetland was located offsite. Per the current Ecology (2023) rating system, the wetland was determined to be Category III. According to the SCC, a Category III wetland with a habitat score between 5-7 under moderate land use impact requires a 110-ft buffer.

4.2 Uplands

The property is dominated by upland forest with a canopy of mixed coniferous and deciduous trees. Recent clearing, sometime between 2024 and 2026, occurred in a portion of the upland forest in the western portion of the property. The dominant vegetation is mixed deciduous and coniferous forest, with openings in the canopy along the southern half due to wind toppled trees from the clear cut on the neighboring parcel. The tree canopy is comprised of red alder, western redcedar (*Thuja plicata*), Douglas fir (*Pseudotsuga menziesii*), and bigleaf maple (*Acer macrophyllum*). Shrubs present are Himalayan blackberry, snowberry (*Symphoricarpos albus*), salal (*Gaultheria shallon*), Oregon grape (*Mahonia nervosa*), osoberry (*Oemleria cerasiformis*), vine maple (*Acer circinatum*) beaked hazel (*Corylus cornuta*), oceanspray (*Holodiscus discolor*), and evergreen blackberry. Herbaceous species present are hairy cat's ear (*Hypochaeris radicata*), dandelion (*Taraxacum officinale*), creeping buttercup, black bent, trailing blackberry,

and herb Robert. Figure 10 is an overview of upland forest conditions within the site and XXX is an overview of the recent clearing.



Figure 10. Upland forest conditions (October 22, 2024).



Figure 11. Cleared upland forest conditions (May 15, 2026).

Chapter 5. Functions & Values

5.1 Functions Provided by Wetlands and Buffers

Wetlands A, B, C, H, I and Mosaic D (D, E, F, G) all contain moderate water quality and hydrologic function with seasonal inundation and saturation. Sediment control and pollutant trapping functions vary and are likely low to moderate given that the wetlands have some areas of dense herbaceous/ shrub vegetation that could slow flood waters and collect sediment. The wetlands provide moderate habitat function due to the lack of vegetation species diversity, structures available to wildlife, and disturbance screening. Some birds, mammals, and amphibians may utilize the wetlands for short periods for food or other resources.

The buffer area where the project is proposed provides moderate protection of wetland functions. The presence of trees and shrubs in the buffer increase infiltration of runoff, thus reducing the amount of upgradient runoff that reaches the wetlands. The trees and shrubs in the buffer provide shelter and food for wildlife but also provide some visual and auditory disturbance screening from the nearby road and residences.

5.2 Functional Assessment

The functions of the existing conditions onsite were evaluated based on best professional judgment, ecological knowledge of the site, aerial images, and the SCC. The function of all wetland's buffers will be impacted by the proposed project. Clearing vegetation and adding gravel fill to the construct the access drive within the buffer will impact existing runoff infiltration and habitat functions. The project will utilize compensatory mitigation measures to ensure no net loss of buffer functions identified in this section. See Chapter 6 for details on compensation offered.

Chapter 6. Mitigation Sequencing Analysis

The mitigation sequencing process is a series of steps that are required to be followed to avoid and minimize impacts to critical areas and their buffers wherever practicable. Mitigation shall ensure no loss of critical area function or values. An explanation of these steps can be found in the General Mitigation Requirements (SCC 14.24.080(5)). The following analysis of the mitigation sequencing steps was completed for the proposed project. The proposed mitigation plan should provide equivalent or greater critical area functions and adhere to a comprehensive mitigation monitoring program.

6.1 Mitigation Sequence

6.1.1 Avoiding and Minimizing the Impact

The proposed project includes the installation of a gravel access drive from Valentine Rd to the subject parcel, where a shop will be installed. To avoid impacts on the existing critical areas, the project has been designed to avoid direct wetland impacts and to minimize buffer impacts by placing the access and shop as far away from the wetlands as feasible. The proposed driveway has also been designed to avoid the 50 percent buffer reduction boundary in all feasible areas. The 50 percent reduction boundary was unavoidable at the westernmost portion of the parcel in order to access the property. The proposed driveway is the minimum required width (12 ft) to reduce the footprint to the greatest extent possible. As the entire property is completely encumbered by buffer, avoiding buffer impacts completely is not possible. Multiple locations for the shop were assessed, but only one location allowed for the proposed shop to be constructed in the outer 50 percent of the wetland buffers (Figure 12).



Figure 12. Proposed shop location alternatives analysis.

Any required future clearing or grading will be limited to the area necessary to construct the project. During construction, high-visibility silt fencing will be placed between the boundaries of construction and the wetlands, parallel to the topographical contour lines. Other BMPs should be used to control construction stormwater runoff. Exposed soils should be covered when not in use and revegetated with native species as soon as possible. Figure 12 shows a detailed mapping of the proposed impacts (Appendix E).

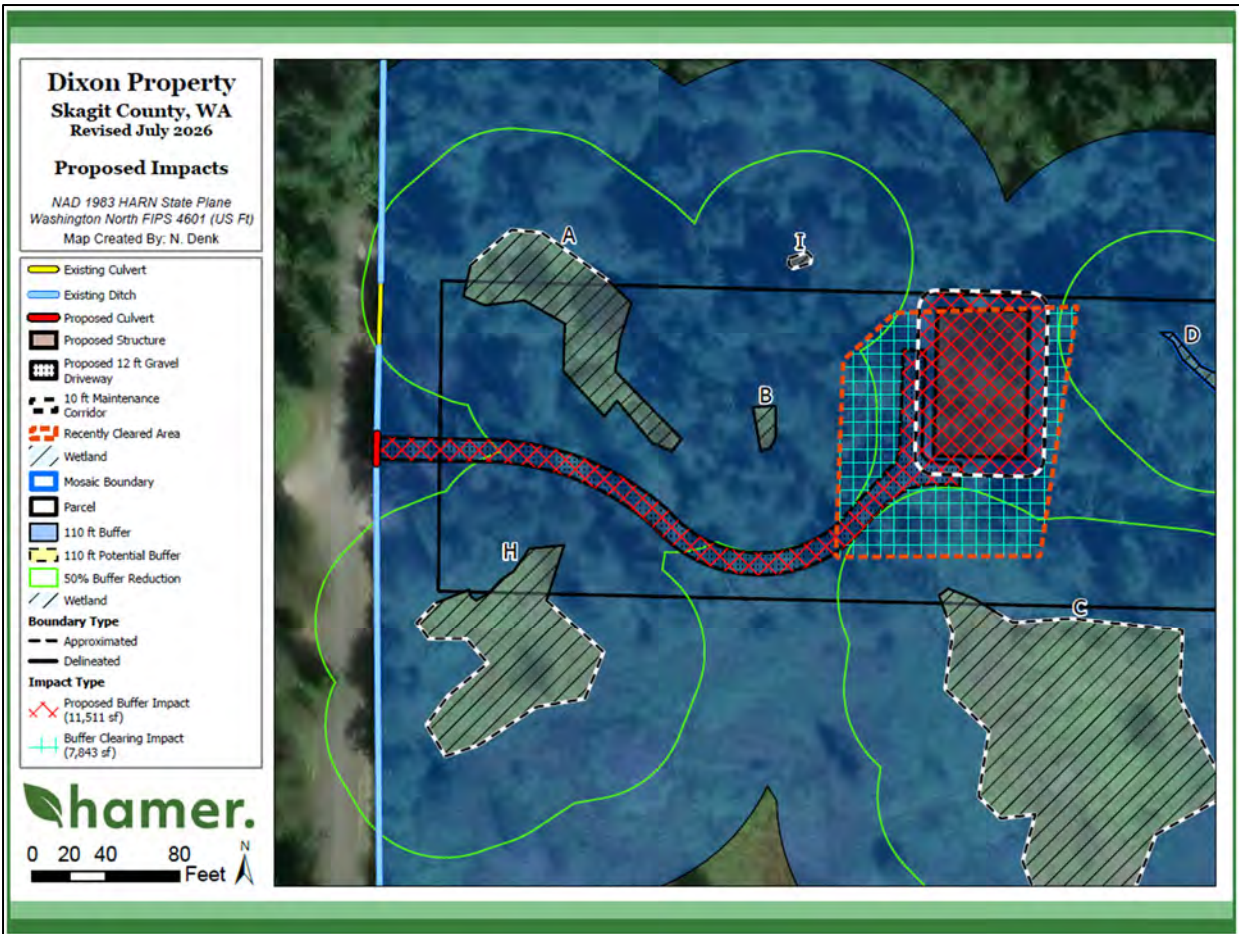


Figure 13. Proposed impacts map (Appendix F).

6.1.2 Rectification

Prior to critical areas permit issuance, clearing occurred onsite between 2024 and 2026. The clearing occurred within the approximate area of the proposed shop and turnaround. Any cleared area beyond the proposed project boundary shall be restored to its condition prior to clearing via replanting native woody vegetation. Any additional temporary impacts resulting from construction within the buffer will be restored to the condition prior to impact via planting and/or regrading. No areas of temporary impact are anticipated at this time.

6.1.3 Reduction & Elimination

Over the life of the project, impacts to the buffer shall be reduced by directing any installed lighting away from the wetlands, installing fencing around the 10 ft maintenance corridor to discourage human intrusion, and avoiding use of chemical lawn or garden fertilizers. The proposed enhancement outside the area of impact will mature over time to provide habitat and disturbance screening, therefore reducing the impact to the buffer function as a whole. Due to the permanent nature of the project, completely eliminating the impact over time is not possible.

6.1.4 Compensation

There are 11,511 sf of buffer impacts proposed for the project in addition to the 7,843 sf of buffer clearing impact around the proposed project. To mitigate the existing and proposed impacts, a combination of 3,184 sf of wetland enhancement (1:1), 16,669 sf of buffer enhancement (2:1),

and 7,843 sf of buffer restoration (1:1) is proposed. A greater than 1:1 compensation ratio is proposed for buffer enhancement due to the existing native canopy cover (Table 5, Figure 14, & Appendix E).

The westernmost portion of the parcel and the southwest edges of the parcel were selected for enhancement due to the presence of nonnative and invasive species or sparse cover. The remainder of the area surrounding the proposed project is primarily vegetated with native species, except the recently cleared portions. The area between the proposed enhancement and the proposed project, surrounding Wetland B, features native canopy cover and a dense layer of salal. The portion of Wetland A excluded from enhancement is already vegetated with native species and is well shaded by the existing coniferous canopy cover. The area along the western property boundary that is excluded from the proposed enhancement is a hummock vegetated with native species. Enhancement is proposed in areas that will increase screening and protection for Wetlands A, C, and H over time.

Table 5. Summary of impacts & mitigation recommendations

Impact		Mitigation			
Impact Type	Area (sf)	Compensation Type	Area (sf)	Ratio	Credit
Permanent Buffer	11,511	Buffer Enhance	16,669	2 to 1	8,334
		Wetland Enhance	3,184	1 to 1	3,184
		Total Enhancement Credit:			11,518
Temporary Buffer	7,843	Buffer Restore	7,843	1 to 1	7,843
Total Impact:	19,354	Total Restoration Credit:			7,843

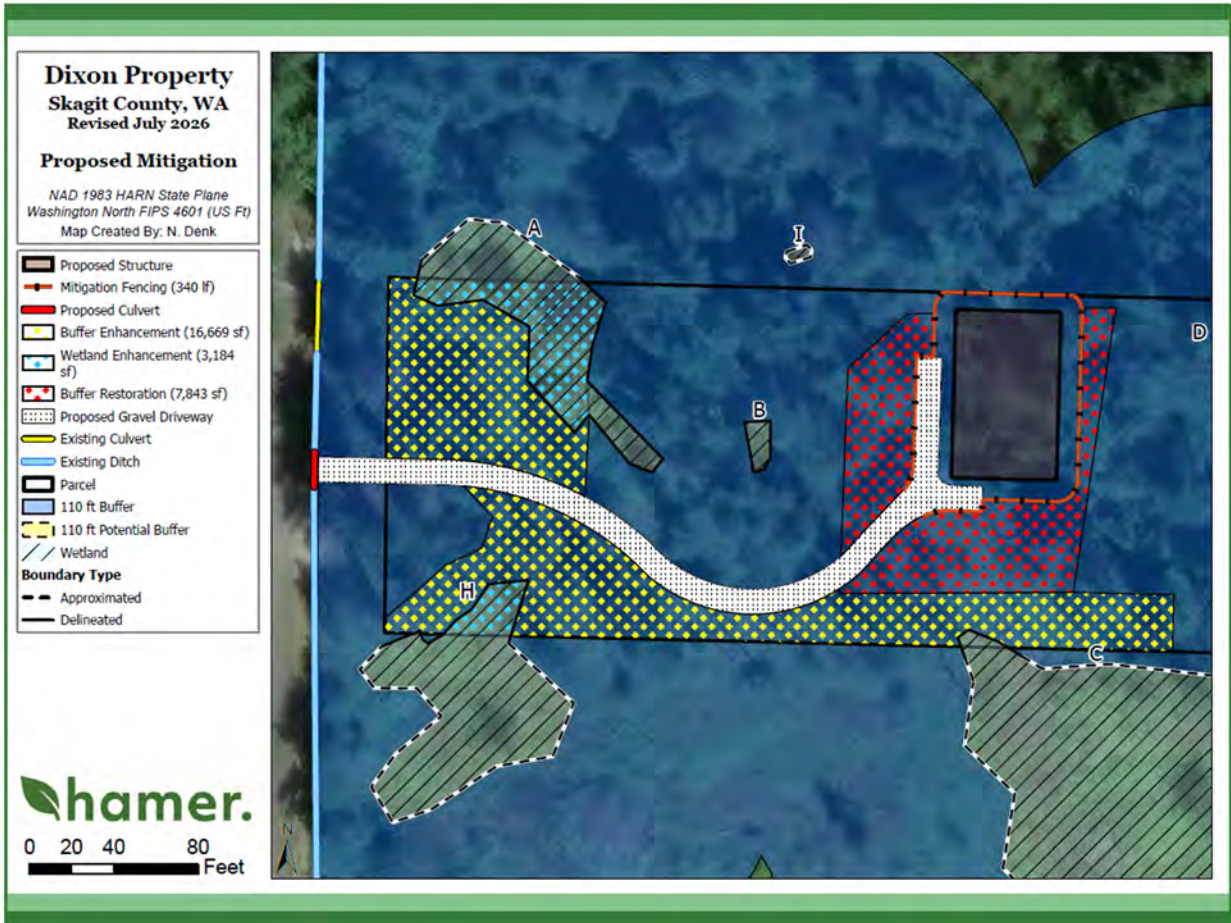


Figure 14. Proposed mitigation map (Appendix E).

Chapter 7. Mitigation Installation

7.1 Site Preparation

Once the mitigation plan has been approved and all relevant permits are obtained, the implementation of mitigation planting should follow the approved site design and construction specifications. The proposed project location should be verified from existing records and field surveys to ensure that the mitigation areas are avoided during construction. In addition, the project should avoid disturbance to existing vegetation located outside of the limits of clearing/grading.

Weed control measures should be conducted prior to plant installation. All non-native vegetation, including existing grass species, should be removed from the mitigation site prior to planting and throughout the maintenance period of the mitigation site. Non-native vegetation removal should be done by hand pulling/cutting or motorized cutting. Pesticide use shall not be permitted without the approval of a qualified consultant. Any existing native vegetation within the planting areas should be retained.

7.2 Recommended Plant Species and Installation

Hamer recommends that all plant species and materials used at the mitigation site should be acquired from local or nearby sources in the Puget Sound lowlands and obtained from a reputable native plant nursery. For a list of plant species recommended for the site, see Table 6, Table 7, and Table 8 below. Note that the quantities of individual species may change with the approval of a qualified consultant depending on nursery availability.

Site installation will consist of installing plants, plant protective devices (as needed), and applying mulch. Installation should not be initiated until the mitigation site is prepared in accordance with this mitigation plan and all requirements made by the County or other jurisdictional authority have been completed. The recommended plant species and quantities should follow approved planting specifications, including watering and planting. Specific attention should be paid to hydrologic, soil, and shade conditions that can contribute to the survival and proliferation of the plantings. The plant species list is based on observed native vegetation in the local area.

Table 6. Recommended species list for buffer enhancement (16,669 sf).

Common Name	Scientific Name	Size	Spacing (ft on center)	Recommended Quantity
Trees				
Douglas-Fir	<i>Pseudotsuga menziesii</i>	1-gal	16 ft	25
Sitka Spruce	<i>Picea sitchensis</i>	1-gal	16 ft	20
Western Hemlock	<i>Tsuga heterophylla</i>	1-gal	16 ft	20
Subtotal:				65
Shrubs				
Thimbleberry	<i>Rubus parviflorus</i>	1-gal	8 ft	65
Nootka Rose	<i>Rosa nootkana</i>	1-gal	8 ft	65
Common Snowberry	<i>Symphoricarpos albus</i>	1-gal	8 ft	65
Red Elderberry	<i>Sambucus racemosa</i>	1-gal	8 ft	65
Subtotal:				260
TOTAL:				325

Notes: 1-gal = 1-gallon container

¹Plant densities were calculated using professional and the Project Design tool from Fourth Corner Nurseries.

Table 7. Recommended species list for wetland enhancement (3,184 sf).

Common Name	Scientific Name	Size	Spacing (ft on center)	Recommended Quantity
Shrubs				
Red Osier Dogwood	<i>Cornus sericea</i>	Stake	4 ft	40
Black Twinberry	<i>Lonicera involucrata</i>	1-gal	4 ft	40
Nootka Rose	<i>Rosa nootkana</i>	1-gal	4 ft	40
Douglas Spirea	<i>Spiraea douglasii</i>	1-gal	4 ft	40
Pacific Ninebark	<i>Physocarpus capitatus</i>	1-gal	4 ft	40
Subtotal:				200
Groundcover				
Piggyback Plant	<i>Tolmiea menziesii</i>	1-gal	2 ft	75
Lady Fern	<i>Athyrium filix-femina</i>	1-gal	2 ft	75
Slough Sedge	<i>Carex obnupta</i>	1-gal	2 ft	75
Subtotal:				225
TOTAL:				425

Notes: 1-gal = 1-gallon container

¹Plant densities were calculated using professional opinion in conjunction with the Project Design tool from Fourth Corner Nurseries.

Table 8. Recommended species list for buffer restoration (7,843 sf).

Common Name	Scientific Name	Size	Spacing (ft on center)	Recommended Quantity
Trees				
Douglas-Fir	<i>Pseudotsuga menziesii</i>	1-gal	10 ft	20
Sitka Spruce	<i>Picea sitchensis</i>	1-gal	10 ft	18
Western Hemlock	<i>Tsuga heterophylla</i>	1-gal	10 ft	20
Bigleaf Maple	<i>Acer macrophyllum</i>	1-gal	10 ft	20
Subtotal:				78
Shrubs				
Thimbleberry	<i>Rubus parviflorus</i>	1-gal	5 ft	62
Beaked Hazel	<i>Corylus cornuta</i>	1-gal	5 ft	62
Common Snowberry	<i>Symphoricarpos albus</i>	1-gal	5 ft	65
Red Elderberry	<i>Sambucus racemosa</i>	1-gal	5 ft	62
Vine Maple	<i>Acer circinatum</i>	1-gal	5 ft	62
Subtotal:				313
TOTAL:				391

Notes: 1-gal = 1-gallon container

¹Plant densities were calculated using professional opinion in conjunction with the Project Design tool from Fourth Corner Nurseries.

7.2.1 Planting locations

Using the tables above as a guide, plants should be installed in areas best suited to promote the growth and function of a native habitat area. Shrub and groundcover species should be installed in clusters of three to five that mimic natural plant distribution. Groundcover species clusters should be scattered throughout the mitigation areas in patches, while shrubs clusters should be evenly spaced throughout the sites. Tree species shall be evenly distributed throughout their corresponding planting areas. Planting plan locations may vary based on site conditions; however, the total number of plants installed, and the enhanced area should not fall below the suggested quantities without approval from a qualified consultant or the county.

7.2.2 Installation of Plants

Mitigation installation should begin in the spring or fall following the approval of this mitigation plan by County staff. Planting should generally take place between February 15th and April 15th, between September 15th and October 31st, or when the nursery providing the materials recommends. Planting outside of these windows can substantially reduce survival rates. Flagging should be attached to all trees and shrubs planted in order to more easily identify during monitoring. Flagging should be consistent across the entire site and should be attached to a lateral branch when possible. Flagging should be attached by creating a loop on one end and feeding both tails of the flagging through that loop as to not girdle or otherwise damage the tree during growth. Plants grown in containers are typically more expensive than bare root stock but are easier to transplant and have higher survival rates. We recommend these general guidelines:

- Water all container stock and bare root plants the day before planting.
- Install according to the location recommendations provided in this report.
- Follow the appropriate spacing guidelines in Table 6 and Table 7.
- Dig holes deep enough and wide enough to allow room for roots to spread.
- Soil augmentation may be necessary to properly establish the installed plants in the heavy clay rich soils.
- Install plantings with downward facing root mass and avoid “J-planting” or horizontal root arrangements.
- Take care to install bare root fragments in an upright position so they can successfully sprout next season.
- Apply water to the hole prior to installing the plant.
- Water plant after installation and tamp down the soil to close any air holes.
- Install stakes by driving stake 50-75% of the length into the soil and trimming remaining stake down to three lateral buds.
- Use a slurry of mixed soil and water to fill any gaps between installed stakes and the soil.

7.2.3 Mulch

Mulch installation helps prevent the growth of competitive species, retain moisture, enhance overall soil health, and reduce mortality. A 1 ft wide collar of mulch shall be placed around each plant within the wetland and buffer after installation. Mulch collar should be approximately 3 inches in depth. After installation it should be ensured that a 1–2-inch gap between the mulch and the stem of the installed plant is present to prevent rot/ improve survival. Mulch shall be composed of untreated or coated wood chips or assorted wood fibers. Mulch shall be free of live weeds, non-native seeds, and/or invasive/nonnative plant stock. Sheet mulch is specifically not called for in this plan to avoid damaging the existing native herbs in the planting areas.

7.2.4 Fencing

Protective fencing (approximately 340 lf) shall be installed along the edge of the proposed building's maintenance corridor to discourage human intrusion and further disturbance of the enhancement areas. Fence should be a split rail design made of non-toxic natural materials, such as untreated wood. It should be at least 3 ft high and should not exclude wildlife from the protected areas.

7.2.5 As-Built Report

The applicant shall submit, or arrange to have submitted, an as-built report within 30 days of the

completion of the implementation of this mitigation plan to the Skagit County Planning and Development Department. The as-built will contain at a minimum: photographs of the installed mitigation from photo point locations, a map showing all activities associated with this mitigation plan, a plant plot map showing specific locations of the installed individual plant species, and a schedule of planned activities that include procedures, materials, and equipment to be used for maintenance for the first monitoring year. The five-year monitoring period will commence only after the County has received the as-built report.

Chapter 8. Mitigation Monitoring & Maintenance

8.1 Performance Standards

Mitigation performance standards are used to determine the relative success of the mitigation. Failure to meet these general minimum standards throughout the monitoring period would result in implementing contingency measures and maintenance activities provided in Chapter 9.

Hamer recommends the following performance standards for the mitigation site:

- The Protected Critical Area (PCA) shall be recorded with the County Auditor in accordance with the procedures established under SCC 14.24.090 prior to submittal of building or land disturbance applications.
- Non-native species should be removed and managed so that their aerial cover is below 10 percent throughout the monitoring period.
- Planted shrub species should have a survival rate of at least 80 percent for the duration of the 5-year monitoring period.
 - o If native vegetation volunteering results in the total native tree and shrub cover exceeding 80 percent, the mitigation would still be considered successful. A percent cover calculation would be conducted before plant installation to create a baseline for determining total plant cover success.
- The groundcover layer should have an average areal cover of 50 percent throughout the mitigation area by the completion of the 5-year monitoring period.

8.2 Maintenance & Monitoring Schedule

The mitigation area is to be maintained and monitored for five years following the planting installation. After the as-built report has been submitted to the County, monitoring reports will be required for the subsequent years until the 5-year monitoring period has been completed and the site approved by the county. The monitoring reports are to be submitted by December 31st of each monitoring year (Table 9).

Table 9. Mitigation monitoring schedule.

Year	Task	Date
Year 0	Mitigation Installation	Between September and April
	Preparation of As-Built Report	Within 30 days of Installation
	Legal Protection of Site	Prior to Submittal of 1 st Monitoring Report
Year 1	Monitoring Activities	Early Fall 1 st year
	Mitigation Maintenance (As described in Mitigation Plan)	Recommended Monthly During Growing Season (March 15 – October 15)
	Dry season Watering (As Needed)	Summer (June, July, August, September)
	Year 1 monitoring Report	December 31
Year 2	Monitoring Activities	Early Fall 2 nd year
	Mitigation Maintenance (Specifics described in Year 1 Monitoring Report)	Recommended Monthly During Growing Season (March 15 – October 15)
	Dry season Watering (As Needed)	Summer (June, July, August, September)
	Year 2 Monitoring Report	December 31
Year 3	Monitoring Activities	Early Fall 3 rd year
	Mitigation Maintenance (Specifics described in Year 2 Monitoring Report)	Recommended Monthly During Growing Season (March 15 – October 15)
	Year 3 Monitoring Report	December 31 / 3 rd year
Year 4	Monitoring Activities	Early Fall 4 th year
	Mitigation Maintenance (Specifics described in Year 3 Monitoring Report)	Spring/Summer 4 th year
	Year 4 Monitoring Report	December 31
Year 5	Monitoring Activities	Early Fall 5 th year
	Mitigation Maintenance (Specifics described in Year 4 Monitoring Report)	Spring/Summer 5 th year
	Final Monitoring Report	December 31
	Agency Confirmation of Mitigation Monitoring Completion	To be determined
	Contingency Measures (if required)	To be determined

8.3 Monitoring Reports

At the end of each monitoring year (Years 1 through 5) an annual report should be prepared by a qualified consultant and submitted to the County. The specific monitoring schedule would be determined by the date of implementation, the submittal of the mitigation As-Built Report, and the acquisition of the installation completion letter from the County. The Year 1 monitoring report would be submitted by December 31 of the first monitoring year, contingent on County approval. Annual monitoring reports would provide an assessment of the mitigation site as it relates to the performance standards and an evaluation of progress toward completion of the goals and objectives contained in this mitigation plan. Each monitoring report would contain, at a minimum:

- The survival rate and/or replacement of planted tree and shrub species.
- Areal cover of planted herbaceous species.
- Percent cover of native vegetation, native plant recruitment, and average shrub height.
- An inventory of plant species (both planted and volunteer).
- A list of names, titles, and companies of any and all persons who participated in the data collection, compilation, and preparation of the monitoring report.
- A mitigation site map identifying mitigation areas, data collection locations and/or transects, photo point locations, and any other pertinent information.
- Labeled photographs from each of the photo point locations.
- Copies of completed field data sheets.
- An analysis of all qualitative and quantitative monitoring data.

8.4 Monitoring Methods

8.4.1 Plant Survival Sampling Technique

An inventory of all installed plants will be conducted at the end of each growing season of the corresponding monitoring year. The total number of dead, missing, or declining plant stock will be recorded and subtracted from the total number of plants installed. The percentage of surviving plants will be calculated to determine whether the stated performance standards are being met. If performance standards are not met for any monitoring year, the Applicant shall be responsible for additional plantings to meet or exceed performance standard values, unless total percent coverage (installed plants plus natural native recruits) meets or exceeds these criteria.

8.4.2 Native Plant Coverage Sampling Techniques

Due to the small size of the mitigation site, the entire area will be used to evaluate native plant cover. A census shall be taken of the type and number of shrub species on site and the percent cover occupied by those species within the plot. Photographs shall also be taken to document the change in vegetation structure of the site over time. The first year's monitoring data should be collected prior to the removal of the noxious species, and after the removal of the noxious species and the installation of mitigation plants. The data collected at this time will provide a baseline for comparison to all future percent cover data collected from these sites.

Subsequent data will be collected in the exact same way and at the same time of year (+/- two weeks) as the baseline data. The total percent cover for each vegetative layer (herbaceous, shrub, and tree layers) shall be compared against the previous years' data and baseline coverage. This comparison of data will be used to determine if there is a percent increase, decrease, or no change in the total native cover for each vegetative layer. The average percent change of the previous year and the start year will be calculated to determine if the stated

performance standards for native shrub and herbaceous plant cover are being met.

8.4.3 Photo Documentation

Permanent stations for photo documentation will be established during the mitigation installation period. Each photo point location will be mapped, and the photo point direction will be recorded. Photographs from each photo point location will be included in each submitted monitoring report.

8.4.4 Monitoring Inspection Checklist

The site should be inspected at least once a year in the early fall (September) to evaluate the mitigation project. The following inspection checklist will be used to document the re-vegetation progress:

- Plants and plant communities will be evaluated using monitoring methods listed above.
- If plants are determined to be dead, dying, or missing, they will be replaced with the same species or another native species that may be demonstrating success in the mitigation area.
- Photos will be taken at predetermined photo points.

8.5 Maintenance

Maintenance activities shall be conducted throughout the mitigation area to ensure the success of the mitigation site. Maintenance activities should also occur continuously throughout the five-year monitoring period. Maintenance personnel, if contracted, should be informed of the ultimate goals and objectives of the approved mitigation plan. Individuals conducting maintenance activities should also report existing or potential problems that may be observed.

Maintenance shall be conducted using the following guidelines as the minimum amount of care necessary to ensure mitigation success. Additional invasive and noxious vegetation management throughout the year is recommended. A summary of the maintenance task is provided in Table 10 below.

Table 10. Summary of maintenance tasks.

Activity	Schedule	Notes
Replace all dead and declining vegetation	One year following completion of the mitigation implementation, and then as specified in the Mitigation Monitoring Reports.	The Applicant is responsible for replacing all dead or unhealthy plants unless a contractor has been hired to conduct the maintenance activities. Then the responsibility shall be determined by whatever contractual agreement is made with the landowner.
Invasive and noxious species control measures	No less than twice per year during the growing season. Monthly is recommended.	The Applicant is responsible for conducting Noxious Species control measures. The Applicant may choose to hire a landscape contractor to do this work. Herbicide shall not be used without the consultation of a qualified consultant.
Water newly installed plants	As needed with a minimum of one inch of water for every two weeks during the dry season (generally July and August). This should only be necessary for the first two years after installation has occurred.	The Applicant shall be responsible for ensuring that an appropriate watering schedule is implemented. The Applicant may choose to hire a landscape contractor to do this work.
Remove trash from site/repair fencing	As needed.	The applicant shall be responsible for ensuring protection of the site by removing trash and ensuring the boundary of the protected area is marked.

Chapter 9. Mitigation Completion

9.1 Notification of Completion

The applicant shall provide written notification to the County when the monitoring period is complete, and the County approved success criteria have been met. If the mitigation is not considered successful, then the County shall be notified and consulted to approve the implementation of a newly developed contingency plan. Only those areas that fail to meet specific performance standards will require additional monitoring if additional monitoring is deemed necessary. This process will continue until all performance standards are met or until the County determines that mitigation has succeeded sufficiently.

The applicant shall not be held responsible or accountable for any natural occurrence that significantly damages or destroys the mitigation planting, provided the mitigation planting was documented to have been proceeding towards meeting the stated performance standards. In the event the site is damaged or destroyed by a natural occurrence, reconstruction and replanting will not be required. Natural occurrences that could cause significant damage include, but are not limited to, considerable windstorm events, flooding, naturally caused fire, or other destructive natural forces. In the event that a natural occurrence does damage or destroy the mitigation area but fares significantly worse than the surrounding natural communities in the same circumstance, the mitigation site would then be considered not to have sufficiently established itself, and reconstruction, replanting, and monitoring should continue.

9.2 County Confirmation

Following the submittal of the final year monitoring report and notification of the completion of the mitigation period, the County will provide written confirmation releasing the applicant of any and all mitigation and monitoring responsibilities associated with this plan. While it is the responsibility of the Applicant to ensure that the mitigation is successful, County staff must review annual reports in a timely fashion and provide comments throughout the maintenance and monitoring period so that any part of the mitigation project that is deemed insufficient can be addressed prior to the anticipated end of the mitigation maintenance and monitoring period.

9.3 Contingency Plan and Measures

The contingency measures are intended to state the nature of the actions that will take place in the event that one or more of the performance standards are not being met for any year of the maintenance and monitoring period. In the event that any or all performance standards are not being met, a qualified professional must prepare an analysis of the cause(s) of the failure, and if deemed necessary by the County, develop a plan for remedial action for approval by County staff. Maintenance and monitoring must continue beyond the original five-year plan until the County gives final approval to release the Applicant of any and all remaining mitigation responsibilities.

If deemed necessary, a contingency plan will be developed to provide remediation of any and all aspects of the mitigation that prevent the success and/or final approval for the completion of the mitigation period. A qualified professional will develop a contingency plan only if it is determined that the performance standards cannot be achieved through normal routine maintenance. Any contingency plan that is developed will replace the corresponding components of the approved mitigation plan and must be approved by the County prior to implementation.

9.3.1 Contingency Measures

If performance standards are not met within the maintenance and monitoring period, the following actions will take place:

1. If the survival rate of the total planted shrubs becomes less than 80 percent during the maintenance and monitoring period for any individual species, then additional planting will take place to replace the same number and species of non-surviving species unless it is determined that a different native species will have better results.
2. If non-native species occupies more than 10 percent of the total vegetative cover, then additional weed control measures must be used. Mechanical weed methods, rather than chemical weed control methods, should be prioritized. Herbicide is not to be used without consultation with a qualified consultant.
3. If the average overall native herbaceous cover is below 50 percent, then an additional planting will take place to replace and increase the coverage and species of non-surviving species, unless it is determined that a different native species will have better results.
4. If additional mitigation measures are needed to meet the performance standards stated in this report, a Hamer scientist or other qualified consultant will monitor any and all efforts to reestablish the mitigation area to meet or exceed the performance standards stated in this report. A specific contingency plan may need to be developed in the event that any or all performance standards have not been met by the end of the stated maintenance and monitoring period.

9.3.2 Financial Guarantee

Skagit County may require a financial guarantee in the form of a monetary bond. This bond is to ensure the installation and success of the proposed mitigation plan. The Whatcom County Mitigation Bond Worksheet was used to calculate the required bond as Skagit County does not have a similar document available. The required bond amount has been estimated at a value of \$29,757.36 (Appendix F).

References

- Cowardin, L.M., V. Carter, F.C. Golet, and R.T. LaRoe. (1979). *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service, FWS/OBS079/31, 103 pp.
- Environmental Laboratory. (1987). Corps of Engineers wetland delineation manual. Technical Report Y-87-1, Environmental Laboratory, Department of the Army, Waterways Experiment Station, Vicksburg, MI.
- Federal Emergency Management Agency (FEMA). (2013). *Floodplain Habitat Assessment and Mitigation, Regional Guidance for the Puget Sound Basin*. Federal Emergency Management Agency (FEMA)- Region 10. August 2013.
- Federal Geographic Data Committee (FGDC). (2013). *Classification of wetlands and deepwater habitats of the United States*. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.
- Environmental Laboratory. (1987). Corps of Engineers wetland delineation manual. Technical Report Y-87-1, Environmental Laboratory, Department of the Army, Waterways Experiment Station, Vicksburg, MI.
- Google (n.d). (State of Washington Maps). Retrieved from 2024, Google Earth.
- Hruby, T. (2014). Washington State Wetland Rating System for Western Washington: 2014 Update. (Publication #14-06-029). Olympia, WA: Washington Department of Ecology.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 wetland ratings*. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X.
- NOAA Fisheries. (2024). National NMFS ESA Critical Habitat Mapper. Retrieved from [National NMFS ESA Critical Habitat Mapper \(arcgis.com\)](https://nationalnmfsesa.com/)
- Skagit County. Skagit County Critical Areas Map. 2025a. Accessed online at: <https://www.skagitcounty.net/departments/gis/gallery/main.htm>
- Skagit County. 2025b. Code of Ordinances Skagit County, Washington Codified Ordinance 020240010, passed December 16, 2024. Accessed online at: <https://www.codepublishing.com/WA/SkagitCounty/#!/SkagitCounty14/SkagitCounty14.html>
- Skagit County. 2025c. iMap. Accessed online at: <https://www.skagitcounty.net/Maps/iMap/?mapjs=parcel>
- USACE. (2014). United States Army Corps of Engineers. Final Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountain, Valley, and Coast Region, Version 2.0, ed. J.S. Wakely, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-03-13. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- United States Army Corps of Engineers (USACE). (2016). *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-perennial Streams in the Western Mountains, Valleys and Coast Region of the United States*. Mersel and Lichvar 2014. U.S. Army Engineer Research and Development Center.
- USACE. (2020). United States Army Corps of Engineers. National Wetland Plant List, Version 3.5. Accessed online at: [National 2020v1.pdf \(army.mil\)](https://www.usace.army.mil/Portals/0/docs/2020v1.pdf).

- USACE. (2021). United States Army Corps Engineers. Antecedent-Precipitation-Tool (APT), Version 1.09.19.
- [USDA, NRCS] United States Department of Agriculture, Natural Resource Conservation Service. (2018). In cooperation with the National Technical Committee for Hydric Soils. Field indicators of hydric soils in the United States guide for identifying and delineating hydric soils, version 8.2. Washington, D.C.
- USDA, NRCS. (2018). Natural Resources Conservation Service [Internet]. Field Office Technical Guide. US Department of Agriculture. Available at: [Washington | Field Office Technical Guide | NRCS - USDA](#)
- USDA, NRCS. (2024). Soil Survey of Project Area, Washington. U.S. Department of Agriculture, Natural Resource Conservation Service. Accessed online at: <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- U.S. Congress. (2023). Definition of “Waters of the United States.” Codified at 40 CFR 3004 (et seq.). Washington, DC: U.S. Government Printing Office.
- U.S Fish and Wildlife Service (USFWS). (2024) United States Fish and Wildlife Service. 2023. National wetlands inventory in Washington State. Accessed online at: <http://www.fws.gov/wetlands/Data/Mapper.html>.
- U.S Fish and Wildlife Service (USFWS). (2024b). Endangered Species Mapper for project site. Accessed online on at: <https://ecos.fws.gov/ipac/>.
- Washington Department of Ecology (Ecology). (2019). *Stormwater Management Manual for Western Washington*. Publication No. 19-10-021. Accessed online at: <https://fortress.wa.gov/ecy/ezshare/wg/Permits/Flare/2019SWMMWW/2019SWMMWW.htm>
- Washington Department of Ecology (Ecology). (2024). Washington State Department of Ecology. *Water Quality Assessments/TMDLs*. Accessed online at: <https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx>.
- Washington Department of Natural Resources (WDNR). (2024). *Forest Practices Mapping Tool*. Accessed online at: <https://fortress.wa.gov/dnr/protectiongis/fpamt/default.aspx#>.
- Washington Department of Natural Resources (WDNR). (2024b). *Washington Wetlands of High Conservation Value*. Accessed online at: [Rare Plant and Ecosystem Locations | WNHP Data Explorer \(arcgis.com\)](#)
- Washington Department of Fish and Wildlife (WDFW). (2024a). Washington State Department of Fish and Wildlife (WDFW) SalmonScape Maps. Accessed online at: <http://apps.wdfw.wa.gov/salmonscape/map.html#>
- Washington Department of Fish and Wildlife (WDFW). (2024b). *SWIFD, Statewide Washington Integrated Fish Distribution Map*. Accessed online at: [Statewide Washington Integrated Fish Distribution | Statewide Washington Integrated Fish Distribution | Washington State Geospatial Open Data Portal](#)
- Washington Department of Fish and Wildlife (WDFW). (2024c). Fish Passage Map Application. Accessed online at: <https://geodataservices.wdfw.wa.gov/hp/fishpassage/index.html>.
- Washington Department of Fish and Wildlife (WDFW). (2024d). Washington Department of Fish and Wildlife Priority Habitat and Species Report for site. Accessed online at: <http://apps.wdfw.wa.gov/phsontheweb/>.

Appendix A – Existing Conditions Map

Dixon Property

Skagit County, WA

Revised May 15, 2026

Existing Conditions - Detailed Study Area

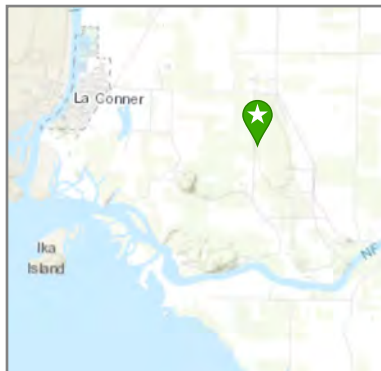
NAD 1983 HARN State Plane
Washington North FIPS 4601 (US Ft)

Map Created By: N. Denk

- Sample Plot
- ▭ Mosaic
- ▭ Culvert
- ▭ Ditch
- ▭ 110 ft Buffer
- ▭ 110 ft Potential Buffer
- ▭ 200 ft Detailed Study Area
- ▭ Parcel
- ▭ Potential Project Area
- ▭ Recently Cleared Area
- ▭ Wetland

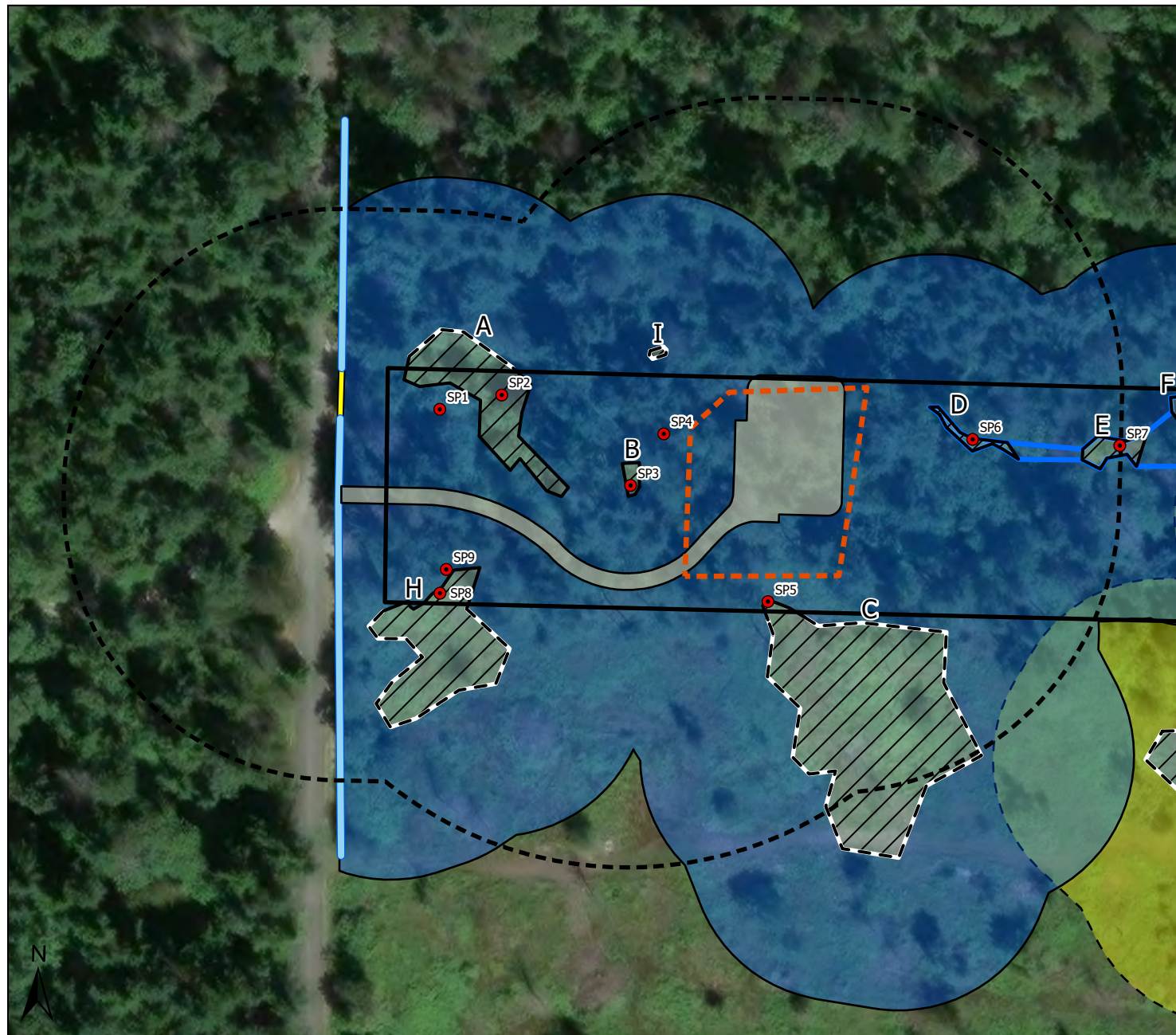
Boundary Type

- Approximated
- Delineated



hamer.

0 40 80 160 Feet



Dixon Property

Skagit County, WA

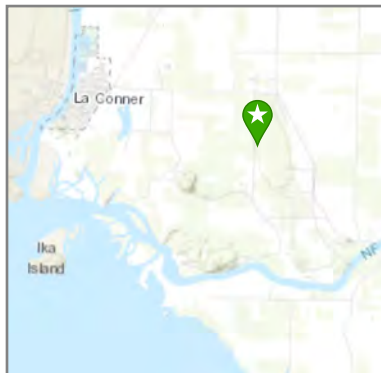
Revised May 15, 2026

Existing Conditions - Parcel

NAD 1983 HARN State Plane
Washington North FIPS 4601 (US Ft)

Map Created By: N. Denk

- Sample Plot
 - ▭ Mosaic
 - ▭ Culvert
 - ▭ Ditch
 - ▭ 110 ft Buffer
 - ▭ Wetland_BufferAssumed
 - ▭ 200 ft Detailed Study Area
 - ▭ Parcel
 - ▭ Potential Project Area
 - ▭ Wetland
- Boundary Type**
- Approximated
 - Delineated
 - ▨ Recently Cleared Area



hamer.

0 70 140 280 Feet



Appendix B – Supplementary Documents



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Skagit County Area, Washington



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface	2
How Soil Surveys Are Made	5
Soil Map	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	11
Map Unit Descriptions.....	11
Skagit County Area, Washington.....	13
17—Bow gravelly loam, 3 to 8 percent slopes.....	13
85—Laconner very gravelly loamy sand, 0 to 8 percent slopes.....	14
References	16

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Skagit County Area, Washington
Survey Area Data: Version 24, Aug 27, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 14, 2022—Sep 1, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
17	Bow gravelly loam, 3 to 8 percent slopes	5.3	90.3%
85	Laconner very gravelly loamy sand, 0 to 8 percent slopes	0.6	9.7%
Totals for Area of Interest		5.9	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Skagit County Area, Washington

17—Bow gravelly loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2htx
Elevation: 50 to 400 feet
Mean annual precipitation: 20 to 40 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 170 to 220 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Bow and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bow

Setting

Landform: Hillslopes, terraces
Parent material: Volcanic ash, glaciolacustrine deposits, and glacial drift

Typical profile

H1 - 0 to 7 inches: gravelly ashy loam
H2 - 7 to 17 inches: very gravelly ashy loam
H3 - 17 to 31 inches: clay loam
H4 - 31 to 60 inches: silty clay

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: F002XA007WA - Puget Lowlands Wet Forest
Forage suitability group: Seasonally Wet Soils (G002XN202WA)
Other vegetative classification: Seasonally Wet Soils (G002XN202WA)
Hydric soil rating: Yes

Minor Components

Bellingham, undrained

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XN102WA)
Hydric soil rating: Yes

85—Laconner very gravelly loamy sand, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2hxb
Elevation: 100 to 2,370 feet
Mean annual precipitation: 22 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 160 to 210 days
Farmland classification: Not prime farmland

Map Unit Composition

Laconner and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Laconner

Setting

Landform: Terraces, hillslopes
Parent material: Glacial drift and volcanic ash

Typical profile

H1 - 0 to 6 inches: very gravelly loamy sand
H2 - 6 to 19 inches: very gravelly loamy sand
H3 - 19 to 38 inches: very gravelly sand
H2 - 38 to 62 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 25 to 40 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 20 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: B
Ecological site: F002XA001WA - Puget Lowlands Dry Forest
Forage suitability group: Droughty Soils (G002XN402WA)
Other vegetative classification: Droughty Soils (G002XN402WA)
Hydric soil rating: No

Minor Components

Bow

Percent of map unit: 5 percent

Landform: Terraces

Other vegetative classification: Seasonally Wet Soils (G002XN202WA)

Hydric soil rating: Yes

Coveland

Percent of map unit: 5 percent

Landform: Terraces

Other vegetative classification: Wet Soils (G002XN102WA)

Hydric soil rating: Yes

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

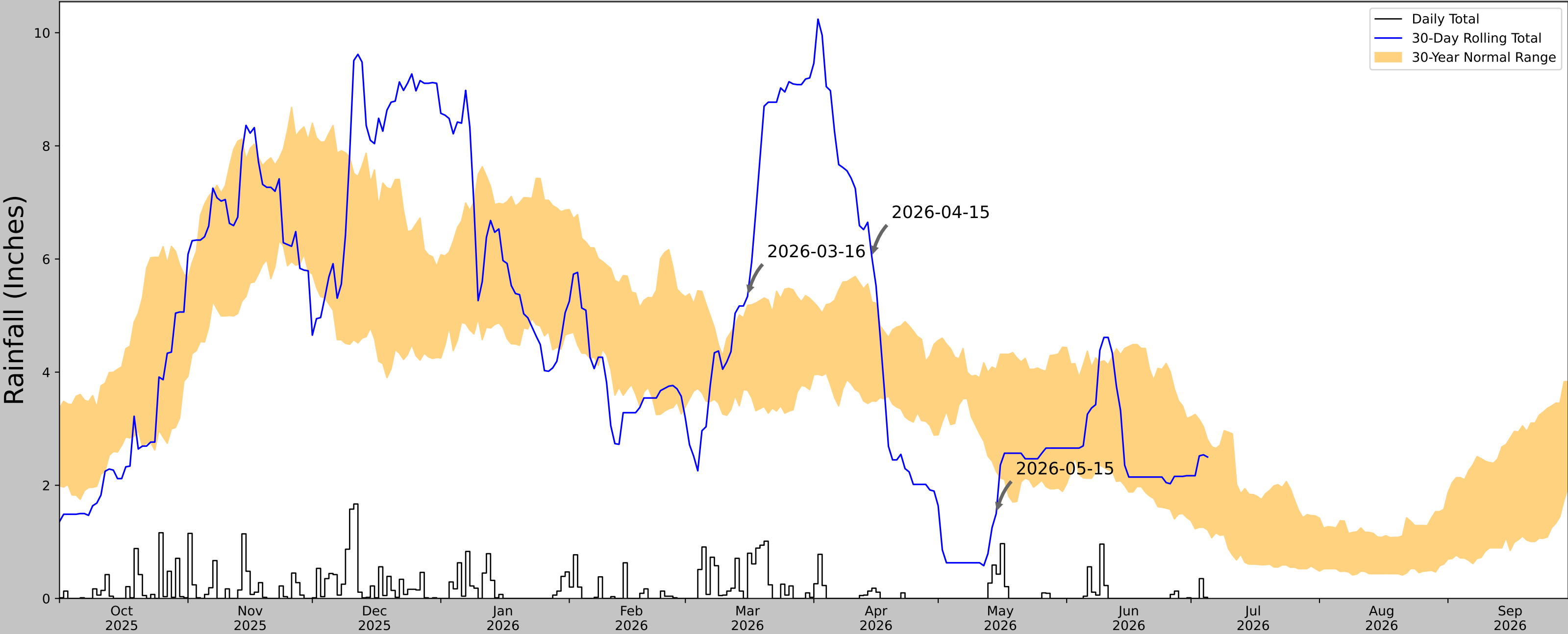
Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	48.38198, -122.44633
Observation Date	2026-05-15
Elevation (ft)	126.568
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-05-15	2.246457	4.051181	1.5	Dry	1	3	3
2026-04-15	3.488583	5.241732	6.031496	Wet	3	2	6
2026-03-16	3.680709	5.182677	5.338583	Wet	3	1	3
Result							Normal Conditions - 12

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
SEDRO-WOOLLEY	48.4961, -122.235	51.837	12.49	74.731	6.554	11108	75
SEDRO-WOOLLEY 1.0 SSE	48.4941, -122.2286	61.024	0.324	9.187	0.149	3	15
SEDRO-WOOLLEY 5.1 E	48.5158, -122.125	73.163	5.216	21.326	2.458	5	0
MOUNT VERNON 0.6 N	48.4297, -122.3148	88.911	5.866	37.074	2.857	1	0
SEDRO-WOOLLEY 5.1 N	48.5816, -122.2358	201.115	5.908	149.278	3.541	26	0
BOW 1.6 SE	48.5438, -122.3757	98.097	7.234	46.26	3.59	21	0
MOUNT VERNON 2.3 E	48.4202, -122.2634	299.869	5.403	248.032	3.771	7	0
MT VERNON 3 WNW	48.4403, -122.3867	14.108	7.947	37.729	3.876	141	0
MOUNT VERNON 0.8 SW	48.413, -122.3249	179.134	7.067	127.297	4.08	10	0
MOUNT VERNON 3.4 W	48.4277, -122.3886	18.045	8.477	33.792	4.101	4	0
MOUNT VERNON 1.1 E	48.4202, -122.2909	392.06	5.836	340.223	4.612	5	0
ANACORTES	48.5119, -122.6136	20.013	17.366	31.824	8.367	21	0
BELLINGHAM 3 SSW	48.7169, -122.5142	32.152	19.886	19.685	9.34	1	0



US Army Corps
of Engineers



ERDC

Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Skagit County, Washington



Local office

Washington Fish And Wildlife Office

☎ (360) 753-9440

📅 (360) 753-9405

510 Desmond Drive Se, Suite 102
Lacey, WA 98503-1263

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
North American Wolverine <i>Gulo gulo luscus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5123	Threatened

Birds

NAME	STATUS
Marbled Murrelet <i>Brachyramphus marmoratus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
Bull Trout <i>Salvelinus confluentus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8212	Threatened
Dolly Varden <i>Salvelinus malma</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1008	PSAT

Insects

NAME	STATUS
------	--------

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below.

Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON

Bald Eagle *Haliaeetus leucocephalus*

Breeds Mar 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Golden Eagle *Aquila chrysaetos*

Breeds Mar 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted

- Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
 - The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (🟡)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

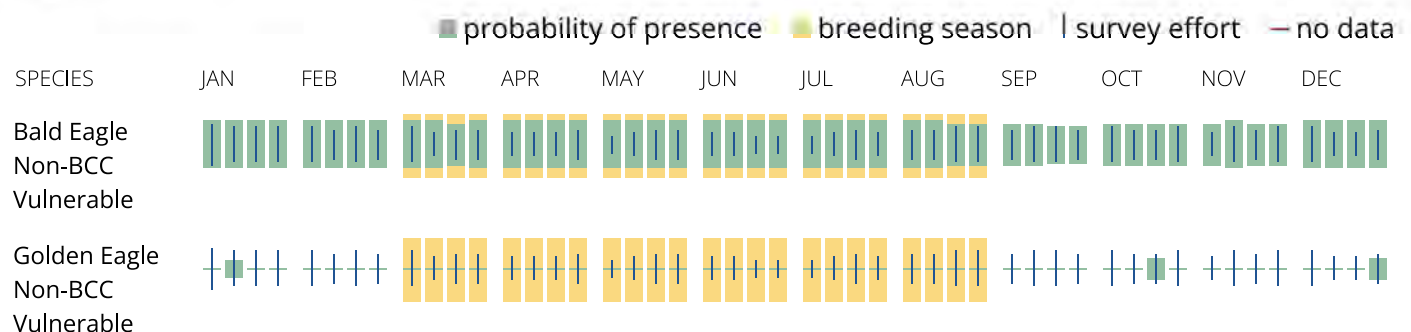
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>

- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON

Bald Eagle *Haliaeetus leucocephalus*

Breeds Mar 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Black Swift *Cypseloides niger*

Breeds Jun 15 to Sep 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8878>

Black Turnstone *Arenaria melanocephala*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

California Gull *Larus californicus*

Breeds Mar 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Cassin's Finch *Haemorhous cassinii*

Breeds May 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9462>

Chestnut-backed Chickadee *Poecile rufescens rufescens*

Breeds Mar 1 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Evening Grosbeak *Coccothraustes vespertinus*

Breeds May 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Golden Eagle *Aquila chrysaetos*

Breeds Mar 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Lesser Yellowlegs *Tringa flavipes*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9679>

Marbled Godwit *Limosa fedoa*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9481>

Olive-sided Flycatcher *Contopus cooperi*

Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3914>

Oregon Vesper Sparrow *Pooecetes gramineus affinis*

Breeds Apr 21 to Aug 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/5141>

Red Knot *Calidris canutus roselaari*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8880>

Rufous Hummingbird *Selasphorus rufus*

Breeds Apr 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8002>

Short-billed Dowitcher *Limnodromus griseus*

Breeds Jun 1 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9480>

Western Grebe *aechmophorus occidentalis*

Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/6743>

Western Gull *Larus occidentalis*

Breeds Apr 21 to Aug 25

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Willet *Tringa semipalmata*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

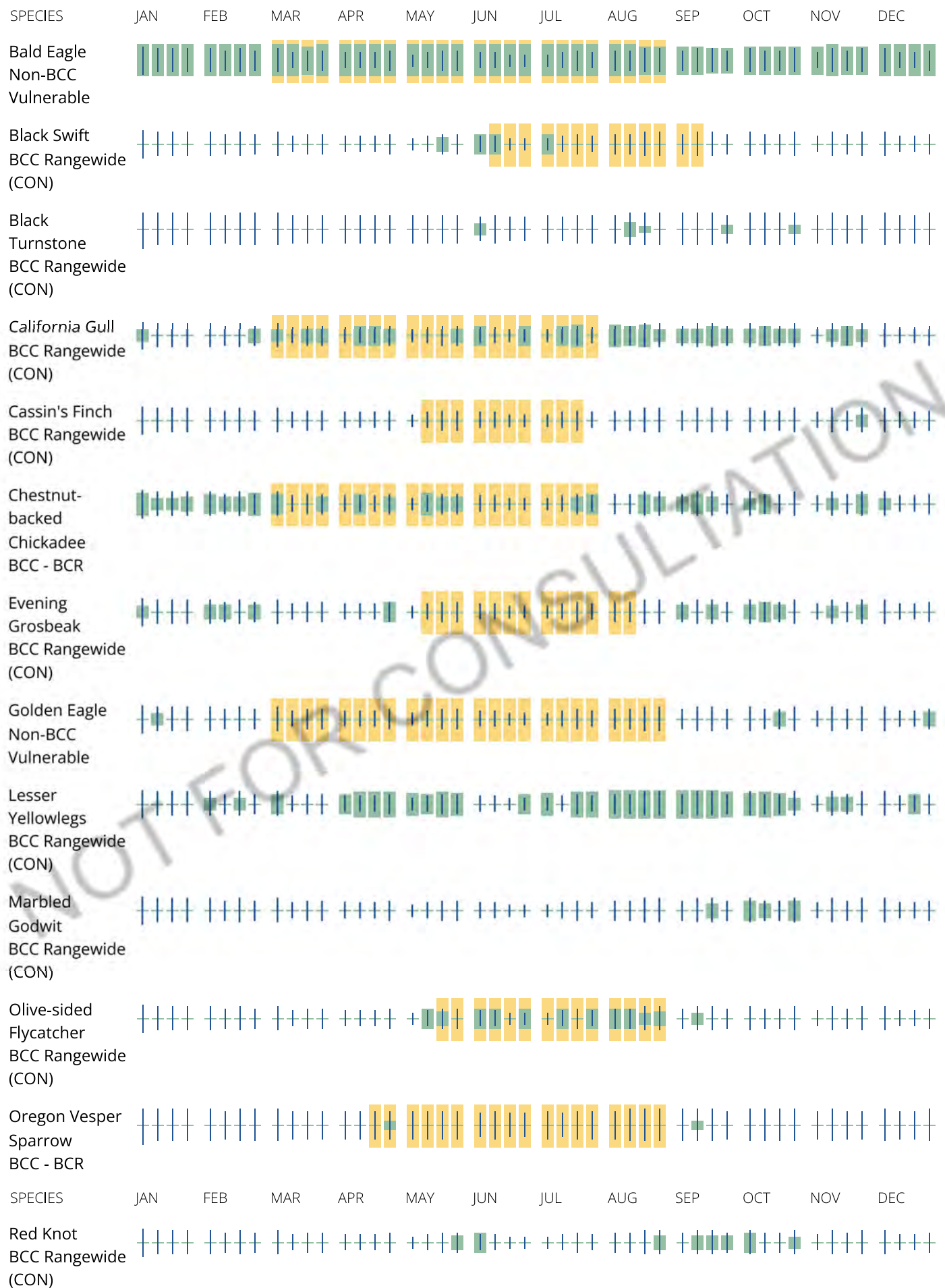
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

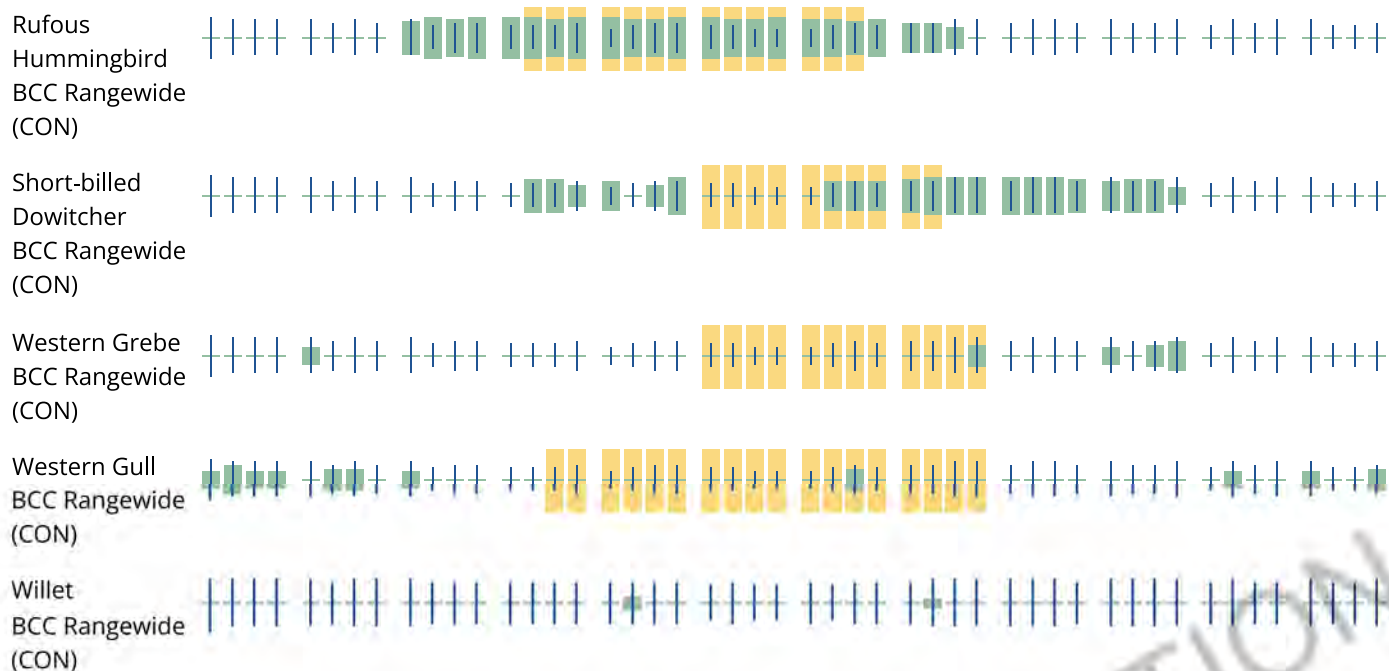
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies.

Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION



Priority Habitats and Species on the Web

Buffer radius: 300 Feet

Report Date: 11/18/2024, Parcel ID: [P15425](#)

PHS Species/Habitats Overview:

Occurence Name	Federal Status	State Status	Sensitive Location
Little Brown Bat			Yes

PHS Species/Habitats Details:

Little Brown Bat	
Scientific Name	<i>Myotis lucifugus</i>
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release at phsproducts@dfw.wa.gov for obtaining information about masked sensitive species and habitats.
PHS Listing Status	PHS Listed Occurrence
Sensitive	Y
Display Resolution	TOWNSHIP
ManagementRecommendations	http://wdfw.wa.gov/publications/pub.php?id=00605

DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necessary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.

Appendix C – Wetland Data Forms

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

Project/Site: Dixon City/County: Skagit County Sampling Date: 2024-10-22
 Applicant/Owner: Paul Dixon State: Washington Sampling Point: SP1
 Investigator(s): Nick Denk, Graeme Riggins Section, Township, Range: S05 T33N R3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Undulating Slope (%): 7
 Subregion (LRR): A 2 Lat: 48.382146 Long: -122.448968 Datum: WGS 84
 Soil Map Unit Name: 85 - Laconner very gravelly loamy sand, 0 to 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? 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: SP1 is located near the northwest corner of the parcel. It is paired with SP2. Precipitation conditions were wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Alnus rubra</u>	<u>20</u>	☒	<u>FAC</u>	
2. <u>Acer macrophyllum</u>	<u>7</u>	☒	<u>FACU</u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. <u>Pseudotsuga menziesii</u>	<u>5</u>		<u>FACU</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.00</u> (A/B)
4. <u>Thuja plicata</u>	<u>1</u>		<u>FAC</u>	
	<u>33</u>	= Total Cover		
Prevalence Index worksheet:				
Total % Cover of:		Multiply by:		
OBL species	<u>0</u>	x 1 = <u>0</u>		
FACW species	<u>3</u>	x 2 = <u>6</u>		
FAC species	<u>110</u>	x 3 = <u>330</u>		
FACU species	<u>33</u>	x 4 = <u>132</u>		
UPL species	<u>0</u>	x 5 = <u>0</u>		
Column Totals:	<u>146</u> (A)	<u>468</u> (B)		
Prevalence Index = B/A = <u>3.20</u>				
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: SP1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 10	10YR 2/2	100					Loam	
10 - 14	10YR 2/2	95	7.5YR 2.5/3	5	C	M	Loam	faint redox
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: Cobble
Depth (inches): 14

Hydric Soil Present? Yes ☐ No ☒

Remarks:

cobble present throughout

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
Water Table Present? Yes ☐ No ☒ Depth (inches): _____
Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

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

Project/Site: Dixon City/County: Skagit County Sampling Date: 2024-10-22
 Applicant/Owner: Paul Dixon State: Washington Sampling Point: SP2
 Investigator(s): Nick Denk, Graeme Riggins Section, Township, Range: S05 T33N R3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Undulating Slope (%): 7
 Subregion (LRR): A 2 Lat: 48.3822356 Long: -122.4488977 Datum: WGS 84
 Soil Map Unit Name: 85 - Laconner very gravelly loamy sand, 0 to 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? 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: SP2 is in Wetland A near the northwest property corner. It is paired with SP1. Precipitation conditions were wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Alnus rubra</u>	<u>15</u>	☒	<u>FAC</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75.00</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
<u>15</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)				Total % Cover of: _____ Multiply by: _____
1. <u>Rubus armeniacus</u>	<u>15</u>	☒	<u>FAC</u>	OBL species <u>0</u> x 1 = <u>0</u>
2. <u>Rubus laciniatus</u>	<u>10</u>	☒	<u>FACU</u>	FACW species <u>85</u> x 2 = <u>170</u>
3. <u>Rubus spectabilis</u>	<u>1</u>	_____	<u>FAC</u>	FAC species <u>36</u> x 3 = <u>108</u>
4. _____	_____	_____	_____	FACU species <u>20</u> x 4 = <u>80</u>
5. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
<u>26</u> = Total Cover				Column Totals: <u>141</u> (A) <u>358</u> (B)
Herb Stratum (Plot size: <u>3 ft r</u>)				Prevalence Index = B/A = <u>2.53</u>
1. <u>Phalaris arundinacea</u>	<u>85</u>	☒	<u>FACW</u>	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.
2. <u>Polystichum munitum</u>	<u>5</u>	_____	<u>FACU</u>	
3. <u>Rubus ursinus</u>	<u>5</u>	_____	<u>FACU</u>	
4. <u>Urtica dioica</u>	<u>5</u>	_____	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes ☒ No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks:				

SOIL

Sampling Point: SP2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 12	10YR 2/2	100					Clay Loam	
12 - 16	2.5Y 4/2	90	10YR 3/6	10	C	M	Clay Loam	prominent redox; charcoal present
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

cobble present throughout

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): <u>10</u>
Saturation Present?	Yes ☒ No ☐	Depth (inches): <u>3</u>

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Dixon City/County: Skagit County Sampling Date: 2024-10-22
 Applicant/Owner: Paul Dixon State: Washington Sampling Point: SP3
 Investigator(s): Nick Denk, Graeme Riggins Section, Township, Range: S05 T33N R3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 7
 Subregion (LRR): A 2 Lat: 48.3820111 Long: -122.448466 Datum: WGS 84
 Soil Map Unit Name: 17 - Bow gravelly loam, 3 to 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? 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: SP3 is in Wetland B. It is paired with SP4. Precipitation conditions were wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Alnus rubra</u>	<u>10</u>	☒	<u>FAC</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
<u>10</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)				Total % Cover of: _____ Multiply by: _____
1. <u>Rubus armeniacus</u>	<u>10</u>	☒	<u>FAC</u>	OBL species <u>0</u> x 1 = <u>0</u>
2. <u>Rubus spectabilis</u>	<u>5</u>	☒	<u>FAC</u>	FACW species <u>0</u> x 2 = <u>0</u>
3. _____	_____	_____	_____	FAC species <u>55</u> x 3 = <u>165</u>
4. _____	_____	_____	_____	FACU species <u>16</u> x 4 = <u>64</u>
5. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
<u>15</u> = Total Cover				Column Totals: <u>71</u> (A) <u>229</u> (B)
Herb Stratum (Plot size: <u>3 ft r</u>)				Prevalence Index = B/A = <u>3.22</u>
1. <u>Agrostis gigantea</u>	<u>15</u>	☒	<u>FAC</u>	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.
2. <u>Carex leptopoda</u>	<u>15</u>	☒	<u>FAC</u>	
3. <u>Galium aparine</u>	<u>5</u>	_____	<u>FACU</u>	
4. <u>Rubus ursinus</u>	<u>5</u>	_____	<u>FACU</u>	
5. <u>Cirsium vulgare</u>	<u>3</u>	_____	<u>FACU</u>	
6. <u>Polystichum munitum</u>	<u>3</u>	_____	<u>FACU</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>46</u> = Total Cover				Hydrophytic Vegetation Present? Yes ☒ No _____
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

SOIL

Sampling Point: SP3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 9	10YR 2/2	100					Clay Loam	
9 - 12	2.5Y 5/1	90	7.5YR 3/4	10	C	M	Clay Loam	prominent redox
-								
-								
-								
-								
-								
-								

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

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): 9

Saturation Present? Yes ☒ No ☐ Depth (inches): 7
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Dixon City/County: Skagit County Sampling Date: 2024-10-22
 Applicant/Owner: Paul Dixon State: Washington Sampling Point: SP4
 Investigator(s): Nick Denk, Graeme Riggins Section, Township, Range: S05 T33N R3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7
 Subregion (LRR): A 2 Lat: 48.3821342 Long: -122.44834 Datum: WGS 84
 Soil Map Unit Name: 17 - Bow gravelly loam, 3 to 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? 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: SP4 is in a Potential project area. It is paired with SP3 and SP5. Precipitation conditions were wetter than normal.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)
1. <u>Acer macrophyllum</u>	<u>20</u>	☒	<u>FACU</u>	
2. <u>Pseudotsuga menziesii</u>	<u>20</u>	☒	<u>FACU</u>	
3. <u>Alnus rubra</u>	<u>10</u>		<u>FAC</u>	
4. <u>Frangula purshiana</u>	<u>2</u>		<u>FAC</u>	
		<u>52</u>	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)				
1. <u>Gaultheria shallon</u>	<u>40</u>	☒	<u>FACU</u>	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.
2. <u>Symphoricarpos albus</u>	<u>15</u>	☒	<u>FACU</u>	
3. <u>Mahonia nervosa</u>	<u>7</u>		<u>FACU</u>	
4. <u>Holodiscus discolor</u>	<u>2</u>		<u>FACU</u>	
5. <u>Rubus armeniacus</u>	<u>2</u>		<u>FAC</u>	
		<u>66</u>	= Total Cover	
Herb Stratum (Plot size: <u>3 ft r</u>)				
1. <u>Rubus ursinus</u>	<u>25</u>	☒	<u>FACU</u>	Hydrophytic Vegetation Present? Yes _____ No ☒
2. <u>Polystichum munitum</u>	<u>5</u>		<u>FACU</u>	
3. <u>Geranium robertianum</u>	<u>1</u>		<u>FACU</u>	
4. _____	_____		_____	
5. _____	_____		_____	
6. _____	_____		_____	
7. _____	_____		_____	
8. _____	_____		_____	
9. _____	_____		_____	
10. _____	_____		_____	
11. _____	_____		_____	
		<u>31</u>	= Total Cover	
Woody Vine Stratum (Plot size: _____)				
1. _____	_____		_____	
2. _____	_____		_____	
		_____	= Total Cover	
% Bare Ground in Herb Stratum _____				
Remarks:				

SOIL

Sampling Point: SP4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 2.5	10YR 2/2	100					Loam	
2.5 - 11	7.5YR 2.5/3	100					Silt Loam	
11 - 12	10YR 3/4	92					Clay Loam	
11 - 12	2.5Y 4/2	8					Clay Loam	
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ☒

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

Remarks:

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

Project/Site: Dixon City/County: Skagit County Sampling Date: 2024-10-22
 Applicant/Owner: Paul Dixon State: Washington Sampling Point: SP5
 Investigator(s): Nick Denk, Graeme Riggins Section, Township, Range: S05 T33N R3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 7
 Subregion (LRR): A 2 Lat: 48.3822915 Long: -122.4484134 Datum: WGS 84
 Soil Map Unit Name: 17 - Bow gravelly loam, 3 to 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? 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: SP5 is in Wetland C. It is paired with SP4. Precipitation conditions were wetter than normal.				

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>55</u> x 2 = <u>110</u> FAC species <u>37</u> x 3 = <u>111</u> FACU species <u>28</u> x 4 = <u>112</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>120</u> (A) <u>333</u> (B) Prevalence Index = B/A = <u>2.77</u>
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>) 1. <u>Rubus armeniacus</u> <u>25</u> ☒ <u>FAC</u> 2. <u>Rosa pisocarpa</u> <u>7</u> _____ <u>FAC</u> 3. <u>Rubus spectabilis</u> <u>5</u> _____ <u>FAC</u> 4. _____ 5. _____ _____ = Total Cover				
Herb Stratum (Plot size: <u>3 ft r</u>) 1. <u>Epilobium ciliatum</u> <u>55</u> ☒ <u>FACW</u> 2. <u>Polystichum munitum</u> <u>15</u> _____ <u>FACU</u> 3. <u>Rubus ursinus</u> <u>7</u> _____ <u>FACU</u> 4. <u>Geranium robertianum</u> <u>5</u> _____ <u>FACU</u> 5. <u>Digitalis purpurea</u> <u>1</u> _____ <u>FACU</u> 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ _____ = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover % Bare Ground in Herb Stratum <u>17</u>				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.
Remarks:				

SOIL

Sampling Point: SP5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 11	10YR 2/2	100					Silty Clay Loam	
11 - 14	2.5Y 4/2	93	7.5YR 4/4	7	C	M	Clay Loam	prominent redox
-								
-								
-								
-								
-								
-								

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

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): 11

Saturation Present? Yes ☒ No ☐ Depth (inches): 7
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Dixon City/County: Skagit County Sampling Date: 2024-10-22
 Applicant/Owner: Paul Dixon State: Washington Sampling Point: SP6
 Investigator(s): Nick Denk, Graeme Riggins Section, Township, Range: S05 T33N R3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 7
 Subregion (LRR): A 2 Lat: 48.382113 Long: -122.447434 Datum: WGS 84
 Soil Map Unit Name: 17 - Bow gravelly loam, 3 to 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? 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: SP6 is in Wetland D. Precipitation conditions were wetter than normal.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)				
1. <u>Rubus spectabilis</u>	<u>10</u>	☒	<u>FAC</u>	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.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: <u>3 ft r</u>)				
1. <u>Carex leptopoda</u>	<u>25</u>	☒	<u>FAC</u>	
2. <u>Rubus ursinus</u>	<u>15</u>	☒	<u>FACU</u>	
3. <u>Urtica dioica</u>	<u>15</u>	☒	<u>FAC</u>	
4. <u>Geranium robertianum</u>	<u>10</u>	_____	<u>FACU</u>	
5. <u>Tolmiea menziesii</u>	<u>5</u>	_____	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes ☒ No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum <u>30</u>				
Remarks:				

SOIL

Sampling Point: SP6

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 5	10YR 3/1	100					Sandy Loam	
5 - 14	10YR 3/1	95	10YR 3/4	5	C	M	Sandy Clay Loam	distinct redox
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): 7

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:

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

Project/Site: Dixon City/County: Skagit County Sampling Date: 2024-10-22
Applicant/Owner: Paul Dixon State: Washington Sampling Point: SP7
Investigator(s): Nick Denk, Graeme Riggins Section, Township, Range: S05 T33N R3E
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 7
Subregion (LRR): A 2 Lat: 48.382113 Long: -122.4473 Datum: WGS 84
Soil Map Unit Name: 17 - Bow gravelly loam, 3 to 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)
Are Vegetation ☒, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? 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: SP7 is in Wetland E. Precipitation conditions were wetter than normal. Shrub layer recently cut. Soils not examined at this plot.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)	
1. <u>Alnus rubra</u>	<u>35</u>	☒	<u>FAC</u>		
2. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>100</u> x 3 = <u>300</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>110</u> (A) <u>340</u> (B) Prevalence Index = B/A = <u>3.09</u>	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____	<u>35</u> = Total Cover	_____	_____		
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)				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.	
1. <u>Rubus spectabilis</u>	<u>10</u>	☒	<u>FAC</u>		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____	<u>10</u> = Total Cover	_____	_____		
Herb Stratum (Plot size: <u>3 ft r</u>)					Hydrophytic Vegetation Present? Yes ☒ No _____
1. <u>Ranunculus repens</u>	<u>25</u>	☒	<u>FAC</u>		
2. <u>Carex leptopoda</u>	<u>15</u>	☒	<u>FAC</u>		
3. <u>Rubus ursinus</u>	<u>10</u>	_____	<u>FACU</u>		
4. <u>Tolmiea menziesii</u>	<u>5</u>	_____	<u>FAC</u>		
5. <u>Urtica dioica</u>	<u>5</u>	_____	<u>FAC</u>		
6. <u>Athyrium cyclosorum</u>	<u>5</u>	_____	<u>FAC</u>		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
_____	<u>65</u> = Total Cover	_____	_____		
Woody Vine Stratum (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
_____	_____ = Total Cover	_____	_____		
% Bare Ground in Herb Stratum <u>35</u>					
Remarks:					

SOIL

Sampling Point: SP7

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
-								
-								
-								
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Soils not recorded.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): 2

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

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Dixon City/County: Skagit County Sampling Date: 2026-05-15
 Applicant/Owner: Paul Dixon State: Washington Sampling Point: SP8
 Investigator(s): Nicholas Denk Section, Township, Range: S05 T33N R3E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): A 2 Lat: 48.3819765 Long: -122.4463327 Datum: WGS 84
 Soil Map Unit Name: 17 - Bow gravelly loam, 3 to 8 percent slopes 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: SP8 is located near the center of the property in an approximated wetland area . Per the USACE APT, precipitation conditions were normal.				

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Thuja plicata</u>	<u>10</u>	☒	<u>FAC</u>	
2. <u>Alnus rubra</u>	<u>5</u>	☒	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>6</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83.33</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
<u>15</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>5 ft r</u>)				Total % Cover of: _____ Multiply by: _____
1. <u>Salix scouleriana</u>	<u>40</u>	☒	<u>FAC</u>	OBL species <u>0</u> x 1 = <u>0</u>
2. <u>Rubus spectabilis</u>	<u>30</u>	☒	<u>FAC</u>	FACW species <u>0</u> x 2 = <u>0</u>
3. <u>Rosa pisocarpa</u>	<u>10</u>	_____	<u>FAC</u>	FAC species <u>110</u> x 3 = <u>330</u>
4. <u>Gaultheria shallon</u>	<u>5</u>	_____	<u>FACU</u>	FACU species <u>36</u> x 4 = <u>144</u>
5. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
<u>85</u> = Total Cover				Column Totals: <u>146</u> (A) <u>474</u> (B)
Herb Stratum (Plot size: <u>5 ft r</u>)				Prevalence Index = B/A = <u>3.24</u>
1. <u>Rubus ursinus</u>	<u>25</u>	☒	<u>FACU</u>	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.
2. <u>Urtica dioica</u>	<u>15</u>	☒	<u>FAC</u>	
3. <u>Galium aparine</u>	<u>5</u>	_____	<u>FACU</u>	
4. <u>Cardamine hirsuta</u>	<u>1</u>	_____	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>46</u> = Total Cover				Hydrophytic Vegetation Present? Yes ☒ No _____
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>54</u>				
Remarks:				

SOIL

Sampling Point: SP8

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 5	10YR 2/2	100					Silt Loam	
5 - 7.5	2.5Y 4/2	85	2.5Y 5/2	10	D	M	Silty Clay Loam	faint contrast
-			10YR 4/4	5	C	M		distinct contrast
7.5 - 12	2.5Y 4/1	75	10YR 4/6	15	C	M	Silty Clay Loam	Prominent contrast
-			10YR 3/6	10	C	M		Prominent contrast
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

soil very moist

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

Project/Site: Dixon City/County: Skagit County Sampling Date: 2026-05-15
 Applicant/Owner: Paul Dixon State: Washington Sampling Point: SP9
 Investigator(s): Nicholas Denk Section, Township, Range: S05 T33N R3E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): A 2 Lat: 48.3821567 Long: -122.4457706 Datum: WGS 84
 Soil Map Unit Name: 17 - Bow gravelly loam, 3 to 8 percent slopes 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: SP9 is located near the center of the property in an approximated wetland area. Per the USACE APT, precipitation conditions were normal.				

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>75</u> x 3 = <u>225</u> FACU species <u>30</u> x 4 = <u>120</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>105</u> (A) <u>345</u> (B) Prevalence Index = B/A = <u>3.28</u>
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>5 ft r</u>) 1. <u>Rubus spectabilis</u> <u>5</u> ☒ <u>FAC</u>				
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	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.
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: <u>5 ft r</u>) 1. <u>Carex leptopoda</u> <u>65</u> ☒ <u>FAC</u>				Hydrophytic Vegetation Present? Yes ☒ No _____
2. <u>Geranium robertianum</u>	<u>15</u>	_____	<u>FACU</u>	
3. <u>Rubus ursinus</u>	<u>10</u>	_____	<u>FACU</u>	
4. <u>Polystichum munitum</u>	<u>5</u>	_____	<u>FACU</u>	
5. <u>Urtica dioica</u>	<u>5</u>	_____	<u>FAC</u>	Hydrophytic Vegetation Present? Yes ☒ No _____
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes ☒ No _____
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft r</u>) 1. _____ 2. _____ _____ = Total Cover				Hydrophytic Vegetation Present? Yes ☒ No _____
% Bare Ground in Herb Stratum <u>0</u>				
Remarks:				

SOIL

Sampling Point: SP9

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 7.5	10YR 2/2	100					Silt Loam	
7.5 - 12	2.5Y 4/2	90	10YR 3/6	10	C	M	Silty Clay Loam	Prominent contrast
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): 7
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Dixon City/County: Skagit County Sampling Date: 2026-05-15
 Applicant/Owner: Paul Dixon State: Washington Sampling Point: SP10
 Investigator(s): Nicholas Denk Section, Township, Range: S05 T33N R3E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): A 2 Lat: 48.3818018 Long: -122.4454405 Datum: WGS 84
 Soil Map Unit Name: 17 - Bow gravelly loam, 3 to 8 percent slopes 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: SP10 is located near the center of the property in an approximated wetland area. Per the USACE APT, precipitation conditions were normal.				

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Alnus rubra</u>	<u>60</u>	☒	<u>FAC</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.66</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
<u>60</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>5 ft r</u>)				Total % Cover of: _____ Multiply by: _____
1. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>
2. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>
3. _____	_____	_____	_____	FAC species <u>125</u> x 3 = <u>375</u>
4. _____	_____	_____	_____	FACU species <u>35</u> x 4 = <u>140</u>
5. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
_____ = Total Cover				Column Totals: <u>160</u> (A) <u>515</u> (B)
Herb Stratum (Plot size: <u>5 ft r</u>)				Prevalence Index = B/A = <u>3.21</u>
1. <u>Carex leptopoda</u>	<u>35</u>	☒	<u>FAC</u>	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.
2. <u>Galium aparine</u>	<u>25</u>	☒	<u>FACU</u>	
3. <u>Urtica dioica</u>	<u>15</u>	_____	<u>FAC</u>	
4. <u>Circaea alpina</u>	<u>15</u>	_____	<u>FAC</u>	
5. <u>Rubus ursinus</u>	<u>9</u>	_____	<u>FACU</u>	
6. <u>Polystichum munitum</u>	<u>1</u>	_____	<u>FACU</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>100</u> = Total Cover				Hydrophytic Vegetation Present? Yes ☒ No _____
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks:				

SOIL

Sampling Point: SP10

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 7.5	10YR 2/2	100					Loam	
7.5 - 11	2.5Y 3/2	90	10YR 3/3	10	C	M	Sandy Loam	faint contrast
11 - 14	2.5Y 4/2	90	10YR 3/4	7	C	M	Sandy Loam	Distinct contrast
-			7.5YR 3/4	3	C	M		Prominent contrast
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): 12
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Dixon City/County: Skagit County Sampling Date: 2026-05-15
 Applicant/Owner: Paul Dixon State: Washington Sampling Point: SP11
 Investigator(s): Nicholas Denk Section, Township, Range: S05 T33N R3E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): A 2 Lat: 48.3818247 Long: -122.4439093 Datum: WGS 84
 Soil Map Unit Name: 17 - Bow gravelly loam, 3 to 8 percent slopes 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: SP11 is located in the southeast portion of the property in an approximated wetland area. Per the USACE APT, precipitation conditions were normal.				

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Alnus rubra</u>	<u>75</u>	☒	<u>FAC</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
4. _____	<u>75</u>	_____	_____	Prevalence Index worksheet:
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>5 ft r</u>)				Total % Cover of:
1. <u>Rubus spectabilis</u>	<u>20</u>	☒	<u>FAC</u>	Multiply by:
2. _____	_____	_____	_____	OBL species <u>80</u> x 1 = <u>80</u>
3. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species <u>100</u> x 3 = <u>300</u>
5. _____	<u>20</u>	_____	_____	FACU species <u>5</u> x 4 = <u>20</u>
= Total Cover				UPL species <u>0</u> x 5 = <u>0</u>
Herb Stratum (Plot size: <u>5 ft r</u>)				Column Totals: <u>185</u> (A) <u>400</u> (B)
1. <u>Carex obnupta</u>	<u>80</u>	☒	<u>OBL</u>	Prevalence Index = B/A = <u>2.16</u>
2. <u>Rubus ursinus</u>	<u>5</u>	_____	<u>FACU</u>	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.
3. <u>Circaea alpina</u>	<u>5</u>	_____	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	<u>90</u>	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				Hydrophytic Vegetation Present? Yes ☒ No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum <u>10</u>	_____	_____	_____	
Remarks:				

SOIL

Sampling Point: SP11

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 9	10YR 2/1	100					Silt Loam	
9 - 12	2.5Y 4/2	85	7.5YR 3/3	15	C	M		Distinct contrast
-								
-								
-								
-								
-								
-								

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

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): 7
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Dixon City/County: Skagit County Sampling Date: 2026-05-15
 Applicant/Owner: Paul Dixon State: Washington Sampling Point: SP12
 Investigator(s): Nicholas Denk Section, Township, Range: S05 T33N R3E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): A 2 Lat: 48.3820853 Long: -122.4442378 Datum: WGS 84
 Soil Map Unit Name: 17 - Bow gravelly loam, 3 to 8 percent slopes 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: SP12 is located near the northeast corner of the property in an approximated wetland area. Per the USACE APT, precipitation conditions were normal.				

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.00</u> (A/B)														
1. <u>Alnus rubra</u>	<u>25</u>	☒	<u>FAC</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	<u>25</u>	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>25</u></td> <td>x 1 = <u>25</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>90</u></td> <td>x 3 = <u>270</u></td> </tr> <tr> <td>FACU species <u>45</u></td> <td>x 4 = <u>180</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>190</u> (A)</td> <td><u>535</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.81</u>	Total % Cover of:	Multiply by:	OBL species <u>25</u>	x 1 = <u>25</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>90</u>	x 3 = <u>270</u>	FACU species <u>45</u>	x 4 = <u>180</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>190</u> (A)	<u>535</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>25</u>	x 1 = <u>25</u>																	
FACW species <u>30</u>	x 2 = <u>60</u>																	
FAC species <u>90</u>	x 3 = <u>270</u>																	
FACU species <u>45</u>	x 4 = <u>180</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>190</u> (A)	<u>535</u> (B)																	
= Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>5 ft r</u>)																		
1. <u>Lonicera involucrata</u>	<u>35</u>	☒	<u>FAC</u>															
2. <u>Symphoricarpos albus</u>	<u>20</u>	☒	<u>FACU</u>															
3. <u>Rubus spectabilis</u>	<u>10</u>	_____	<u>FAC</u>															
4. <u>Rubus parviflorus</u>	<u>5</u>	_____	<u>FACU</u>															
5. _____	_____	_____	_____															
= Total Cover																		
Herb Stratum (Plot size: <u>5 ft r</u>)																		
1. <u>Carex obnupta</u>	<u>25</u>	☒	<u>OBL</u>															
2. <u>Phalaris arundinacea</u>	<u>25</u>	☒	<u>FACW</u>															
3. <u>Rubus ursinus</u>	<u>10</u>	_____	<u>FACU</u>															
4. <u>Ranunculus repens</u>	<u>10</u>	_____	<u>FAC</u>															
5. <u>Circaea alpina</u>	<u>5</u>	_____	<u>FAC</u>															
6. <u>Epilobium ciliatum</u>	<u>5</u>	_____	<u>FACW</u>															
7. <u>Polystichum munitum</u>	<u>5</u>	_____	<u>FACU</u>															
8. <u>Galium aparine</u>	<u>5</u>	_____	<u>FACU</u>															
9. <u>Geum macrophyllum</u>	<u>5</u>	_____	<u>FAC</u>															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
= Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
= Total Cover																		
% Bare Ground in Herb Stratum <u>5</u>																		
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: SP12**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 7	10YR 2/1	100					Loam	
7 - 12	2.5Y 4/2	75	7.5YR 4/4	25	C	M	Sandy Clay Loam	Prominent contrast
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

☐ Histosol (A1)	☐ Sandy Redox (S5)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Stripped Matrix (S6)	☐ Red Parent Material (TF2)
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1) (except MLRA 1)	☐ Very Shallow Dark Surface (TF12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Other (Explain in Remarks)
☐ Depleted Below Dark Surface (A11)	☒ Depleted Matrix (F3)	
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)	
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)	
☐ Sandy Gleyed Matrix (S4)	☐ Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

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

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

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): 11Saturation Present? Yes ☒ No ☐ Depth (inches): 3
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Dixon City/County: Skagit County Sampling Date: 2026-05-15
 Applicant/Owner: Paul Dixon State: Washington Sampling Point: SP13
 Investigator(s): Nicholas Denk Section, Township, Range: S05 T33N R3E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): A 2 Lat: 48.3820857 Long: -122.4445013 Datum: WGS 84
 Soil Map Unit Name: 17 - Bow gravelly loam, 3 to 8 percent slopes 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: SP13 is located near the northeast corner of the property in an approximated wetland area. Per the USACE APT, precipitation conditions were normal.				

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>54</u> x 3 = <u>162</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>54</u> (A) <u>162</u> (B) Prevalence Index = B/A = <u>3.00</u>
Sapling/Shrub Stratum (Plot size: <u>5 ft r</u>)				
1. <u>Rubus spectabilis</u>	<u>45</u>	☒	<u>FAC</u>	
2. <u>Rosa pisocarpa</u>	<u>5</u>	_____	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: <u>5 ft r</u>)				
1. <u>Urtica dioica</u>	<u>3</u>	_____	<u>FAC</u>	
2. <u>Carex leptopoda</u>	<u>1</u>	_____	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
= Total Cover				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.
Woody Vine Stratum (Plot size: <u>30 ft r</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____				Hydrophytic Vegetation Present? Yes ☒ No _____
Remarks:				

SOIL

Sampling Point: SP13

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 5	10YR 2/1	100					Silt Loam	
5 - 12	2.5Y 4/2	90	10YR 4/6	10	C	M	Sandy Clay Loam	Prominent contrast
-								
-								
-								
-								
-								
-								

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

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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): <u>11</u>
Saturation Present?	Yes ☒ No ☐	Depth (inches): <u>1</u>

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

Appendix D – Wetland Rating Forms

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Dixon Wetland A Date of site visit: 10/22/2024Rated by Nicholas Denk Trained by Ecology? ☒ Yes ☐ No Date of training Mar-19HGM Class used for rating Depressional & Flats Wetland has multiple HGM classes? ☒ Yes ☐ No**NOTE: Form is not complete with out the figures requested (figures can be combined).**Source of base aerial photo/map ESRI / Ecology Water Quality Atlas**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
- X **Category III** - Total score = 16 - 19
- Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>List appropriate rating (H, M, L)</i>				
Site Potential	M	M	M	
Landscape Potential	L	L	H	
Value	H	H	M	
Score Based on Ratings	6	6	7	19

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetland in Western Washington

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

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

☒ NO - go to 2

☐ YES - the wetland class is **Tidal Fringe** - go to 1.1

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

☐ NO - **Saltwater Tidal Fringe (Estuarine)**

☐ YES - **Freshwater Tidal Fringe**

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

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it.

Groundwater and surface water runoff are NOT sources of water to the unit.

☒ NO - go to 3

☐ YES - The wetland class is **Flats**

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

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

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

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

☒ NO - go to 4

☐ YES - The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

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

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

☒ The water leaves the wetland **without being impounded**.

☐ NO - go to 5

☒ YES - The wetland class is **Slope**

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

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

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

☐ The overbank flooding occurs at least once every 2 years.

☒ 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.*

NOTES and FIELD OBSERVATIONS:

DEPRESSIONAL AND FLATS WETLANDS**Water Quality Functions** - Indicators that the site functions to improve water quality

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

D 1.1. Characteristics of surface water outflows from the wetland:Wetland is a depression or flat depression (QUESTION 7 on key)
with no surface water leaving it (no outlet).

points = 3

Wetland has an intermittently flowing stream or ditch, OR highly
constricted permanently flowing outlet.

points = 2

☐ Wetland has an unconstricted, or slightly constricted, surface outlet
that is permanently flowing

points = 1

☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is
a permanently flowing ditch.

points = 1

3

D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic
(use NRCS definitions).

Yes = 4 No = 0

0

D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or
Forested Cowardin classes):

Wetland has persistent, ungrazed, plants > 95% of area

points = 5

Wetland has persistent, ungrazed, plants > 1/2 of area

points = 3

Wetland has persistent, ungrazed plants > 1/10 of area

points = 1

Wetland has persistent, ungrazed plants < 1/10 of area

points = 0

5

D 1.4. Characteristics of seasonal ponding or inundation:*This is the area that is ponded for at least 2 months. See description in manual.*

Area seasonally ponded is > 1/2 total area of wetland

points = 4

Area seasonally ponded is > 1/4 total area of wetland

points = 2

Area seasonally ponded is < 1/4 total area of wetland

points = 0

2

Total for D 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

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

D 2.1. Does the wetland unit receive stormwater discharges?

Yes = 1 No = 0

0

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

Yes = 1 No = 0

0

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

Yes = 1 No = 0

0

D 2.4. Are there other sources of pollutants coming into the wetland that are
not listed in questions D 2.1 - D 2.3?

Source

Yes = 1 No = 0

0

Total for D 2

Add the points in the boxes above

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

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

D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,
lake, or marine water that is on the 303(d) list?

Yes = 1 No = 0

0

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

Yes = 1 No = 0

1

D 3.3. Has the site been identified in a watershed or local plan as important for
maintaining water quality (answer YES if there is a TMDL for the basin in
which the unit is found)?

Yes = 2 No = 0

2

Total for D 3

Add the points in the boxes above

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

DEPRESSIONAL AND FLATS WETLANDS**Hydrologic Functions** - Indicators that the site functions to reduce flooding and stream degradation

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

D 4.1. Characteristics of surface water outflows from the wetland:

- | | | |
|---|------------|---|
| Wetland is a depression or flat depression with no surface water leaving it (no outlet) | points = 4 | 4 |
| Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet | points = 2 | |
| Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch | points = 1 | |
| Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing | points = 0 | |

D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.

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

D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.

- | | | |
|---|------------|---|
| ☐ The area of the basin is less than 10 times the area of the unit | points = 5 | 3 |
| The area of the basin is 10 to 100 times the area of the unit | points = 3 | |
| The area of the basin is more than 100 times the area of the unit | points = 0 | |
| ☐ Entire wetland is in the Flats class | points = 5 | |

Total for D 4

Add the points in the boxes above

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

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

D 5.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0

0

D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0

0

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0

0

Total for D 5

Add the points in the boxes above

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

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

D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.

- | | | |
|--|------------|---|
| The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): | | 2 |
| <ul style="list-style-type: none"> Flooding occurs in a sub-basin that is immediately down-gradient of unit. | points = 2 | |
| ☐ <ul style="list-style-type: none"> Surface flooding problems are in a sub-basin farther down-gradient. | points = 1 | |
| ☐ Flooding from groundwater is an issue in the sub-basin. | points = 1 | |
| ☐ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why | points = 0 | |
| ☐ There are no problems with flooding downstream of the wetland. | points = 0 | |

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0

0

Total for D 6

Add the points in the boxes above

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

These questions apply to wetlands of all HGM classes.**HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat**H 1.0.** Does the site have the potential to provide habitat?

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

- | | | |
|---|----------------------------------|---|
| ☐ Aquatic bed | 4 structures or more: points = 4 | 2 |
| ☒ 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 | |
| <i>If the unit has a Forested class, check if:</i> | | |
| ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon | | |

H 1.2. Hydroperiods

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

- | | | |
|--|-------------------------------------|-----------------|
| ☐ Permanently flooded or inundated | 4 or more types present: points = 3 | 1 |
| ☒ Seasonally flooded or inundated | 3 types present: points = 2 | |
| ☐ Occasionally flooded or inundated | 2 types present: points = 1 | |
| ☒ Saturated only | 1 types present: points = 0 | |
| ☐ Permanently flowing stream or river in, or adjacent to, the wetland | | |
| ☐ Seasonally flowing stream in, or adjacent to, the wetland | | |
| ☐ Lake Fringe wetland | | 2 points |
| ☐ Freshwater tidal wetland | | 2 points |

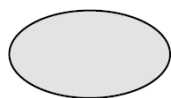
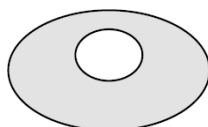
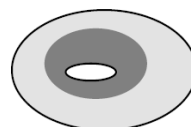
H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft². *Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*

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

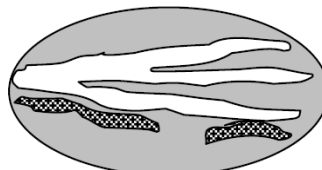
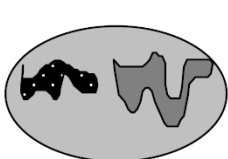
H 1.4. Interspersion of habitats

Decide from the diagrams below whether interspersions 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

2

All three diagrams in this row are
HIGH = 3 points



H 1.5. Special habitat features:

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

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

1

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 function of the site?

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

Calculate:

28 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 38%

If total accessible habitat is:

> 1/3 (33.3%) of 1 km Polygon

points = 3

20 - 33% of 1 km Polygon

points = 2

10 - 19% of 1 km Polygon

points = 1

< 10 % of 1 km Polygon

points = 0

3

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

Calculate:

36 % undisturbed habitat + (29 % moderate & low intensity land uses / 2) = 50.5%

Undisturbed habitat > 50% of Polygon

points = 3

Undisturbed habitat 10 - 50% and in 1-3 patches

points = 2

Undisturbed habitat 10 - 50% and > 3 patches

points = 1

Undisturbed habitat < 10% of 1 km Polygon

points = 0

3

H 2.3 Land use intensity in 1 km Polygon: If

> 50% of 1 km Polygon is high intensity land use

points = (-2)

≤ 50% of 1km Polygon is high intensity

points = 0

0

Total for H 2

Add the points in the boxes above

6

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

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

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

Site meets ANY of the following criteria:

points = 2

☐ It has 3 or more priority habitats within 100 m (see next page)

☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)

☐ It is mapped as a location for an individual WDFW priority species

☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources

☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan

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

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

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

<http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here:

<http://wdfw.wa.gov/conservation/phs/list/>

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

- ☐ **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- ☐ **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- ☐ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- ☐ **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
- ☐ **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- ☐ **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- ☐ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- ☐ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- ☐ **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- ☐ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- ☐ **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- ☐ **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- ☒ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.</i>	
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	
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 <i>Spartina</i> , see page 25) ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed 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	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? ☒ Yes - Go to SC 2.2 ☐ No - Go to SC 2.3	
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? ☐ Yes = Category I ☒ No = Not WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? ☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i>	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? ☐ Yes - Go to SC 3.3 ☒ No - Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? ☐ Yes - Go to SC 3.3 ☒ No = Is not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? ☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.	
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? ☐ Yes = Is a Category I bog ☐ No = Is not a bog	

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**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- ☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- ☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☒ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

- ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).
- ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.
- ☐ The wetland is larger than 1/10 ac (4350 ft²)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

- ☐ Long Beach Peninsula: Lands west of SR 103
- ☐ Grayland-Westport: Lands west of SR 105
- ☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☒ No = **Not an interdunal wetland for rating**

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**

Category of wetland based on Special Characteristics

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

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Dixon Wetland B Date of site visit: 10/22/2024

Rated by Nicholas Denk Trained by Ecology? ☒ Yes ☐ No Date of training Mar-19

HGM Class used for rating Depressional & Flats Wetland has multiple HGM classes? ☐ Yes ☒ No

NOTE: Form is not complete with out the figures requested (figures can be combined).
Source of base aerial photo/map ESRI / Ecology Water Quality Atlas

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
- X

Category III - Total score = 16 - 19
- Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
List appropriate rating (H, M, L)				
Site Potential	M	M	L	
Landscape Potential	L	L	H	
Value	H	H	M	
Score Based on Ratings	6	6	6	18

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

9 = H, H, H

8 = H, H, M

7 = H, H, L

7 = H, M, M

6 = H, M, L

6 = M, M, M

5 = H, L, L

5 = M, M, L

4 = M, L, L

3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetland in Western Washington

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

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

☒ **NO** - go to 2

☐ **YES** - the wetland class is **Tidal Fringe** - go to 1.1

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

☐ **NO - Saltwater Tidal Fringe (Estuarine)**

☐ **YES - Freshwater Tidal Fringe**

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

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

☒ **NO** - go to 3

☐ **YES** - The wetland class is **Flats**

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

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

- ☐ The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
- ☐ At least 30% of the open water area is deeper than 6.6 ft (2 m).

☒ **NO** - go to 4

☐ **YES** - The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

- ☐ The wetland is on a slope (*slope can be very gradual*),
- ☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
- ☐ The water leaves the wetland **without being impounded**.

☒ **NO** - go to 5

☐ **YES** - The wetland class is **Slope**

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

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

- ☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ☐ The overbank flooding occurs at least once every 2 years.

☒ **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.*

NOTES and FIELD OBSERVATIONS:

DEPRESSIONAL AND FLATS WETLANDS**Water Quality Functions** - Indicators that the site functions to improve water quality

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

D 1.1. Characteristics of surface water outflows from the wetland:Wetland is a depression or flat depression (QUESTION 7 on key)
with no surface water leaving it (no outlet).

points = 3

Wetland has an intermittently flowing stream or ditch, OR highly
constricted permanently flowing outlet.

points = 2

☐ Wetland has an unconstricted, or slightly constricted, surface outlet
that is permanently flowing

points = 1

☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is
a permanently flowing ditch.

points = 1

3

D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true
organic (use NRCS definitions).

Yes = 4 No = 0

0

D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or
Forested Cowardin classes):

Wetland has persistent, ungrazed, plants > 95% of area

points = 5

Wetland has persistent, ungrazed, plants > 1/2 of area

points = 3

Wetland has persistent, ungrazed plants > 1/10 of area

points = 1

Wetland has persistent, ungrazed plants < 1/10 of area

points = 0

1

D 1.4. Characteristics of seasonal ponding or inundation:*This is the area that is ponded for at least 2 months. See description in manual.*

Area seasonally ponded is > 1/2 total area of wetland

points = 4

Area seasonally ponded is > 1/4 total area of wetland

points = 2

Area seasonally ponded is < 1/4 total area of wetland

points = 0

4

Total for D 1

Add the points in the boxes above

8

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

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

D 2.1. Does the wetland unit receive stormwater discharges?

Yes = 1 No = 0

0

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

Yes = 1 No = 0

0

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

Yes = 1 No = 0

0

D 2.4. Are there other sources of pollutants coming into the wetland that are
not listed in questions D 2.1 - D 2.3?

Source

Yes = 1 No = 0

0

Total for D 2

Add the points in the boxes above

0

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

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

D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream,
river, lake, or marine water that is on the 303(d) list?

Yes = 1 No = 0

0

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

Yes = 1 No = 0

1

D 3.3. Has the site been identified in a watershed or local plan as important
for maintaining water quality (answer YES if there is a TMDL for the basin in
which the unit is found)?

Yes = 2 No = 0

2

Total for D 3

Add the points in the boxes above

3

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

Record the rating on the first page

DEPRESSIONAL AND FLATS WETLANDS**Hydrologic Functions** - Indicators that the site functions to reduce flooding and stream degradation

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

D 4.1. Characteristics of surface water outflows from the wetland:

- | | | |
|---|------------|---|
| Wetland is a depression or flat depression with no surface water leaving it (no outlet) | points = 4 | 4 |
| Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet | points = 2 | |
| Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch | points = 1 | |
| Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing | points = 0 | |

D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.*

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

D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.*

- | | | |
|---|------------|---|
| ☐ The area of the basin is less than 10 times the area of the unit | points = 5 | 3 |
| The area of the basin is 10 to 100 times the area of the unit | points = 3 | |
| The area of the basin is more than 100 times the area of the unit | points = 0 | |
| ☐ Entire wetland is in the Flats class | points = 5 | |

Total for D 4 Add the points in the boxes above **7****Rating of Site Potential** If score is: ☐ 12 - 16 = H ☒ 6 - 11 = M ☐ 0 - 5 = L Record the rating on the first page

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

D 5.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0 0

D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0 0

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0 0

Total for D 5 Add the points in the boxes above **0****Rating of Landscape Potential** If score is: ☐ 3 = H ☐ 1 or 2 = M ☒ 0 = L Record the rating on the first page

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

D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.

- | | |
|--|---|
| The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon | 2 |
| <ul style="list-style-type: none"> • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-gradient. points = 1 | |
| ☐ Flooding from groundwater is an issue in the sub-basin. points = 1 | |
| ☐ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0 | |
| ☐ There are no problems with flooding downstream of the wetland. points = 0 | |

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0 0

Total for D 6 Add the points in the boxes above **2****Rating of Value** If score is: ☒ 2 - 4 = H ☐ 1 = M ☐ 0 = L Record the rating on the first page

These questions apply to wetlands of all HGM classes.**HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat

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

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

- | | | |
|--|----------------------------------|---|
| ☐ Aquatic bed | 4 structures or more: points = 4 | 0 |
| ☒ Emergent | 3 structures: points = 2 | |
| ☐ Scrub-shrub (areas where shrubs have > 30% cover) | 2 structures: points = 1 | |
| ☐ Forested (areas where trees have > 30% cover) | 1 structure: points = 0 | |
- If the unit has a Forested class, check if:*
- ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

H 1.2. Hydroperiods

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

- | | | |
|--|-------------------------------------|---|
| ☐ Permanently flooded or inundated | 4 or more types present: points = 3 | 1 |
| ☒ Seasonally flooded or inundated | 3 types present: points = 2 | |
| ☐ Occasionally flooded or inundated | 2 types present: points = 1 | |
| ☐ Saturated only | 1 types present: points = 0 | |
| ☐ Permanently flowing stream or river in, or adjacent to, the wetland | | |
| ☐ Seasonally flowing stream in, or adjacent to, the wetland | | |
| ☐ Lake Fringe wetland | 2 points | |
| ☐ Freshwater tidal wetland | 2 points | |

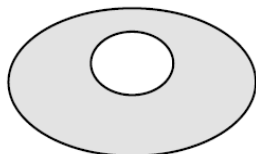
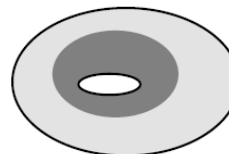
H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft². *Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*

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

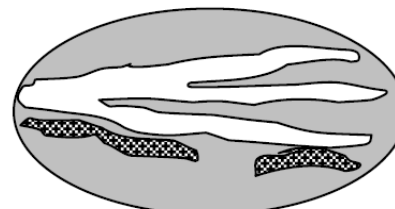
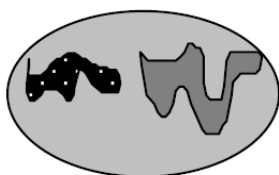
H 1.4. Interspersion of habitats

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

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

0

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



H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i>		1
☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)		
☐ Standing snags (dbh > 4 in) within the wetland		
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)		
☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)		
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by</i>)		
☒ Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)		
Total for H 1		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 function of the site?		
H 2.1 Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). <i>Calculate:</i>		
28 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 38%		3
If total accessible habitat is:		
> 1/3 (33.3%) of 1 km Polygon points = 3		
20 - 33% of 1 km Polygon points = 2		
10 - 19% of 1 km Polygon points = 1		
< 10 % of 1 km Polygon points = 0		
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate:</i>		
36 % undisturbed habitat + (29 % moderate & low intensity land uses / 2) = 50.5%		3
Undisturbed habitat > 50% of Polygon points = 3		
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2		
Undisturbed habitat 10 - 50% and > 3 patches points = 1		
Undisturbed habitat < 10% of 1 km Polygon points = 0		
H 2.3 Land use intensity in 1 km Polygon: If		
> 50% of 1 km Polygon is high intensity land use points = (-2)		0
≤ 50% of 1km Polygon is high intensity points = 0		
Total for H 2		6

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		1
☐ It has 3 or more priority habitats within 100 m (see next page)		
☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)		
☐ It is mapped as a location for an individual WDFW priority species		
☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources		
☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan		
Site has 1 or 2 priority habitats (listed on next page) with in 100m 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

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

<http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here:

<http://wdfw.wa.gov/conservation/phs/list/>

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

- ☐ **Aspen Stands**: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- ☐ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- ☐ **Herbaceous Balds**: Variable size patches of grass and forbs on shallow soils over bedrock.
- ☐ **Old-growth/Mature forests**: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
- ☐ **Oregon White Oak**: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- ☐ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- ☐ **Westside Prairies**: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- ☐ **Instream**: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- ☐ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- ☐ **Caves**: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- ☐ **Cliffs**: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- ☐ **Talus**: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- ☒ **Snags and Logs**: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.</i>	
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	
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 <i>Spartina</i> , see page 25) ☐ 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	
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? ☒ Yes - Go to SC 2.2 ☐ No - Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? ☐ Yes = Category I ☒ No = Not WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? ☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? ☐ Yes - Go to SC 3.3 ☒ No - Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? ☐ Yes - Go to SC 3.3 ☒ No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? ☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? ☐ Yes = Is a Category I bog ☐ No = Is not a bog	

SC 4.0. Forested Wetlands Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i> ☐ 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	
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 (<i>needs to be measured near the bottom</i>) ☐ 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 on p. 100). ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. ☐ The wetland is larger than 1/10 ac (4350 ft²) ☐ Yes = Category I ☐ No = Category II	
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i> In practical terms that means the following geographic areas: ☐ Long Beach Peninsula: Lands west of SR 103 ☐ Grayland-Westport: Lands west of SR 105 ☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109 ☐ Yes - Go to SC 6.1 ☒ No = Not an interdunal wetland for rating 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	
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Dixon Wetland C Date of site visit: 10/22/2024

Rated by Nicholas Denk Trained by Ecology? ☒ Yes ☐ No Date of training Mar-19

HGM Class used for rating Depressional & Flats Wetland has multiple HGM classes? ☐ Yes ☒ No

NOTE: Form is not complete with out the figures requested (*figures can be combined*).
Source of base aerial photo/map ESRI / Ecology Water Quality Atlas

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
- X

Category III - Total score = 16 - 19
- Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
List appropriate rating (H, M, L)				
Site Potential	M	M	L	
Landscape Potential	L	L	H	
Value	H	H	M	
Score Based on Ratings	6	6	6	Total 18

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

9 = H, H, H

8 = H, H, M

7 = H, H, L

7 = H, M, M

6 = H, M, L

6 = M, M, M

5 = H, L, L

5 = M, M, L

4 = M, L, L

3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetland in Western Washington

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

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

☒ NO - go to 2

☐ YES - the wetland class is **Tidal Fringe** - go to 1.1

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

☐ NO - **Saltwater Tidal Fringe (Estuarine)**

☐ YES - **Freshwater Tidal Fringe**

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

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

☒ NO - go to 3

☐ YES - The wetland class is **Flats**

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

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

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

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

☒ NO - go to 4

☐ YES - The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

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

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

☐ The water leaves the wetland **without being impounded**.

☒ NO - go to 5

☐ YES - The wetland class is **Slope**

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

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

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

☐ The overbank flooding occurs at least once every 2 years.

☒ 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.*

NOTES and FIELD OBSERVATIONS:

DEPRESSIONAL AND FLATS WETLANDS**Water Quality Functions** - Indicators that the site functions to improve water quality

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

D 1.1. Characteristics of surface water outflows from the wetland:Wetland is a depression or flat depression (QUESTION 7 on key)
with no surface water leaving it (no outlet).

points = 3

Wetland has an intermittently flowing stream or ditch, OR highly
constricted permanently flowing outlet.

points = 2

☐ Wetland has an unconstricted, or slightly constricted, surface outlet
that is permanently flowing

points = 1

☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is
a permanently flowing ditch.

points = 1

3

D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true
organic (use NRCS definitions).

Yes = 4 No = 0

0

D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or
Forested Cowardin classes):

Wetland has persistent, ungrazed, plants > 95% of area

points = 5

Wetland has persistent, ungrazed, plants > 1/2 of area

points = 3

Wetland has persistent, ungrazed plants > 1/10 of area

points = 1

Wetland has persistent, ungrazed plants < 1/10 of area

points = 0

3

D 1.4. Characteristics of seasonal ponding or inundation:*This is the area that is ponded for at least 2 months. See description in manual.*

Area seasonally ponded is > 1/2 total area of wetland

points = 4

Area seasonally ponded is > 1/4 total area of wetland

points = 2

Area seasonally ponded is < 1/4 total area of wetland

points = 0

2

Total for D 1

Add the points in the boxes above

8

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

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

D 2.1. Does the wetland unit receive stormwater discharges?

Yes = 1 No = 0

0

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

Yes = 1 No = 0

0

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

Yes = 1 No = 0

0

D 2.4. Are there other sources of pollutants coming into the wetland that are
not listed in questions D 2.1 - D 2.3?

Source

Yes = 1 No = 0

0

Total for D 2

Add the points in the boxes above

0

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

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

D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream,
river, lake, or marine water that is on the 303(d) list?

Yes = 1 No = 0

0

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

Yes = 1 No = 0

1

D 3.3. Has the site been identified in a watershed or local plan as important
for maintaining water quality (answer YES if there is a TMDL for the basin in
which the unit is found)?

Yes = 2 No = 0

2

Total for D 3

Add the points in the boxes above

3

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

Record the rating on the first page

DEPRESSIONAL AND FLATS WETLANDS**Hydrologic Functions** - Indicators that the site functions to reduce flooding and stream degradation

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

D 4.1. Characteristics of surface water outflows from the wetland:

- | | | |
|---|------------|---|
| Wetland is a depression or flat depression with no surface water leaving it (no outlet) | points = 4 | 4 |
| Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet | points = 2 | |
| Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch | points = 1 | |
| Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing | points = 0 | |

D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.*

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

D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.*

- | | | |
|---|------------|--|
| ☐ The area of the basin is less than 10 times the area of the unit | points = 5 | |
| The area of the basin is 10 to 100 times the area of the unit | points = 3 | |
| The area of the basin is more than 100 times the area of the unit | points = 0 | |
| ☐ Entire wetland is in the Flats class | points = 5 | |

Total for D 4 Add the points in the boxes above **7****Rating of Site Potential** If score is: ☐ 12 - 16 = H ☒ 6 - 11 = M ☐ 0 - 5 = L Record the rating on the first page

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

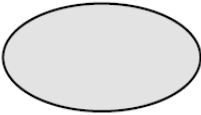
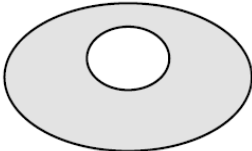
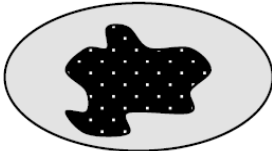
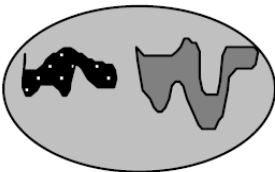
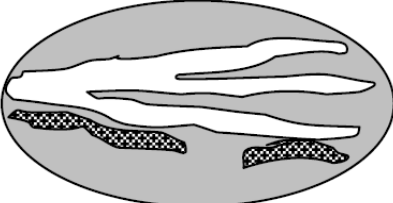
D 5.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0 **0**D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0 **0**D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0 **0**Total for D 5 Add the points in the boxes above **0****Rating of Landscape Potential** If score is: ☐ 3 = H ☐ 1 or 2 = M ☒ 0 = L Record the rating on the first page

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

D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.

- | | |
|--|---|
| The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon | 2 |
| <ul style="list-style-type: none"> • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-gradient. points = 1 | |
| ☐ Flooding from groundwater is an issue in the sub-basin. points = 1 | |
| ☐ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0 | |
| ☐ There are no problems with flooding downstream of the wetland. points = 0 | |

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0 **0**Total for D 6 Add the points in the boxes above **2****Rating of Value** If score is: ☒ 2 - 4 = H ☐ 1 = M ☐ 0 = L Record the rating on the first page

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: <i>Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i>	
☐ Aquatic bed ☒ Emergent ☒ Scrub-shrub (areas where shrubs have > 30% cover) ☐ Forested (areas where trees have > 30% cover) <i>If the unit has a Forested class, check if:</i> ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon 4 structures or more: points = 4 3 structures: points = 2 2 structures: points = 1 1 structure: points = 0	1
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).	
☐ Permanently flooded or inundated ☒ Seasonally flooded or inundated ☐ Occasionally flooded or inundated ☒ Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland ☐ Freshwater tidal wetland 4 or more types present: points = 3 3 types present: points = 2 2 types present: points = 1 1 types present: points = 0 2 points 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 . <i>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i>	
If you counted: > 19 species 5 - 19 species < 5 species points = 2 points = 1 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. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i>	
 None = 0 points  Low = 1 point  Moderate = 2 points  All three diagrams in this row are HIGH = 3 points  	1

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

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 function of the site?		
H 2.1 Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). <i>Calculate:</i> 28 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 38%		
If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0		3
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate:</i> 36 % undisturbed habitat + (29 % moderate & low intensity land uses / 2) = 50.5%		
Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0		3
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0		0
Total for H 2		6

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

H 3.0. Is the habitat provided by the site valuable to society?		
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated.		
Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan		1
Site has 1 or 2 priority habitats (listed on next page) with in 100m 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

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

<http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here:

<http://wdfw.wa.gov/conservation/phs/list/>

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

- ☐ **Aspen Stands**: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- ☐ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- ☐ **Herbaceous Balds**: Variable size patches of grass and forbs on shallow soils over bedrock.
- ☐ **Old-growth/Mature forests**: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
- ☐ **Oregon White Oak**: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- ☐ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- ☐ **Westside Prairies**: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- ☐ **Instream**: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- ☐ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- ☐ **Caves**: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- ☐ **Cliffs**: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- ☐ **Talus**: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- ☒ **Snags and Logs**: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.</i>	
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	
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 <i>Spartina</i> , see page 25) ☐ 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	
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? ☒ Yes - Go to SC 2.2 ☐ No - Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? ☐ Yes = Category I ☒ No = Not WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? ☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? ☐ Yes - Go to SC 3.3 ☒ No - Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? ☐ Yes - Go to SC 3.3 ☒ No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? ☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? ☐ Yes = Is a Category I bog ☐ No = Is not a bog	

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**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- ☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- ☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☒ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

- ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).
- ☐ At least $\frac{3}{4}$ 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 $\frac{1}{10}$ ac (4350 ft²)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

- ☐ Long Beach Peninsula: Lands west of SR 103
- ☐ Grayland-Westport: Lands west of SR 105
- ☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☒ No = **Not an interdunal wetland for rating**

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**

Category of wetland based on Special Characteristics

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

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Dixon Wetland DEFG (mosaic) Date of site visit: 10/22/2024

Rated by Nicholas Denk Trained by Ecology? ☒ Yes ☐ No Date of training Mar-19

HGM Class used for rating Depressional & Flats Wetland has multiple HGM classes? ☐ Yes ☒ No

NOTE: Form is not complete with out the figures requested (figures can be combined).
Source of base aerial photo/map ESRI / Ecology Water Quality Atlas

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
- X

Category III - Total score = 16 - 19
- Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
List appropriate rating (H, M, L)				
Site Potential	M	M	M	
Landscape Potential	L	L	H	
Value	H	H	M	
Score Based on Ratings	6	6	7	Total 19

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

9 = H, H, H

8 = H, H, M

7 = H, H, L

7 = H, M, M

6 = H, M, L

6 = M, M, M

5 = H, L, L

5 = M, M, L

4 = M, L, L

3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetland in Western Washington

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

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

☒ NO - go to 2

☐ YES - the wetland class is **Tidal Fringe** - go to 1.1

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

☐ NO - **Saltwater Tidal Fringe (Estuarine)**

☐ YES - **Freshwater Tidal Fringe**

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

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

☒ NO - go to 3

☐ YES - The wetland class is **Flats**

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

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

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

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

☒ NO - go to 4

☐ YES - The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

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

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

☐ The water leaves the wetland **without being impounded**.

☒ NO - go to 5

☐ YES - The wetland class is **Slope**

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

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

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

☐ The overbank flooding occurs at least once every 2 years.

☒ 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.*

NOTES and FIELD OBSERVATIONS:

DEPRESSIONAL AND FLATS WETLANDS**Water Quality Functions** - Indicators that the site functions to improve water quality

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

D 1.1. Characteristics of surface water outflows from the wetland:Wetland is a depression or flat depression (QUESTION 7 on key)
with no surface water leaving it (no outlet).

points = 3

Wetland has an intermittently flowing stream or ditch, OR highly
constricted permanently flowing outlet.

points = 2

☐ Wetland has an unconstricted, or slightly constricted, surface outlet
that is permanently flowing

points = 1

☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is
a permanently flowing ditch.

points = 1

3

D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true
organic (use NRCS definitions).

Yes = 4 No = 0

0

D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or
Forested Cowardin classes):

Wetland has persistent, ungrazed, plants > 95% of area

points = 5

Wetland has persistent, ungrazed, plants > 1/2 of area

points = 3

Wetland has persistent, ungrazed plants > 1/10 of area

points = 1

Wetland has persistent, ungrazed plants < 1/10 of area

points = 0

3

D 1.4. Characteristics of seasonal ponding or inundation:*This is the area that is ponded for at least 2 months. See description in manual.*

Area seasonally ponded is > 1/2 total area of wetland

points = 4

Area seasonally ponded is > 1/4 total area of wetland

points = 2

Area seasonally ponded is < 1/4 total area of wetland

points = 0

2

Total for D 1

Add the points in the boxes above

8

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

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

D 2.1. Does the wetland unit receive stormwater discharges?

Yes = 1 No = 0

0

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

Yes = 1 No = 0

0

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

Yes = 1 No = 0

0

D 2.4. Are there other sources of pollutants coming into the wetland that are
not listed in questions D 2.1 - D 2.3?

Source

Yes = 1 No = 0

0

Total for D 2

Add the points in the boxes above

0

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

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

D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream,
river, lake, or marine water that is on the 303(d) list?

Yes = 1 No = 0

0

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

Yes = 1 No = 0

1

D 3.3. Has the site been identified in a watershed or local plan as important
for maintaining water quality (answer YES if there is a TMDL for the basin in
which the unit is found)?

Yes = 2 No = 0

2

Total for D 3

Add the points in the boxes above

3

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

Record the rating on the first page

DEPRESSIONAL AND FLATS WETLANDS**Hydrologic Functions** - Indicators that the site functions to reduce flooding and stream degradation

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

D 4.1. Characteristics of surface water outflows from the wetland:

- | | | |
|---|------------|---|
| Wetland is a depression or flat depression with no surface water leaving it (no outlet) | points = 4 | 4 |
| Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet | points = 2 | |
| Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch | points = 1 | |
| Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing | points = 0 | |

D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.*

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

D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.*

- | | | |
|---|------------|---|
| ☐ The area of the basin is less than 10 times the area of the unit | points = 5 | 3 |
| The area of the basin is 10 to 100 times the area of the unit | points = 3 | |
| The area of the basin is more than 100 times the area of the unit | points = 0 | |
| ☐ Entire wetland is in the Flats class | points = 5 | |

Total for D 4 Add the points in the boxes above **7****Rating of Site Potential** If score is: ☐ 12 - 16 = H ☒ 6 - 11 = M ☐ 0 - 5 = L Record the rating on the first page

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

D 5.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0 0

D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0 0

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0 0

Total for D 5 Add the points in the boxes above **0****Rating of Landscape Potential** If score is: ☐ 3 = H ☐ 1 or 2 = M ☒ 0 = L Record the rating on the first page

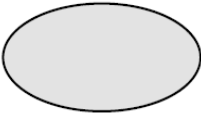
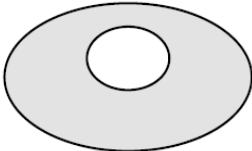
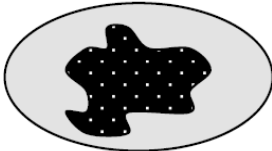
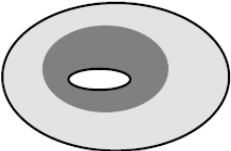
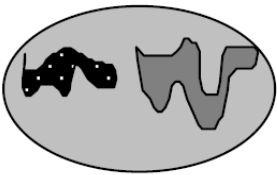
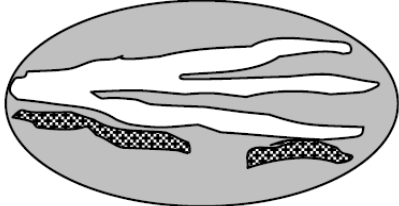
D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.

- | | |
|---|---|
| The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon | 2 |
| ☐ • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 | |
| ☐ • Surface flooding problems are in a sub-basin farther down-gradient. points = 1 | |
| ☐ Flooding from groundwater is an issue in the sub-basin. points = 1 | |
| ☐ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0 | 0 |
| ☐ There are no problems with flooding downstream of the wetland. points = 0 | |

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0 0

Total for D 6 Add the points in the boxes above **2****Rating of Value** If score is: ☒ 2 - 4 = H ☐ 1 = M ☐ 0 = L Record the rating on the first page

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: <i>Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i>	
☐ Aquatic bed ☒ Emergent ☒ Scrub-shrub (areas where shrubs have > 30% cover) ☒ Forested (areas where trees have > 30% cover) <i>If the unit has a Forested class, check if:</i> ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon 4 structures or more: points = 4 3 structures: points = 2 2 structures: points = 1 1 structure: points = 0	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 or ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).	
☐ Permanently flooded or inundated ☒ Seasonally flooded or inundated ☐ Occasionally flooded or inundated ☒ Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland ☐ Freshwater tidal wetland 4 or more types present: points = 3 3 types present: points = 2 2 types present: points = 1 1 types present: points = 0 2 points 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 . <i>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i>	
If you counted: > 19 species 5 - 19 species < 5 species points = 2 points = 1 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. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i>	
 None = 0 points  Low = 1 point  Moderate = 2 points    	1

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i>		2
☒ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)		
☒ Standing snags (dbh > 4 in) within the wetland		
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)		
☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)		
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by</i>)		
☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)		
Total for H 1		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 function of the site?		
H 2.1 Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). <i>Calculate:</i> 28 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 38%		
If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon 20 - 33% of 1 km Polygon 10 - 19% of 1 km Polygon < 10 % of 1 km Polygon	points = 3 points = 2 points = 1 points = 0	3
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate:</i> 36 % undisturbed habitat + (29 % moderate & low intensity land uses / 2) = 50.5%		
Undisturbed habitat > 50% of Polygon Undisturbed habitat 10 - 50% and in 1-3 patches Undisturbed habitat 10 - 50% and > 3 patches Undisturbed habitat < 10% of 1 km Polygon	points = 3 points = 2 points = 1 points = 0	3
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use ≤ 50% of 1km Polygon is high intensity		
	points = (-2) points = 0	0
Total for H 2		6

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)		1
☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)		
☐ It is mapped as a location for an individual WDFW priority species		
☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources		
☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan		
Site has 1 or 2 priority habitats (listed on next page) within 100m		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

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

<http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here:

<http://wdfw.wa.gov/conservation/phs/list/>

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

- ☐ **Aspen Stands**: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- ☐ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- ☐ **Herbaceous Balds**: Variable size patches of grass and forbs on shallow soils over bedrock.
- ☐ **Old-growth/Mature forests**: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
- ☐ **Oregon White Oak**: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- ☐ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- ☐ **Westside Prairies**: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- ☐ **Instream**: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- ☐ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- ☐ **Caves**: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- ☐ **Cliffs**: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- ☐ **Talus**: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- ☒ **Snags and Logs**: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.</i>	
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	
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 <i>Spartina</i> , see page 25) ☐ 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	
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? ☒ Yes - Go to SC 2.2 ☐ No - Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? ☐ Yes = Category I ☒ No = Not WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? ☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? ☐ Yes - Go to SC 3.3 ☒ No - Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? ☐ Yes - Go to SC 3.3 ☒ No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? ☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? ☐ Yes = Is a Category I bog ☐ No = Is not a bog	

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**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- ☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- ☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☒ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

- ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).
- ☐ At least $\frac{3}{4}$ 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 $\frac{1}{10}$ ac (4350 ft²)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

- ☐ Long Beach Peninsula: Lands west of SR 103
- ☐ Grayland-Westport: Lands west of SR 105
- ☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☒ No = **Not an interdunal wetland for rating**

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**

Category of wetland based on Special Characteristics

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

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Dixon Wetland H Date of site visit: 10/22/2024

Rated by Nicholas Denk Trained by Ecology? ☒ Yes ☐ No Date of training Mar-19

HGM Class used for rating Depressional & Flats Wetland has multiple HGM classes? ☐ Yes ☒ No

NOTE: Form is not complete with out the figures requested (figures can be combined).
Source of base aerial photo/map ESRI / Ecology Water Quality Atlas

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
- X **Category III** - Total score = 16 - 19
- Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
List appropriate rating (H, M, L)				
Site Potential	M	H	L	
Landscape Potential	L	L	H	
Value	H	H	M	
Score Based on Ratings	6	7	6	19

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

9 = H, H, H

8 = H, H, M

7 = H, H, L

7 = H, M, M

6 = H, M, L

6 = M, M, M

5 = H, L, L

5 = M, M, L

4 = M, L, L

3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetland in Western Washington

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

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

☒ **NO** - go to 2

☐ **YES** - the wetland class is **Tidal Fringe** - go to 1.1

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

☐ **NO - Saltwater Tidal Fringe (Estuarine)**

☐ **YES - Freshwater Tidal Fringe**

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

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

☒ **NO** - go to 3

☐ **YES** - The wetland class is **Flats**

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

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

- ☐ The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
- ☐ At least 30% of the open water area is deeper than 6.6 ft (2 m).

☒ **NO** - go to 4

☐ **YES** - The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

- ☐ The wetland is on a slope (*slope can be very gradual*),
- ☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
- ☐ The water leaves the wetland **without being impounded**.

☒ **NO** - go to 5

☐ **YES** - The wetland class is **Slope**

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

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

- ☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ☐ The overbank flooding occurs at least once every 2 years.

☒ **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.*

NOTES and FIELD OBSERVATIONS:

DEPRESSIONAL AND FLATS WETLANDS**Water Quality Functions** - Indicators that the site functions to improve water quality

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

D 1.1. Characteristics of surface water outflows from the wetland:Wetland is a depression or flat depression (QUESTION 7 on key)
with no surface water leaving it (no outlet).

points = 3

Wetland has an intermittently flowing stream or ditch, OR highly
constricted permanently flowing outlet.

points = 2

☐ Wetland has an unconstricted, or slightly constricted, surface outlet
that is permanently flowing

points = 1

☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is
a permanently flowing ditch.

points = 1

3

D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true
organic (use NRCS definitions).

Yes = 4 No = 0

0

D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or
Forested Cowardin classes):

Wetland has persistent, ungrazed, plants > 95% of area

points = 5

Wetland has persistent, ungrazed, plants > 1/2 of area

points = 3

Wetland has persistent, ungrazed plants > 1/10 of area

points = 1

Wetland has persistent, ungrazed plants < 1/10 of area

points = 0

1

D 1.4. Characteristics of seasonal ponding or inundation:*This is the area that is ponded for at least 2 months. See description in manual.*

Area seasonally ponded is > 1/2 total area of wetland

points = 4

Area seasonally ponded is > 1/4 total area of wetland

points = 2

Area seasonally ponded is < 1/4 total area of wetland

points = 0

2

Total for D 1

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

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

D 2.1. Does the wetland unit receive stormwater discharges?

Yes = 1 No = 0

0

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

Yes = 1 No = 0

0

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

Yes = 1 No = 0

0

D 2.4. Are there other sources of pollutants coming into the wetland that are
not listed in questions D 2.1 - D 2.3?

Source

Yes = 1 No = 0

0

Total for D 2

Add the points in the boxes above

0

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

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

D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream,
river, lake, or marine water that is on the 303(d) list?

Yes = 1 No = 0

0

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

Yes = 1 No = 0

1

D 3.3. Has the site been identified in a watershed or local plan as important
for maintaining water quality (answer YES if there is a TMDL for the basin in
which the unit is found)?

Yes = 2 No = 0

2

Total for D 3

Add the points in the boxes above

3

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

Record the rating on the first page

DEPRESSIONAL AND FLATS WETLANDS**Hydrologic Functions** - Indicators that the site functions to reduce flooding and stream degradation**D 4.0.** Does the site have the potential to reduce flooding and erosion?**D 4.1.** Characteristics of surface water outflows from the wetland:

- | | | |
|---|------------|---|
| Wetland is a depression or flat depression with no surface water leaving it (no outlet) | points = 4 | 4 |
| Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet | points = 2 | |
| Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch | points = 1 | |
| Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing | points = 0 | |

D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.*

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

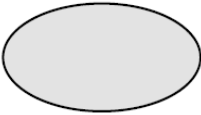
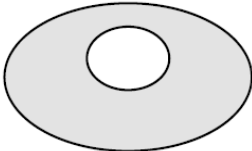
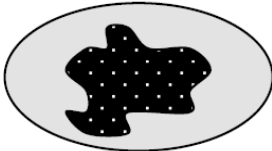
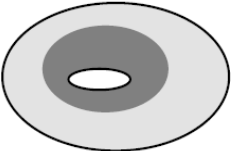
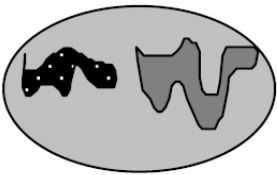
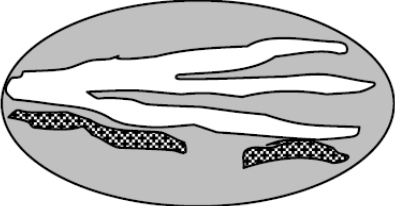
D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.*

- | | | |
|--|------------|---|
| ☒ The area of the basin is less than 10 times the area of the unit | points = 5 | 5 |
| The area of the basin is 10 to 100 times the area of the unit | points = 3 | |
| The area of the basin is more than 100 times the area of the unit | points = 0 | |
| ☐ Entire wetland is in the Flats class | points = 5 | |

Total for D 4 Add the points in the boxes above **12****Rating of Site Potential** If score is: ☒ **12 - 16 = H** ☐ **6 - 11 = M** ☐ **0 - 5 = L** Record the rating on the first page**D 5.0.** Does the landscape have the potential to support hydrologic function of the site?**D 5.1.** Does the wetland unit receive stormwater discharges? Yes = 1 No = 0 **0****D 5.2.** Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0 **0****D 5.3.** Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0 **0**Total for D 5 Add the points in the boxes above **0****Rating of Landscape Potential** If score is: ☐ **3 = H** ☐ **1 or 2 = M** ☒ **0 = L** Record the rating on the first page**D 6.0.** Are the hydrologic functions provided by the site valuable to society?**D 6.1.** The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.

- | | |
|--|------------|
| The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon | 2 |
| ☐ • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 | |
| ☐ • Surface flooding problems are in a sub-basin farther down-gradient. points = 1 | |
| ☐ Flooding from groundwater is an issue in the sub-basin. points = 1 | |
| ☐ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why | points = 0 |
| ☐ There are no problems with flooding downstream of the wetland. | points = 0 |

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0 **0**Total for D 6 Add the points in the boxes above **2****Rating of Value** If score is: ☒ **2 - 4 = H** ☐ **1 = M** ☐ **0 = L** Record the rating on the first page

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: <i>Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i>	
☐ Aquatic bed ☒ Emergent ☐ Scrub-shrub (areas where shrubs have > 30% cover) ☐ Forested (areas where trees have > 30% cover) <i>If the unit has a Forested class, check if:</i> ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon 4 structures or more: points = 4 3 structures: points = 2 2 structures: points = 1 1 structure: points = 0	0
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).	
☐ Permanently flooded or inundated ☒ Seasonally flooded or inundated ☐ Occasionally flooded or inundated ☒ Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland ☐ Freshwater tidal wetland 4 or more types present: points = 3 3 types present: points = 2 2 types present: points = 1 1 types present: points = 0 2 points 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 . <i>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i>	
If you counted: > 19 species 5 - 19 species < 5 species points = 2 points = 1 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. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i>	
 None = 0 points  Low = 1 point  Moderate = 2 points     All three diagrams in this row are HIGH = 3 points	0

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i>		1
☒ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)		
☐ Standing snags (dbh > 4 in) within the wetland		
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)		
☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)		
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by</i>)		
☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)		
Total for H 1		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 function of the site?		
H 2.1 Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). <i>Calculate:</i>		
28 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 38%		3
If total accessible habitat is:		
> 1/3 (33.3%) of 1 km Polygon points = 3		
20 - 33% of 1 km Polygon points = 2		
10 - 19% of 1 km Polygon points = 1		
< 10 % of 1 km Polygon points = 0		
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate:</i>		
36 % undisturbed habitat + (29 % moderate & low intensity land uses / 2) = 50.5%		3
Undisturbed habitat > 50% of Polygon points = 3		
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2		
Undisturbed habitat 10 - 50% and > 3 patches points = 1		
Undisturbed habitat < 10% of 1 km Polygon points = 0		
H 2.3 Land use intensity in 1 km Polygon: If		
> 50% of 1 km Polygon is high intensity land use points = (-2)		0
≤ 50% of 1km Polygon is high intensity points = 0		
Total for H 2		6

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		1
☐ It has 3 or more priority habitats within 100 m (see next page)		
☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)		
☐ It is mapped as a location for an individual WDFW priority species		
☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources		
☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan		
Site has 1 or 2 priority habitats (listed on next page) with in 100m 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

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

<http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here:

<http://wdfw.wa.gov/conservation/phs/list/>

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

- ☐ **Aspen Stands**: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- ☐ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- ☐ **Herbaceous Balds**: Variable size patches of grass and forbs on shallow soils over bedrock.
- ☐ **Old-growth/Mature forests**: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
- ☐ **Oregon White Oak**: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- ☐ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- ☐ **Westside Prairies**: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- ☐ **Instream**: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- ☐ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- ☐ **Caves**: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- ☐ **Cliffs**: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- ☐ **Talus**: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- ☒ **Snags and Logs**: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.</i>	
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	
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 <i>Spartina</i> , see page 25) ☐ 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	
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? ☒ Yes - Go to SC 2.2 ☐ No - Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? ☐ Yes = Category I ☒ No = Not WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? ☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? ☐ Yes - Go to SC 3.3 ☒ No - Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? ☐ Yes - Go to SC 3.3 ☒ No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? ☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? ☐ Yes = Is a Category I bog ☐ No = Is not a bog	

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**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- ☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- ☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☒ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

- ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).
- ☐ At least $\frac{3}{4}$ 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 $\frac{1}{10}$ ac (4350 ft²)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

- ☐ Long Beach Peninsula: Lands west of SR 103
- ☐ Grayland-Westport: Lands west of SR 105
- ☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☒ No = **Not an interdunal wetland for rating**

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**

Category of wetland based on Special Characteristics

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

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Dixon Wetland I Date of site visit: 10/22/2024

Rated by Nicholas Denk Trained by Ecology? Yes No Date of training Mar-19

HGM Class used for rating Depressional & Flats Wetland has multiple HGM classes? Yes No

NOTE: Form is not complete with out the figures requested (figures can be combined).
Source of base aerial photo/map ESRI / Ecology Water Quality Atlas

OVERALL WETLAND CATEGORY (based on functions or special characteristics)

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
List appropriate rating (H, M, L)				
Site Potential				
Landscape Potential				
Value				Total
Score Based on Ratings				0

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetland in Western Washington

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

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

☒ NO - go to 2

☐ YES - the wetland class is **Tidal Fringe** - go to 1.1

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

☐ NO - **Saltwater Tidal Fringe (Estuarine)**

☐ YES - **Freshwater Tidal Fringe**

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

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

☒ NO - go to 3

☐ YES - The wetland class is **Flats**

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

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

- ☐ The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
- ☐ At least 30% of the open water area is deeper than 6.6 ft (2 m).

☒ NO - go to 4

☐ YES - The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

- ☐ The wetland is on a slope (*slope can be very gradual*),
- ☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
- ☐ The water leaves the wetland **without being impounded**.

☒ NO - go to 5

☐ YES - The wetland class is **Slope**

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

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

- ☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ☐ The overbank flooding occurs at least once every 2 years.

☒ 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.*

NOTES and FIELD OBSERVATIONS:

DEPRESSIONAL AND FLATS WETLANDS**Water Quality Functions** - Indicators that the site functions to improve water quality

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

D 1.1. Characteristics of surface water outflows from the wetland:Wetland is a depression or flat depression (QUESTION 7 on key)
with no surface water leaving it (no outlet).

points = 3

Wetland has an intermittently flowing stream or ditch, OR highly
constricted permanently flowing outlet.

points = 2

☐ Wetland has an unconstricted, or slightly constricted, surface outlet
that is permanently flowing

points = 1

☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is
a permanently flowing ditch.

points = 1

3

D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true
organic (use NRCS definitions).

Yes = 4 No = 0

0

D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or
Forested Cowardin classes):

Wetland has persistent, ungrazed, plants > 95% of area

points = 5

Wetland has persistent, ungrazed, plants > 1/2 of area

points = 3

Wetland has persistent, ungrazed plants > 1/10 of area

points = 1

Wetland has persistent, ungrazed plants < 1/10 of area

points = 0

1

D 1.4. Characteristics of seasonal ponding or inundation:*This is the area that is ponded for at least 2 months. See description in manual.*

Area seasonally ponded is > 1/2 total area of wetland

points = 4

Area seasonally ponded is > 1/4 total area of wetland

points = 2

Area seasonally ponded is < 1/4 total area of wetland

points = 0

4

Total for D 1

Add the points in the boxes above

8

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

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

D 2.1. Does the wetland unit receive stormwater discharges?

Yes = 1 No = 0

0

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

Yes = 1 No = 0

0

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

Yes = 1 No = 0

0

D 2.4. Are there other sources of pollutants coming into the wetland that are
not listed in questions D 2.1 - D 2.3?

Source

Yes = 1 No = 0

0

Total for D 2

Add the points in the boxes above

0

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

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

D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream,
river, lake, or marine water that is on the 303(d) list?

Yes = 1 No = 0

0

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

Yes = 1 No = 0

1

D 3.3. Has the site been identified in a watershed or local plan as important
for maintaining water quality (answer YES if there is a TMDL for the basin in
which the unit is found)?

Yes = 2 No = 0

2

Total for D 3

Add the points in the boxes above

3

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

Record the rating on the first page

DEPRESSIONAL AND FLATS WETLANDS**Hydrologic Functions** - Indicators that the site functions to reduce flooding and stream degradation**D 4.0. Does the site have the potential to reduce flooding and erosion?****D 4.1. Characteristics of surface water outflows from the wetland:**

- | | | |
|---|------------|---|
| Wetland is a depression or flat depression with no surface water leaving it (no outlet) | points = 4 | 4 |
| Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet | points = 2 | |
| Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch | points = 1 | |
| Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing | points = 0 | |

D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.

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

D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.

- | | | |
|---|------------|---|
| ☐ The area of the basin is less than 10 times the area of the unit | points = 5 | 3 |
| The area of the basin is 10 to 100 times the area of the unit | points = 3 | |
| The area of the basin is more than 100 times the area of the unit | points = 0 | |
| ☐ Entire wetland is in the Flats class | points = 5 | |

Total for D 4	Add the points in the boxes above	7
---------------	-----------------------------------	----------

Rating of Site Potential If score is: ☐ 12 - 16 = H ☒ 6 - 11 = M ☐ 0 - 5 = L Record the rating on the first page**D 5.0. Does the landscape have the potential to support hydrologic function of the site?**

D 5.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	0
---	----------------	---

D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	0
--	----------------	---

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0	0
---	----------------	---

Total for D 5	Add the points in the boxes above	0
---------------	-----------------------------------	----------

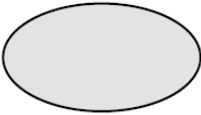
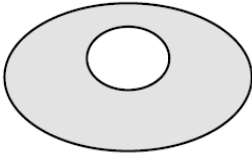
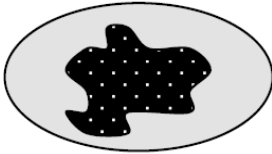
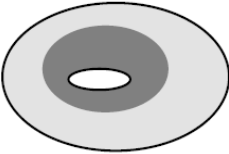
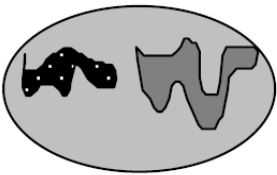
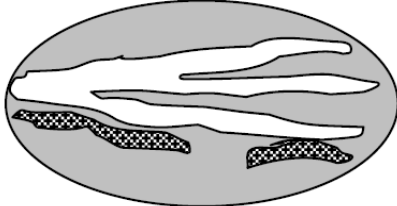
Rating of Landscape Potential If score is: ☐ 3 = H ☐ 1 or 2 = M ☒ 0 = L Record the rating on the first page**D 6.0. Are the hydrologic functions provided by the site valuable to society?****D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.**

- | | |
|--|------------|
| The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon | 2 |
| <ul style="list-style-type: none"> Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 | |
| <ul style="list-style-type: none"> Surface flooding problems are in a sub-basin farther down-gradient. points = 1 | |
| <ul style="list-style-type: none"> Flooding from groundwater is an issue in the sub-basin. points = 1 | |
| ☐ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why | points = 0 |
| ☐ There are no problems with flooding downstream of the wetland. | points = 0 |

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0	0
--	----------------	---

Total for D 6	Add the points in the boxes above	2
---------------	-----------------------------------	----------

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

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: <i>Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i>	
☐ Aquatic bed ☒ Emergent ☐ Scrub-shrub (areas where shrubs have > 30% cover) ☐ Forested (areas where trees have > 30% cover) <i>If the unit has a Forested class, check if:</i> ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon 4 structures or more: points = 4 3 structures: points = 2 2 structures: points = 1 1 structure: points = 0	0
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).	
☐ Permanently flooded or inundated ☒ Seasonally flooded or inundated ☐ Occasionally flooded or inundated ☐ Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland ☐ Freshwater tidal wetland 4 or more types present: points = 3 3 types present: points = 2 2 types present: points = 1 1 types present: points = 0 2 points 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 . <i>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i>	
If you counted: > 19 species 5 - 19 species < 5 species points = 2 points = 1 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. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i>	
 None = 0 points  Low = 1 point  Moderate = 2 points     All three diagrams in this row are HIGH = 3 points	0

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i>		1
☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)		
☐ Standing snags (dbh > 4 in) within the wetland		
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)		
☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)		
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by</i>)		
☒ Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)		
Total for H 1		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 function of the site?		
H 2.1 Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). <i>Calculate:</i>		
28 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 38%		3
If total accessible habitat is:		
> 1/3 (33.3%) of 1 km Polygon points = 3		
20 - 33% of 1 km Polygon points = 2		
10 - 19% of 1 km Polygon points = 1		
< 10 % of 1 km Polygon points = 0		
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate:</i>		
36 % undisturbed habitat + (29 % moderate & low intensity land uses / 2) = 50.5%		3
Undisturbed habitat > 50% of Polygon points = 3		
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2		
Undisturbed habitat 10 - 50% and > 3 patches points = 1		
Undisturbed habitat < 10% of 1 km Polygon points = 0		
H 2.3 Land use intensity in 1 km Polygon: If		
> 50% of 1 km Polygon is high intensity land use points = (-2)		0
≤ 50% of 1km Polygon is high intensity points = 0		
Total for H 2		6

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		1
☐ It has 3 or more priority habitats within 100 m (see next page)		
☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)		
☐ It is mapped as a location for an individual WDFW priority species		
☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources		
☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan		
Site has 1 or 2 priority habitats (listed on next page) with in 100m 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

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

<http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here:

<http://wdfw.wa.gov/conservation/phs/list/>

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

- ☐ **Aspen Stands**: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- ☐ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- ☐ **Herbaceous Balds**: Variable size patches of grass and forbs on shallow soils over bedrock.
- ☐ **Old-growth/Mature forests**: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
- ☐ **Oregon White Oak**: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- ☐ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- ☐ **Westside Prairies**: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- ☐ **Instream**: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- ☐ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- ☐ **Caves**: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- ☐ **Cliffs**: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- ☐ **Talus**: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- ☒ **Snags and Logs**: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.</i>	
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	
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 <i>Spartina</i> , see page 25) ☐ 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	
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? ☒ Yes - Go to SC 2.2 ☐ No - Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? ☐ Yes = Category I ☒ No = Not WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? ☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? ☐ Yes - Go to SC 3.3 ☒ No - Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? ☐ Yes - Go to SC 3.3 ☒ No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? ☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? ☐ Yes = Is a Category I bog ☐ No = Is not a bog	

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**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- ☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- ☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☒ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

- ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).
- ☐ At least $\frac{3}{4}$ 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 $\frac{1}{10}$ ac (4350 ft²)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

- ☐ Long Beach Peninsula: Lands west of SR 103
- ☐ Grayland-Westport: Lands west of SR 105
- ☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☒ No = **Not an interdunal wetland for rating**

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**

Category of wetland based on Special Characteristics

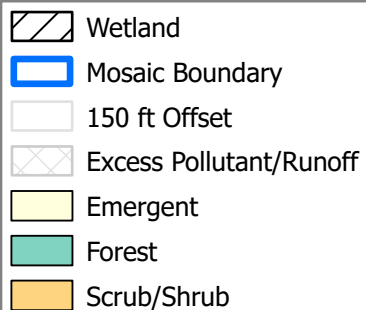
If you answered No for all types, enter "Not Applicable" on Summary Form

Dixon Property Skagit County, WA

November 2024

R1. Vegetation & 150 ft Offset

NAD 1983 HARN State Plane
Washington North FIPS 4601 (US Ft)
Map Created By: N. Denk



A: 8%
B: 9%
C: 0%
Mosaic (D,E,F,G): 0%
H: 0%
I: 0%



0 45 90 180
Feet



Dixon Property Skagit County, WA

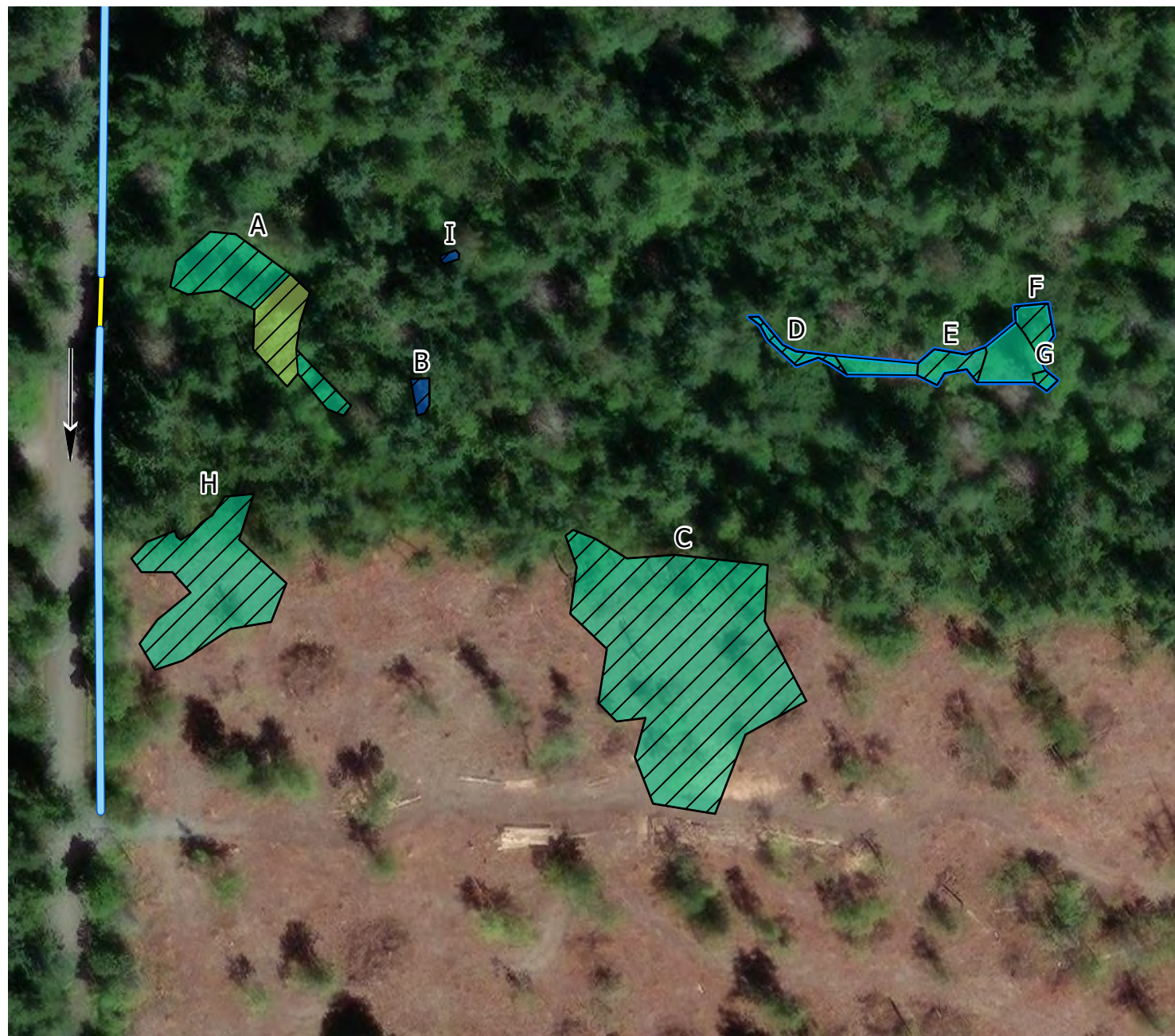
November 2024

R2. Hydrology

NAD 1983 HARN State Plane
Washington North FIPS 4601 (US Ft)

Map Created By: N. Denk

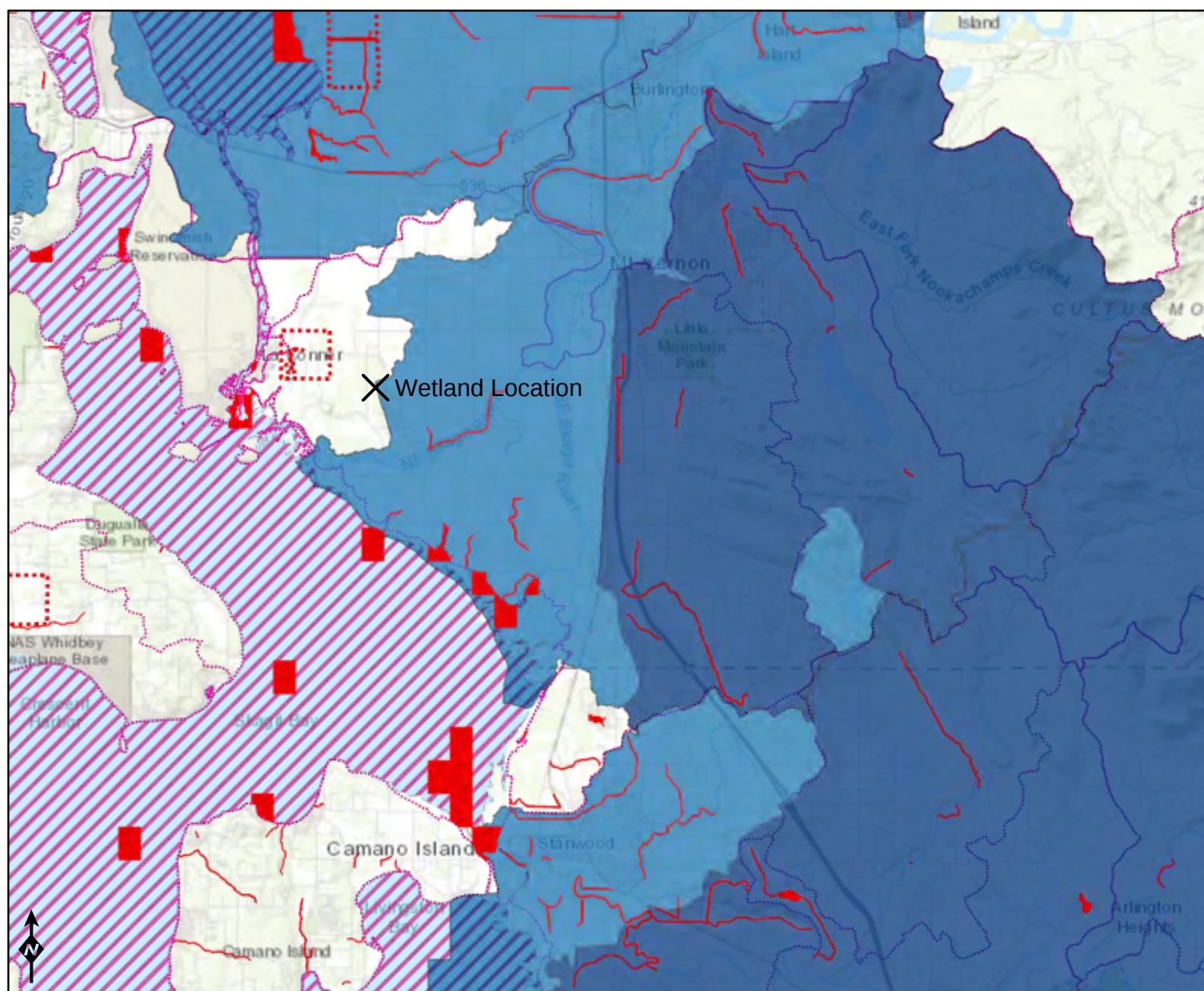
- Seasonally Saturated Only
- Seasonally Flooded
- Seasonally Flooded/Saturated
- Wetland
- Mosaic Boundary
- Culvert
- Ditch
- Flow Direction



hamer.

0 35 70 140 Feet

Figure3. 303(d) Waters & TMDLs

**Assessed Water/Sediment****Water**

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

WQ Improvement Projects

- TMDL - Approved
- 4B - Approved
- STI - Approved
- ARP - Approved
- TMDL - In Development
- STI - In Development
- ARP - In Development

Subbasins (12 digit HUCs)

- HUC boundary

Dixon Property Skagit County, WA

November 2024

R4. Contributing Basin

NAD 1983 HARN State Plane
Washington North FIPS 4601 (US Ft)
Map Created By: N. Denk

-  Wetland
-  Mosaic Boundary
-  Contributing Basin
-  Culvert
-  Ditch
-  Flow Direction

Basin:Wetland

A: 14

B: 15

C: 7

Mosaic (D,E,F,G): 42

H: 8

I: 54



0 45 90 180
 Feet



Dixon Property Skagit County, WA

November 2024

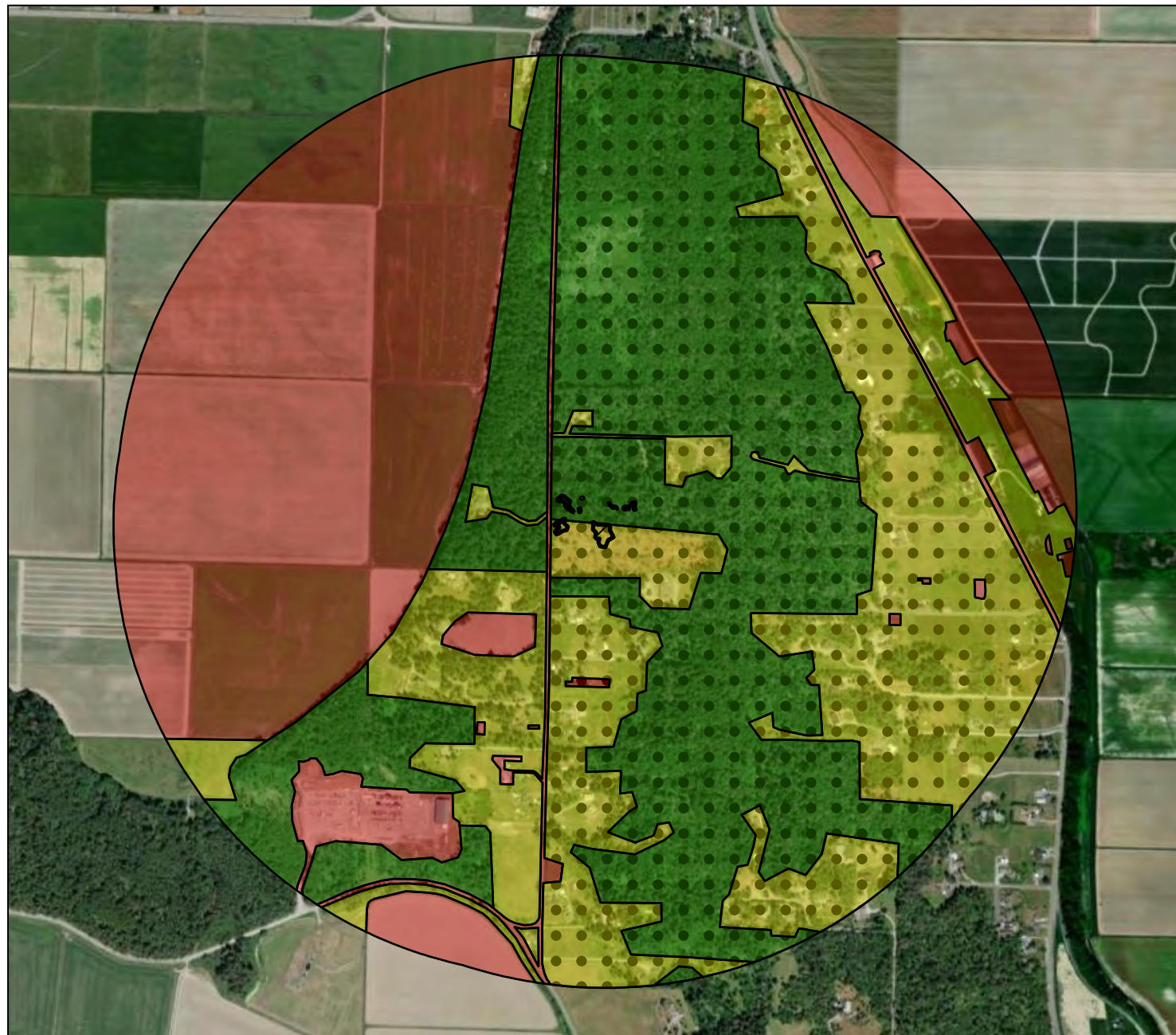
R5. 1km Habitat

NAD 1983 HARN State Plane
Washington North FIPS 4601 (US Ft)
Map Created By: N. Denk

-  Accessible Habitat
-  High Intensity
-  Moderate Intensity
-  Relatively Undisturbed
-  Wetland

hamer.

0 420 840 1,680
 Feet



Appendix E – Impact & Mitigation Maps

Dixon Property

Skagit County, WA

Revised May 15, 2026

Alternatives Analysis

NAD 1983 HARN State Plane
Washington North FIPS 4601 (US Ft)

Map Created By: N. Denk

-  Proposed Culvert
-  10 ft Maintenance Corridor
-  Proposed Gravel Driveway
-  Existing Culvert
-  Existing Ditch
-  Proposed Structure
-  50% Buffer Reduction
-  Parcel
-  110 ft Buffer
-  110 ft Potential Buffer
-  Mosaic Boundary
-  Wetland
- Boundary Type**
 -  Approximated
 -  Delineated



0 70 140 280
Feet



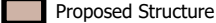
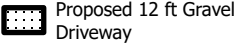
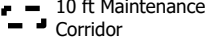
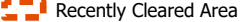
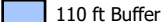
Dixon Property

Skagit County, WA

Revised July 2026

Proposed Impacts

NAD 1983 HARN State Plane
Washington North FIPS 4601 (US Ft)
Map Created By: N. Denk

-  Existing Culvert
-  Existing Ditch
-  Proposed Culvert
-  Proposed Structure
-  Proposed 12 ft Gravel Driveway
-  10 ft Maintenance Corridor
-  Recently Cleared Area
-  Wetland
-  Mosaic Boundary
-  Parcel
-  110 ft Buffer
-  110 ft Potential Buffer
-  50% Buffer Reduction
-  Wetland

Boundary Type

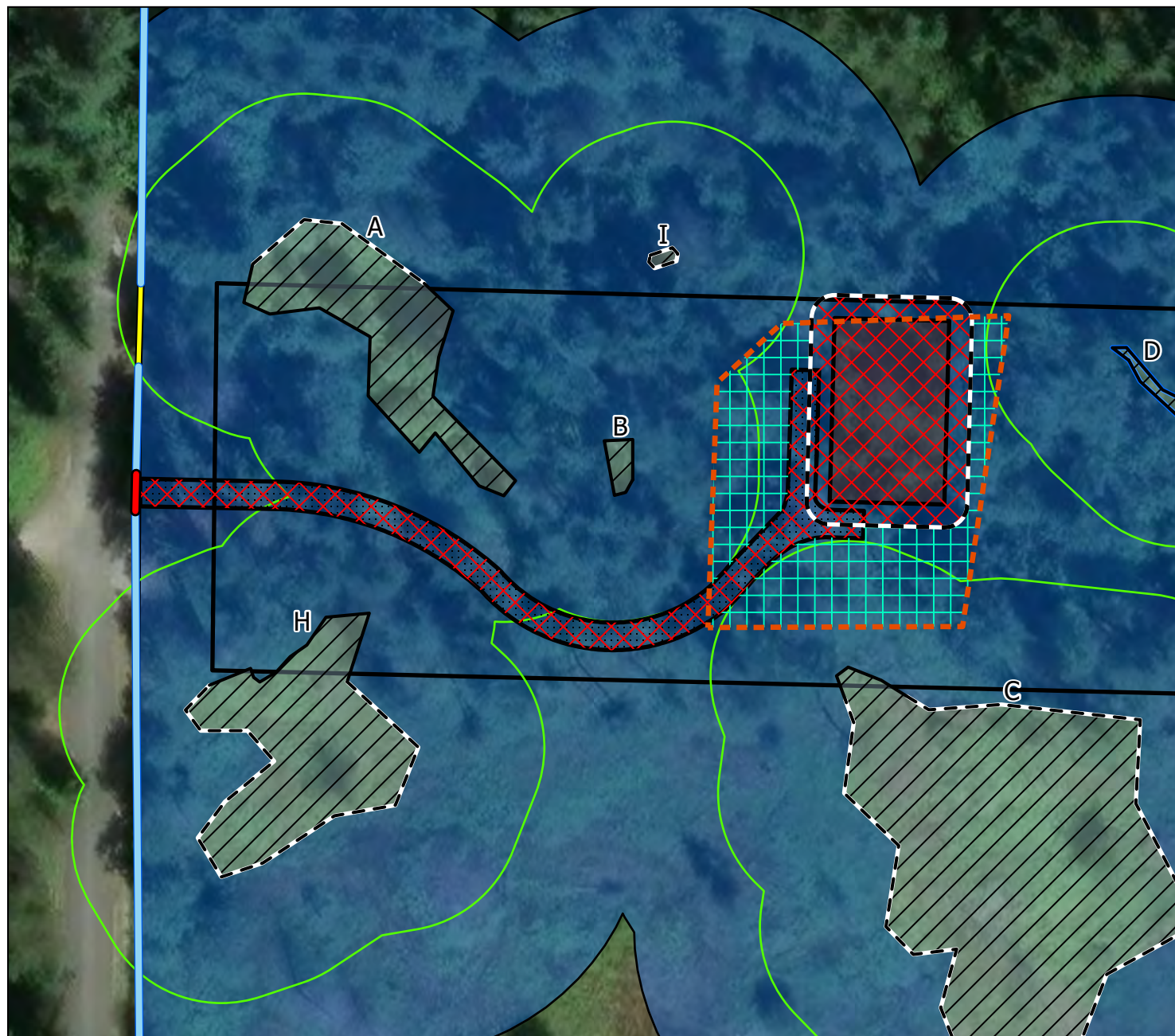
-  Approximated
-  Delineated

Impact Type

-  Proposed Buffer Impact (11,511 sf)
-  Buffer Clearing Impact (7,843 sf)



0 20 40 80 Feet



Dixon Property

Skagit County, WA

Revised July 2026

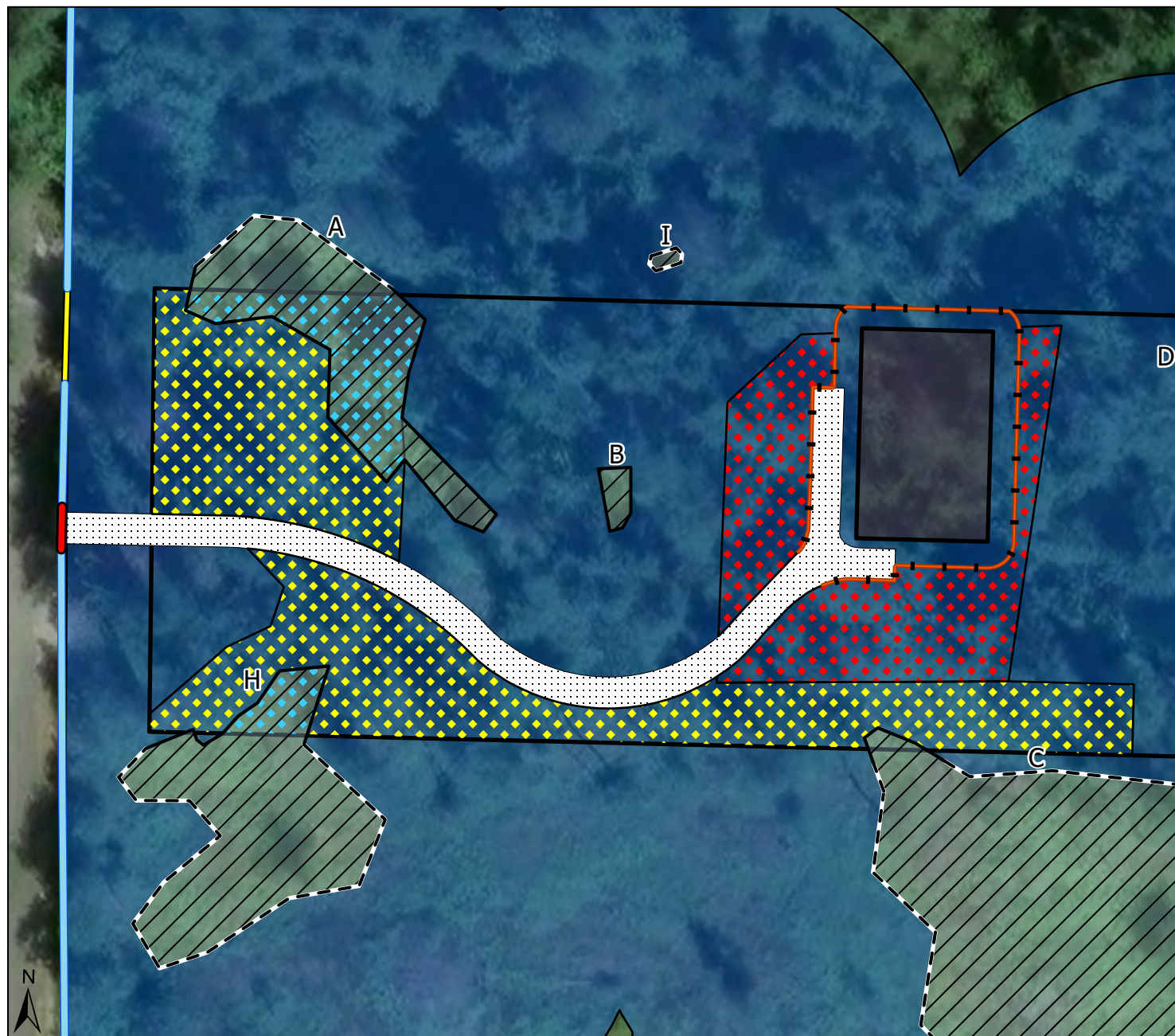
Proposed Mitigation

NAD 1983 HARN State Plane
Washington North FIPS 4601 (US Ft)
Map Created By: N. Denk

-  Proposed Structure
 -  Mitigation Fencing (340 lf)
 -  Proposed Culvert
 -  Buffer Enhancement (16,669 sf)
 -  Wetland Enhancement (3,184 sf)
 -  Buffer Restoration (7,843 sf)
 -  Proposed Gravel Driveway
 -  Existing Culvert
 -  Existing Ditch
 -  Parcel
 -  110 ft Buffer
 -  110 ft Potential Buffer
 -  Wetland
- Boundary Type**
-  -- Approximated
 -  — Delineated



0 20 40 80
Feet



Appendix F – Bond Quantity Worksheet



Critical Areas Mitigation
Bond Quantity Worksheet

Date: 7/2/2026
Project Name: _____
Project Number: _____
Location: Valentine Road
Project Description: New gravel access drive and shop
Prepared by: Hamer Environmental
Applicant: Paul Dixon
Phone: (360)708-8140

PLANT MATERIALS (includes labor cost for plant installation)					
Type	Unit Cost	Unit	Quantity	Description	Cost
PLANTS: Potted, 4" diameter, medium soil	5.00	Each			\$ -
PLANTS: Container, 1 gallon, medium soil	11.50	Each	1141.00		\$ 13,121.50
PLANTS: Container, 2 gallon, medium soil	20.00	Each			\$ -
PLANTS: Container, 5 gallon, medium soil	36.00	Each			\$ -
PLANTS: Seeding, by hand	0.50	SY			\$ -
PLANTS: Flats/plugs, Stakes, Slips	2.00	Each			\$ -
Sub Total					\$ 13,121.50
INSTALLATION COSTS (additional labor, equipment, & overhead)					
Type	Unit Cost	Unit	Quantity	Description	Cost
Compost or mulch, delivered and spread	38.00	CY	31.69		\$ 1,204.39
Decompacting till/hardpan, medium, to 6" depth	1.57	CY			\$ -
Decompacting till/hardpan, medium, to 12" depth	1.57	CY			\$ -
Hydroseeding	0.51	SY			\$ -
Labor, general (landscaping other than plant installation)	40.00	HR			\$ -
Labor, general (construction)	40.00	HR			\$ -
Labor: Consultant, supervising	55.00	HR			\$ -
Labor: Consultant, on-site re-design	95.00	HR			\$ -
Rental of decompacting machinery & operator	70.00	HR			\$ -
Sand, coarse builder's, delivered and spread	42.00	CY			\$ -
Staking material (set per tree)	7.00	Each			\$ -
Surveying, line & grade	250.00	HR			\$ -
Surveying, topographical	250.00	HR			\$ -
Watering, 1" of water, 50' soaker hose	3.62	MSF			\$ -
Irrigation - temporary	3,000.00	Acre			\$ -
Irrigation - buried	4,500.00	Acre			\$ -
Tilling topsoil, disk harrow, 20hp tractor, 4"-6" deep	1.02	SY			\$ -
Sub Total					\$ 1,204.39
HABITAT STRUCTURES (includes delivery & installation)					
Type	Unit Cost	Unit	Quantity	Description	Cost
Fascines (willow)	2.00	Each			\$ -
Logs, (cedar), w/ root wads, 16"-24" diam., 30' long	1,000.00	Each			\$ -
Logs (cedar) w/o root wads, 16"-24" diam., 30'	400.00	Each			\$ -
Logs, w/o root wads, 16"-24" diam., 30' long	245.00	Each			\$ -
Logs w/ root wads, 16"-24" diam., 30' long	460.00	Each			\$ -
Rocks, one-man	60.00	Each			\$ -
Rocks, two-man	120.00	Each			\$ -
Root wads	163.00	Each			\$ -
Spawning gravel, type A	22.00	CY			\$ -
Weir - log	1,500.00	Each			\$ -
Weir - adjustable	2,000.00	Each			\$ -
Woody debris, large	163.00	Each			\$ -
Snags - anchored	400.00	Each			\$ -
Snags - on site	50.00	Each			\$ -
Snags - imported	800.00	Each			\$ -
Sub Total					\$ -
EROSION CONTROL					
Type	Unit Cost	Unit	Quantity	Description	Cost
Backfill and Compaction-embankment	4.89	CY			\$ -
Crushed surfacing, 1 1/4" minus	30.00	CY			\$ -
Ditching	7.03	CY			\$ -
Excavation, bulk	4.00	CY			\$ -
Fence, silt	1.60	LF			\$ -
Jute Mesh	1.26	SY			\$ -
Mulch, by hand, straw, 2" deep	1.27	SY			\$ -
Mulch, by hand, wood chips, 2" deep	3.25	SY			\$ -
Mulch, by machine, straw, 1" deep	0.32	SY			\$ -
Piping, temporary, CPP, 6"	9.30	LF			\$ -
Piping, temporary, CPP, 8"	14.00	LF			\$ -
Piping, temporary, CPP, 12"	18.00	LF			\$ -
Plastic covering, 6mm thick, sandbagged	2.00	SY			\$ -
Rip Rap, machine placed, slopes	33.98	CY			\$ -
Rock Constr. Entrance 100'x15'x1'	3,000.00	Each			\$ -
Rock Constr. Entrance 50'x15'x1'	1,500.00	Each			\$ -
Sediment pond riser assembly	1,695.11	Each			\$ -
Sediment trap, 5' high berm	15.57	LF			\$ -
Sediment trap, 5' high berm w/spillway incl. riprap	59.60	LF			\$ -
Sodding, 1" deep, level ground	5.24	SY			\$ -
Sodding, 1" deep, sloped ground	6.48	SY			\$ -
Straw bales, place and remove	600.00	TON			\$ -
Hauling and disposal	20.00	CY			\$ -
Topsoil, delivered and spread	35.73	CY			\$ -
Sub Total					\$ -
GENERAL ITEMS					
Type	Unit Cost	Unit	Quantity	Description	Cost
Fencing, split rail, 3" high (2-rail)	12.00	LF	340.00		\$ 4,080.00
Fencing, temporary	1.20	LF			\$ -
Signs, critical area boundary (inc. backing, post, install)	48.50	Each			\$ -
Sub Total					\$ 4,080.00
MAINTENANCE, ANNUAL (by owner or consultant)					
Type	Unit Cost	Unit	Quantity	Description	Cost
Less than or equal to 1,000 sq. ft.	180.00	per year		(4 hrs @ \$45/hr)	\$ -
Larger than 1,000 sq. ft. and ≤ 1 acre	360.00	per year	5.00	(8 hrs @ \$45/hr)	\$ 1,800.00
Larger than 1 acre	720.00	per year		(16 hrs @ \$45/hr)	\$ -
Sub Total					\$ 1,800.00
MONITORING, ANNUAL (by owner or consultant)					
Type	Unit Cost	Unit	Quantity	Description	Cost
Less than or equal to 1,000 sq. ft.	360.00	per year		(4 hrs @ 90/hr)	\$ -
Larger than 1,000 sq. ft. and ≤ 1 acre	720.00	per year	5.00	(8 hrs @ \$90/hr)	\$ 3,600.00
Larger than 1 acre	1,440.00	per year		(16 hrs @ \$90/hr)	\$ -
Sub Total					\$ 3,600.00
PROJECT COST					\$ 23,805.89
25% CONTINGENCY					\$ 5,951.47
TOTAL					\$ 29,757.36