THIRD REVISION CRITICAL AREAS REPORT: WETLANDS & HABITAT CONSERVATION AREAS FOR SHINTAR TOWNHOMES PROJECT - 4193 NORTHWEST DRIVE

Bellingham, Washington Parcel No. 380211-435125

for Victor Shintar

May 31, 2024



Project No. 210009

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May 31, 2024

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Author Qualifications

This report was prepared by Ed Miller.

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Disclaimer

This report and wetland and/or stream delineation, is based on protocols that are described and defined in manuals and publications utilized by Federal, State, and Local agencies. The wetland delineation methodology used is consistent with the *Washington State Wetlands Identification and Delineation Manual* (Ecology, 1997), the U.S. Army Corps of Engineers *Wetlands Delineation Manual* (Environmental Laboratory, 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Corps, 2010), and subsequent Corps guidance. Completed work is based on conditions at the time of the site visit. No guarantees are given that a delineation determination or assessment will concur exactly with those performed by regulatory agencies or by other qualified professionals.

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1.0 INTRODUCTION

At the request of the applicant and property owners, Victor Shintar, Miller Environmental Services, LLC (MES) conducted a wetland delineation at 4193 Northwest Drive (tax parcel 380211-435125), located on the west side of Northwest Drive in Bellingham, Washington; Section 11, Township 38 N, Range 02 E, W.M. The project location is shown below on **Figure 1**. A map of the property and critical areas is included as **Appendix A**. The first and second revisions were completed to address City of Bellingham comments and associated site design changes. This third revision has been completed to account for site design changes necessitated by the placement of a stormwater outfall – from a stormwater vault on the adjacent property to the south.

This report presents the best professional judgment of MES in estimating the subject jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. However, only the regulatory agencies can make a final determination of jurisdictional boundaries.

1.1 PURPOSE

This Critical Areas Report was conducted as required within the 2016 City of Bellingham Critical Areas Chapter [Bellingham Municipal Code (BMC) 16.55]. This report documents the location and nature of critical areas (wetlands and fish and wildlife habitat conservation areas) on the project site.



Figure 1: Vicinity Map

4193 Northwest Drive

2.0 METHODS

2.1 PRELIMINARY RESEARCH

Published information about local conditions was reviewed for known critical area occurrences in the project vicinity. The information reviewed included:

- National Wetlands Inventory (NWI), Wetlands Mapper, United States Fish and Wildlife Service (USFWS);
- *Priority Habitats and Species Mapper,* Washington State Department of Fish and Wildlife (WDFW);
- SalmonScape Mapper, WDFW;
- City of Bellingham CityIQ, City of Bellingham;
- *Web Soil Survey,* United States Department of Agriculture, Natural Resource Conservation Service (NRCS);
- National Hydric Soils List, United States Department of Agriculture, NRCS; and
- National Map Viewer, United States Geological Survey (USGS).

2.2 FIELD INVESTIGATION

Investigations of the subject property were conducted on March 3, 2021 to document site conditions. The site visit included a wetland delineation and an assessment of onsite habitat. Wetland boundaries and data plot locations were flagged. Site photographs taken during the site visit are included within **Appendix B**.

Wetlands were identified on the basis of hydrophytic vegetation, hydric soils, and evidence of wetland hydrology as described in the U.S. Army Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987), Corps Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (U.S. Army Corps of Engineers, 2010), and subsequent U.S. Army Corps of Engineers (Corps) guidance.

Hydrophytic vegetation (i.e., plants adapted to saturated soil conditions) was determined to be present when dominant cover of plants observed (greater than 50 percent) had an indicator status of facultative (FAC), facultative wetland (FACW), or obligate wetland (OBL). Plant species on-site were identified according to Cooke (1997), Pojar and MacKinnon (1994), and Hitchcock and Cronquist (1973). Plant indicator status was determined using the National Wetland Plant List, version 3.5 (U.S. Army Corps of Engineers, 2020).

Hydric soils were determined according to the methodology in the Field indicators of Hydric Soils in the United States, A Guide for Identifying and Delineating Hydric Soils, Version 8.2 (USDA NRCS, 2018).

Wetland hydrology was determined through the observation of soil saturation, surface ponding, or other primary and secondary indicators such as water marks, drift deposits, iron deposits, surface cracks, water-stained leaves, drainage patterns, etc. (U.S. Army Corps of Engineers, 2010). Data were collected on vegetation, soils, and hydrology at each data plot

and recorded on data forms (**Appendix C**). MES flagged wetland boundaries, which were subsequently located and mapped by professional land surveyors.

2.3 WETLAND CLASSIFICATION AND FUNCTIONAL ASSESSMENT

Wetlands were classified using the USFWS wetland classification system (Cowardin et al., 1979). A wetland rating was completed for the on-site wetlands, using the 2014 Washington State Wetland Rating System for Western Washington (Ecology Rating System) (Hruby, 2014). Rating forms are included in **Appendix D**.

Wetland delineators visited each wetland and determined wetland classes and categories using field observations and resources utilized during the preliminary data review process. Ecology recognizes four categories of wetlands based on sensitivity to disturbance, rarity, the functions they provide, and difficulty to replace.

A qualitative functional assessment was also conducted for the wetland based on the Ecology Rating System (Hruby, 2014). Hydrologic, water quality, and habitat functions were evaluated based on the scoring criteria listed in **Table 1**.

	Criteria			
Wetland Functions	Low Score	Moderate Score	High Score	
Water Quality Functions	3-4	5-7	8-9	
Hydrology Functions	3-4	5-7	8-9	
Habitat Functions	3-4	5-7	8-9	

 Table 1: 2014 Wetland Functional Assessment Criteria

3.0 PROJECT AREA SETTING

3.1 WATERSHED

The property is located within the Silver Creek Watershed, in the Lower Nooksack subbasin watershed - within Water Resource Inventory Area (WRIA) number 01.

The property contains an undulating topography, with higher areas in the southeast portion and western side of the property. Low areas, generally containing wetlands, are located in the northeast portion and center of the property. The southwest portion of the property (including Wetlands D and E) drains to offsite wetlands to the south. The offsite wetlands drain into the City of Bellingham stormwater collection system in Arctic Avenue. This water is carried north and then westward to the City Regional stormwater pond. This pond empties to the West Fork Bear Creek drainage. Bear Creek drains northward where it empties to Silver Creek, north of Slater Road. The western and northern portions of the property, including Wetlands A, B and C, drain offsite to the north. Water is carried under Mahogany Avenue via a culvert, into a wetland on the north side of the road. Presumedly, water then drains northwestward following the general topography, eventually reaching the same unnamed tributary to Bear Creek.

3.2 PROJECT VICINITY

The subject property is located within the Meridian neighborhood, an urban area in the City of Bellingham. Northwest Drive is located along the east side of the property, Mahogany Avenue is along the north side of the property and Arctic Avenue is along the west side of the property. Adjacent properties to the south are generally undeveloped, though a house is located fronting Northwest Avenue on the property to the south. In general, the property is within a developed and rapidly developing area of the City. Costco is located to the west and dense residential housing is located to the northwest – with more under construction. Single family residences are located to the north and east.

3.3 PROJECT SITE

The review area includes the entire property at 4193 Northwest Drive. The east side of the property contains an existing single family residence, garage, shop shed and landscaping (lawn). The center and western portion of the property consists of undeveloped forest habitat. Dominant plant species include red alder (*Alnus rubra*), black cottonwood (*Populus balsamifera*), snowberry (*Symphoricarpos albus*), vine maple (*Acer circinatum*) and salmonberry (*Rubus spectabilis*).

Five wetlands were identified and flagged on the property. A site map is included in **Appendix A**. Site photographs are included in **Appendix B**.

4.0 RESULTS

4.1 PRELIMINARY RESEARCH

4.1.1 National Wetlands Inventory

The National Wetlands Inventory (NWI) shows no wetlands on the subject property. One wetland is shown to the south of the property (in a currently developed area) and two wetlands are shown to the east, on the east side of Northwest Avenue (USFWS, 2022).

4.1.2 Soils Survey Data

The entire property and surrounding area is mapped with Whatcom-Labounty silt loam, 0 to 8 percent slopes (soil unit 182). This soil is 55 percent Whatcom soil and 25 percent Labounty soil. Whatcom soils consist of ashy silt loam from the surface to 16 inches depth. Below 16 inches, the soil is a loam soil. Whatcom silt loam is moderately well drained with a water table between 18 and 36 inches below the surface. This soil type is non-hydric (NRCS, 2022).

Labounty soil consists of ashy loam from the surface to 10 inches depth. Below 10 inches, the soil is loam. The water table is between 0 and 12-inches depth and is poorly drained. Labounty soils are hydric (NRCS, 2022).

4.1.3 WDFW Priority Habitats and Species Data

The Washington State Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) Mapper indicates no priority habitats or species are known on the property. Wetland areas are shown to the east, on the eastern side of Northwest Drive (WDFW, 2022).

4.1.4 City of Bellingham Critical Areas

The City of Bellingham City IQ Mapper shows a wetland on the northeast portion of the property, in the location MES identified Wetlands A and B. Additionally, an offsite wetland is shown to the south of the southwest portion of the property (City of Bellingham, 2022).

The City of Bellingham Habitat Restoration Technical Assessment (ESA et. al., 2015) shows the western half of the property within eastern edge of Forest Block 126. The portion of the forest block mapped on the property contains a forest protection overlay. The report recommends City consideration for property acquisition or regulatory protection, with a goal of maintaining a contiguous forested wildlife corridor that provides north- south connectivity. However, since the time of report publication, the portion of forest habitat on the property has been isolated by the construction of Costco, Arctic Avenue and Mahogany Avenue. The portion of forest habitat on the property no longer provides connectivity to the larger portion of forest block 126 or Bear Creek. The forest habitat connects only with small portions of forest habitat on the property to the south.

Additionally, the City of Bellingham Wildlife Corridor Analysis (Diamond Head Consulting, 2021) does not show any modeled habitat blocks or corridors on or adjacent to the property.

4.2 FIELD INVESTIGATION

4.2.1 Uplands

A majority of the property consists of upland habitat. Generally, the center and western portion of the property is dominated by coniferous forest habitat. Dominant plant species include red alder, paper birch (*Betula papyrifera*), salmonberry, vine maple, snowberry and sword fern (*Polystichum munitum*).

Observed soils generally consisted of very dark grayish brown (10YR 3/2) or dark brown 10YR 3/3) loams. Upland soils are documented in data plots (DP) 2, 4, 5 and 8.

4.2.2 Wetlands

Five wetlands, Wetlands A through E, were identified on the property. These wetlands are summarized below in **Table 2**. MES flagged all onsite wetland boundaries, which were subsequently surveyed by professional land surveyors and mapped in AutoCAD.

Wetland	Cowardin Classification	Ecology Category	HGM Class	Ecology Habitat Score	City of Bellingham Buffer Width (Feet) ¹
А	PFO	111	Depressional	Low (4)	80
В	PFO	III	Depressional	Low (4)	80
С	PFO	IV	Depressional	Low (4)	02
D	PSS	IV	Depressional	Low (4)	02
E	PSS	IV	Depressional	Low (4)	02
F (offsite)	PSS	IV	Depressional	Low (4)	50

Table 2: Project Wetlands Summary

¹Assumes high intensity land use proposal – more than one unit per acre.

²Wetlands C, D and E are exempt from buffer requirements, per BMC 16.55.270(B)(1).

<u>Wetland A</u>

Wetland A is a Palustrine forested depressional wetland located on the east side of the property, abutting Northwest Drive. The wetland extends offsite to the north onto the adjacent property.

Wetland conditions are documented in data point (DP) 1 while adjacent upland areas are documented in DP-2.

Vegetation. Wetland A is dominated by plant species including willows (Salix spp.) and salmonberry.

Hydrology. The wetland contains a significant amount of seasonal ponding, over a majority of the wetland. A seasonal outlet, old ditch, is located at the west side of the wetland draining higher water levels westward into Wetland B. Water enters the wetland from adjacent upland areas including the subject property, the property to the north and the adjacent Northwest Avenue.

Soils. Soils in Wetland A (DP-1) consist of very dark grayish brown (10YR 3/2) loam from the surface to eleven inches depth and a gray (2.5Y 5/1) silt loam with redoximorphic concentrations from eleven to 16 inches depth. These soils meet hydric soil indicator A11 - depleted below dark surface.

Wetland Rating. Wetland A is classified as a Palustrine forested wetland using the USFWS wetland classification system (Cowardin et al., 1979). Per the City of Bellingham Municipal Code the wetland was rated using the 2014 Ecology rating system (Hruby, 2014). The wetland received a total score of 16 points with a habitat score of four points (low). The wetland had no special characteristics and was rated as a Category III wetland using a functional score of 16. Wetland A is required to have an 80-foot buffer based on a proposed high intensity use.

<u>Wetland B</u>

Wetland B is a Palustrine forested, depressional wetland located in the center of the property. The wetland extends offsite to the north onto the adjacent property.

Wetland conditions are documented in DP-3 and adjacent upland conditions in DP-4 and 5.

Vegetation. Wetland B is dominated by red alder, paper birch, salmonberry, red-osier dogwood (*Cornus sericea*) and western red cedar (*Thuja plicata*).

Hydrology. The wetland has an area of seasonal ponding of between 25 and 50 percent of the wetland area. The remaining portions, edges, are seasonally saturated. Water enters the wetland from adjacent upland areas, including the residence and yard on the subject property and from Wetland A. The wetland extends offsite to the north. The City of Bellingham IQ Mapper shows this wetland extending northward to Mahogany Avenue, where a culvert carries water northward into another wetland on the north side of the road.

Soils. The observed soils consisted of a black (10YR 2/1) organic loam with decomposing plant material within the soil matrix. Though the organic content was not measured, the soil likely meets A3 – black histic or A12 – thick dark surface.

Wetland Rating. Wetland B is classified as a Palustrine forested using the USFWS wetland classification system (Cowardin et al., 1979). Per the City of Bellingham Municipal Code the wetland was rated using the 2014 Ecology rating system (Hruby, 2014). The wetland received a total score of 16 points with a habitat score of four points (low). The wetland had no special characteristics and was rated as a Category III wetland using a functional score of 16. Wetland B is required to have an 80-foot buffer based on a proposed high intensity use.

<u>Wetland C</u>

Wetland C is a small Palustrine forested, depressional wetland located in the north portion of the property, west of Wetland B. Wetland C is 742 square feet in size. Wetland conditions are documented in DP-6.

Vegetation. The wetland is dominated by plant species including vine maple, western red cedar, red alder, salmonberry and creeping buttercup (*Ranunculus repens*).

Hydrology. At the time of the site visit, water was observed ponded at approximately 1-inch depth over 25 to 50 percent of the wetland area. Remaining areas are seasonally saturated. Water inters the wetland from a small contributing basin adjacent to the wetland and leaves the wetland via a seasonal outlet to the north.

Soils. The observed soils in Wetland C consist of a black (10YR 2/1) silt loam from the surface to sixteen inches depth. These soils are assumed to meet hydric soil indicator A12 – thick dark surface.

Wetland Rating. Wetland C is classified as a Palustrine scrub/shrub wetland using the USFWS wetland classification system (Cowardin et al., 1979). Per the City of Bellingham Municipal Code the wetland was rated using the 2014 Ecology rating system (Hruby, 2014). The wetland received a total score of 14 points with a habitat score of four points (low). The wetland had no special characteristics and was rated as a Category IV wetland using a functional score of 14. Wetland C is exempt from buffer requirements, per BMC 16.55.270(B)(1) because the wetland is a Category IV wetland less than 1,000 square feet in size; is not associated with riparian areas or their buffers; does not contain habitat identified as essential for local populations of priority species or provide suitable breeding amphibian habitat; and is not part of a mosaic.

<u>Wetland D</u>

Wetland D is a small Palustrine scrub/shrub, depressional wetland located in the southwest corner of the property. The wetland is 192 square feet in size.

Wetland conditions are documented in DP-8 while adjacent upland conditions are documented in DP-7.

Vegetation. Dominant vegetation within this wetland includes only salmonberry and red-osier dogwood.

Hydrology. The wetland has seasonal ponding over a large portion of the wetland, approximately 75 of the wetland area. The remaining area was seasonally saturated. The wetland receives water from a small contributing basing to the north and east and leaves the wetland to the south, via a seasonal outlet.

Soils. Soils in Wetland D consist of very dark brown (10YR 2/2) loam from zero to five inches depth and a very dark grayish brown (10YR 3/2) silt loam with redoximorphic concentrations from five to 13 inches depth. These soils meet hydric soil F6 – redox dark surface.

Wetland Rating. Wetland D is classified as a Palustrine scrub/shrub wetland using the USFWS wetland classification system (Cowardin et al., 1979). Per the City of Bellingham Municipal Code the wetland was rated using the 2014 Ecology rating system (Hruby, 2014). The wetland received a total score of 15 points with a habitat score of four points (low). The wetland had no special characteristics and was rated as a Category IV wetland using a functional score of 15. Wetland D is exempt from buffer requirements, per BMC 16.55.270(B)(1) because the wetland is a Category IV wetland less than 1,000 square feet in size; is not associated with riparian areas or their buffers; does not contain habitat identified as essential for local populations of priority species or provide suitable breeding amphibian habitat; and is not part of a mosaic.

<u>Wetland E</u>

Wetland E is a small Palustrine scrub/shrub, depressional wetland located in the southwest portion of the property. The wetland is 454 square feet in size and is located primarily offsite to the south, with a small portion extending onto the subject property.

Vegetation. Dominant vegetation within this small wetland includes red-osier dogwood, vine maple and bitter nightshade (*Solanum dulcamara*).

Hydrology. The wetland receives water from adjacent upland areas and drains to the south toward a separate offsite wetland (Wetland F). The wetland has a large area of seasonal ponding, approximately 95 percent of the wetland area.

Soils. Given the small and obvious nature of this wetland, a data pit sample was not documented.

Wetland Rating. Wetland E is classified as a Palustrine scrub/shrub wetland using the USFWS wetland classification system (Cowardin et al., 1979). Per the City of Bellingham Municipal Code the wetland was rated using the 2014 Ecology rating system (Hruby, 2014). The wetland received a total score of 13 points with a habitat score of four points (low). The wetland had no special

characteristics and was rated as a Category IV wetland using a functional score of 13. Wetland E is exempt from buffer requirements, per BMC 16.55.270(B)(1) because the wetland is a Category IV wetland less than 1,000 square feet in size; is not associated with riparian areas or their buffers; does not contain habitat identified as essential for local populations of priority species or provide suitable breeding amphibian habitat; and is not part of a mosaic.

4.2.3 Fish and Wildlife Habitat Conservation Areas

In the City of Bellingham, designated fish and wildlife habitat conservation areas (16.55.470.A) includes:

- 1. Areas with which State or Federally designated endangered, threatened, and sensitive species have a primary association. This includes state priority habitats and areas associated with state priority species;
- 2. Commercial and recreational shellfish areas;
- 3. Naturally occurring ponds under 20 acres;
- 4. Waters of the State, including lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses;
- 5. State natural area preserves and natural resource conservation areas;
- 6. Areas of rare plant species and high quality ecosystems; and
- 7. Land useful or essential for preserving connections between habitat blocks and open spaces.

No habitat conservation areas were observed or are mapped onsite by WDFW. Additionally, habitat conservation areas were not observed offsite. While the western portion of the property does contain forest habitat, and is mapped within Forest block 126, with a protection overlay, this area of forest has been cut off with the construction of Artic Street and Mahogany Avenue. The forest habitat onsite does not provide a significant amount of habitat value and does not constitute a habitat corridor.

4.2.4 Off-site Areas

Off-site areas were viewed as feasible given site conditions at the time of the site visit. Other information was used where applicable including aerial photography and CitylQ (City of Bellingham, 2022) mapping to assess off-site conditions.

<u> Off-site Areas- West</u>

Arctic Avenue is located to the west. This road contains curbs and stormwater controls – directing stormwater into pipes that carry water north and westward – to the regional stormwater pond.

<u> Off-site Areas- East</u>

Northwest Avenue is located along the east side of the property. Single family residences and a power substation are located on the east side of the road. Drainage from this road is not controlled. Water from the road enters Wetland A.

Off-site Areas- South

The property to the south contains a single family residence on the eastern end of the property. Remaining areas consist of scattered trees with cleared understory. Two small areas of shallowing ponding were observed on the eastern portion of the adjacent property. Given the time of year, late winter, the presence of water is not necessarily indicative of wetland presence. Given the lack of observable vegetation (recent clearing) and the inability to assess soil conditions, it is unknown whether these area are wetlands. Both areas of observed winter ponding were very small – less than 1,000 square feet in size.

The property south of the western half of the subject property consists of deciduous forest habitat. Wetland E, as noted above, extends southward onto the adjacent property. Additionally, a larger wetland, Wetland F, is located approximately 25 feet south of the property boundary to the west of Wetland E. Wetland F was observed during the delineation of the adjacent property to the south. The wetland was rated using the 2014 Ecology rating form (included in **Appendix D**). The wetland was rated as a Category IV wetland with a low habitat score, requiring a 50 foot buffer under City of Bellingham Code. Data from this delineation work is included in **Appendix C**, including several data pits between Wetlands E and F.

Off-site Areas- North

The area to the north of the east half of the property consists of a property with a single family residence, outbuildings, a portion of Wetlands A and B and deciduous forest habitat. No other potential wetland areas were observed. The area north of the western portion of the property consists of Mahogany Avenue.

4.3 WETLAND FUNCTIONAL ASSESSMENT

Wetland functional value was assessed for utilizing the Ecology Wetland Rating Form for Western Washington (Hruby, 2014). This rating method evaluates wetlands based on three categories of function, which include water quality, hydrologic function, and habitat value.

Wetland	Water Quality Function	Hydrologic Function	Habitat Function
А	Moderate (6)	Moderate (6)	Low (4)
В	Moderate (6)	Moderate (6)	Low (4)
С	Moderate (5)	Moderate (5)	Low (4)
D	Moderate (6)	Moderate (5)	Low (4)
E	Moderate (5)	Low (4)	Low (4)
F	Moderate (6)	Moderate (5)	Low (4)

Table 3:	Wetland Functional	Value Summary ¹
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¹Numerical functional value scores included in parentheses.

4.3.1 Water Quality Function

Water quality function is assessed by characterizing the amount and type of vegetation present within a wetland. Plants enhance sedimentation by acting like a filter causing sediment particles to drop to the wetland surface. Other variables include the average slope within slope wetlands, outlet type, and amount of seasonal ponding within depressional wetlands. The potential for the landscape to support water quality functions is also assessed, including potential pollutant sources from stormwater septic systems or other sources. Additionally, water quality value to society is assessed based on the wetland's proximity to polluted waterbodies, with the assumption that wetlands can improve water quality before reaching downstream waterways.

All of the wetlands onsite provide a moderate level of water quality function. Generally, they are all vegetated wetlands with seasonal outlets and areas of seasonal ponding. Wetlands C and D do not have the potential to receive stormwater flows while the remaining wetland do – from adjacent residences, yards and Northwest Avenue. All of the wetlands are located within a basin with a 303(d) listed water downgradient.

4.3.2 Hydrologic Function

Wetlands have the ability to reduce flooding and stream erosion in downstream areas. This is accomplished through the entrainment, storage, and slow release of water, which acts to moderate flood pulses following storm events. Characteristics of this function include the vegetation characteristics (reduction of water velocity in slope wetlands), outlet type, and depth of storage for depressional wetlands. Hydrologic function is also influenced by the landscape and input of potential stormwater discharges and excess runoff from urban and developed areas. The hydrologic function of a wetland is also assessed in relation to its value to society. Wetlands that are located upstream of flood zones may help reducing flooding and protect down-gradient resources (human or natural).

All of the wetlands, except Wetland E, have a moderate level of hydrologic function. Most of these wetlands have seasonal outlets, small contributing basins and limited seasonal ponding. Some of the wetlands have storm water inputs while several do not. Wetland E has a low level of function as it does not receive stormwater inputs.

Wetlands A, B and C drain to a basin where they may help reduce downstream flooding. Wetlands D and E drain to Wetland F, which has a constrained culvert outlet that drains to a regional stormwater pond. These wetlands do not have the opportunity to reduce potential downgradient flooding.

4.3.3 Habitat Function

Wetlands can provide habitat value to a variety of wildlife species by providing a variety of habitat types, water regimes, habitat features (such as snags and downed logs), and number of plant species. Additionally, the wetland's opportunity to provide habitat is important, as characterized by buffer condition, corridors and connections, position in the landscape, and proximity to priority habitats and undisturbed habitat.

All of the wetlands onsite provide low habitat function. The wetlands have one habitat type (scrub/shrub or forest), two hydroperiods, no habitat interspersion, few or no habitat features, and only one priority habitat within 100 meters (priority snags and logs). Additionally, the property is disconnected from larger habitat blocks by roads and development.

5.0 REGULATORY REQUIREMENTS

The wetlands identified on the property are subject to federal regulations under the Clean Water Act (CWA) Sections 404 and 401, as well as state regulations under the Growth Management Act administered by the City of Bellingham under the 2016 Critical Areas Chapter (BMC 16.55).

5.1 CWA SECTION 404- US ARMY CORPS OF ENGINEERS

Pursuant to Section 404 of the CWA, the Corps regulates the discharge of dredged and/or fill material into waters of the United States, including wetlands. Impacts to onsite wetlands would likely require a Nationwide Permit (for up to 0.5 acre of wetland fill) or an Individual Permit (for greater than 0.5 acre of wetland fill). If impacts to the onsite wetlands are proposed, a Corps permit will be required for this project.

5.2 CWA SECTION 401 - DEPARTMENT OF ECOLOGY

Ecology is the state agency responsible for administering the CWA Section 401 Water Quality Certification program. Impacts to wetlands may require approval or a waiver from the Department of Ecology. If impacts to wetlands are proposed, Ecology approval will likely be necessary for this project.

5.3 CRITICAL AREAS ORDINANCE - CITY OF BELLINGHAM

The City of Bellingham regulates critical areas, including wetlands and their associated buffers, and fish and wildlife habitat conservation areas under Title 16, Chapter 55 of the Bellingham Municipal Code. Impacts to wetlands and buffers require a Critical Area Permit and compensatory mitigation. Buffer widths are determined based on the proposed land use intensity, wetland category, and habitat score. Wetland buffers are listed in **Table 2**. Wetlands C, D and E are exempt from buffer requirements due to their wetland rating (Category IV) and small size (less than 1,000 square feet).

Per City of Bellingham Code (16.55.340.C.2) buffers may be reduced with the following conditions:

- a. The buffer of a Category I wetland shall not be reduced;
- b. The buffer reduction shall not adversely affect the functions and values of the adjacent wetlands;
- c. The buffer of a Category II or III wetland shall not be reduced to less than 75 percent of the required buffer or 50 feet, whichever is greater;
- d. The buffer of a Category IV wetland shall not be reduced to less than 50 percent of the required buffer, or 25 feet, whichever is greater, provided the buffer reduction does not result in reducing the functions and values of the wetland; and

- e. The applicant implements all reasonable measures to reduce the adverse effects of adjacent land uses and ensure no new loss of buffer functions and values. The specific measures that shall be implemented include, but are not limited to, the following:
 - i. Direct lights away from the wetland and buffer;
 - ii. Locate facilities that generate substantial noise (such as some manufacturing, industrial and recreational facilities) away from the wetland and buffer;
 - iii. Implement integrated pest management programs;
 - iv. Infiltrate or treat, detain and disperse runoff into buffer;
 - v. Construct a wildlife permeable fence around buffer and post signs at the outer edge of the critical area or buffer to clearly indicate the location of the critical area according to the direction of the City;
 - vi. Plant buffer with "impenetrable" native vegetation appropriate for the location;
 - vii. Use low impact development techniques to the greatest extent possible;
 - viii. Establish and record a permanent conservation easement to protect the wetland and the associated buffer and restrict the use of pesticides and herbicides in the easement.

In addition to the required buffers, a 15-foot building setback from the edge of buffers is also required under BMC 16.55.340(G) for around above ground structures, paving, and other hard surfaces – unless the director determines a shorter distance is appropriate. This setback is to avoid conflicts with tree branches and/or critical root zones of trees that are in the buffer or will be planted in the buffer.

6.0 PROJECT DESCRIPTION AND IMPACT ASSESSMENT

The proposed project includes construction of 19 townhomes in two phases, with retention of an existing single family residence. Six townhomes will be added on the east side of the property, accessed from Northwest Avenue with a new driveway at the southeast corner of the property. The existing residence will remain, while other existing structures will be removed, including the existing garage, shop and dog kennel. A new garage will be constructed to service the existing residence. Stormwater from the proposed roadway will be collected and routed to a proposed stormwater facility to be constructed on the adjacent property to the south. Water from all pathways, green areas and roofs will drain toward the onsite wetlands. The outer portion of the proposed buffer on the east side of the property currently contains mowed grass with no trees. This current report revision reflects the addition of a stormwater outfall for the offsite stormwater facility (vault) within the Wetland B buffer. The outfall area, within a 20-foot-wide corridor will be tabulated as buffer impact.

Thirteen townhomes will be constructed on the west end of the property, with a new access off of Mahogany Avenue. This will include the access road, utilities, and a fire truck turn

around. Stomwater from the access road will be routed into the City stormwater system in Mahogany Avenue. This stormwater is routed to the regional stormwater facility to the northwest. Water from pathways, green areas and roofs will drain toward the existing wetlands. Additionally, the City is requiring a trail connection, through buffer area, to the adjacent property to the south. Proposed buildings on the west side of the property are approximately 5 to 15 feet from the proposed final buffer. It is not anticipated that the reduced buffer setback will affect the buffer, as the final buffer for Wetland F, is at the property line.

The proposed work necessitates wetland buffer reduction and impacts – totaling 9,613 square feet. These impacts will occur to Wetland A, B and F.

A site plan is included in Appendix A.

6.1 MITIGATION SEQUENCING (BMC 16.55.250)

- 1. Avoid the impact. The subject property contains five wetlands spread around the property and one wetland offsite with a buffer extending onsite. All direct impacts to wetlands have been avoided. Earlier iterations of the project design included fewer buffer impacts on the east side of the property, with the location of proposed townhomes to the west of the existing house. However, the City of Bellingham requested that proposed townhomes be located closer to Northwest Avenue. This increased the level of buffer impact.
- 2. **Minimize the impact**. Impacts have been minimized as feasible to construct the proposed housing units and infrastructure. However, to gain the necessary density, outfall treated stormwater and construct a fire truck turnaround, 9,613 square feet of buffer impacts are proposed.
- 3. **Rectify the impact**. No temporary impacts are proposed. A dog kennel, currently located in the Wetland A buffer will be removed. A portion of this area will be restored/enhanced as a component of the proposed mitigation.
- 4. Minimize or eliminate the hazard. No hazards are located on the property.
- 5. Reduce or eliminate the impact or hazard. No hazards are located on the property.
- 6. **Compensate for impacts**. Compensation for wetland buffer impacts will include onsite wetland buffer enhancement over 9,636 square feet of buffer currently containing mowed lawn. The enhancement of this area will increase buffer function between proposed residences and the wetlands to offset the proposed buffer impacts.
- 7. **Monitor the hazard or other required mitigation**. The proposed mitigation will be monitored for five years, per this mitigation plan.

6.2 IMPACTED WETLAND AND BUFFER FUNCTIONS

A majority of proposed buffer impacts will occur on the east side of the property, where proposed residences have been moved closer to Northwest Avenue. The buffer area proposed for impact is low functioning mowed lawn. Forested buffer will be impacted with the installation of the stormwater outfall. Additionally, a small portion of the buffer impacts will occur on the west side of the property and will occur to forested buffer. While the proposed impacts on the east side of the property will occur below the minimum reduced buffer amount, the impact area is a yard consisting of mowed grass. The conversion of lawn to townhomes will not indirectly affect the wetland. The lawn provides no significant habitat function. Additionally, stormwater from developed surfaces will be controlled per City requirement – where the existing driveway has no stormwater controls. Buffer mitigation planting between the proposed townhomes and the wetland will also increase screening and habitat value.

This assessment was based on Ecology guidance (Ecology, 2021) which states that the recommended buffer width provides a starting point for determining the extent of indirect impacts. The agencies will also consider the condition of existing buffers (e.g., presence, width, type of vegetation, and slope) when determining the extent of indirect impacts and the required compensation ratio.

Proposed buffer impacts on the west side of the property are generally within the outer 25 percent of the buffer. With the exception of a City required trail. As the trail has minimal impact, is not pollutant generating and will not remove a large amount of vegetation, it was not tabulated as an indirect impact to Wetland B.

The applicant will implement reasonable measures to reduce adverse effects of adjacent land uses and ensure no net loss of buffer functions and values for on and offsite wetlands by integrating the following measures, per BMC 16.55.340(C)e:

- *i.* **Direct lights away from the wetland and buffer.** Lights will be directed away from wetlands to the maximum extent possible.
- *ii.* Locate facilities that generate substantial noise away from the wetland and buffer. The proposed project is a residential development and does not include substantial noise.
- *iii.* Construct a wildlife permeable fence around buffer and post signs at the outer edge of the critical area or buffer to clearly indicate the location of the critical area according to the direction of the city. A split rail fence will be located at the edge of the proposed buffers. Critical areas signs will be posted every 100 feet on or adjacent to the split rail fence, facing the development.
- *iv.* **Plant buffer with "impenetrable" native vegetation appropriate for the location.** Currently, a large portion of the existing Wetland A and B buffers consist of mowed lawn. These areas will be enhanced with native tree and shrub plantings.
- v. Use low impact development techniques to the greatest extent possible. The applicant may incorporate low impact development techniques if feasible.
- vi. Establish and record a permanent conservation easement to protect the wetlands and buffers and restrict the use of pesticides and herbicides in the

easement. The applicant will record a permanent conservation easement over the onsite wetlands and proposed buffers.

7.0 MITIGATION

In order to accommodate a viable high density residential project, Wetland A, B and F buffers will be impacted. Mitigation for this buffer impact includes 9,636 square feet of wetland buffer enhancement. This includes the removal/mowing of invasive species, placement of mulch and planting of native trees and shrubs. The location of buffer enhancement is shown on a map in **Appendix A**.

7.1 MITIGATION GOALS, OBJECTIVES, AND PERFORMANCE STANDARDS

This mitigation plan has been designed to replace lost wetland and buffer function due to proposed project-related impacts. During monitoring activities, performance standards will be measured to ensure the site is meeting the Goals and Objectives of the mitigation project. These standards are the primary factors that will be used to judge the success of the mitigation project. While specific performance criteria provide important benchmarks and will help to direct maintenance and contingency efforts, the mitigation goals must also be considered when evaluating mitigation success.

The applicant will be responsible for the construction of the proposed mitigation and for ensuring the monitoring and maintenance occurs annually for five years. The applicant may hire a qualified professional to conduct annual monitoring and maintenance.

Goal A: Improve buffer function and wildlife habitat in onsite portion of Wetland A and B buffer.

Objective A.1: Enhance 9,636 square feet of Wetland A and B buffer by removing invasive species, installing mulch and planting native trees and shrubs.

<u>Performance Standard A.1.1</u>: 90-percent survival of installed plants at Year 1.

<u>Performance Standard A.1.2</u>: There will be at least 10, 15, 30 and 50 percent aerial cover of native shrub or tree species (excluding cover by invasive species) in the enhancement area by the end of Years 2, 3, 4 and 5 respectively. This can include installed plants and native recruits.

<u>Performance Standard A.1.3</u>: Less than 15 percent aerial cover of non-native invasive species (**Table 4**) within the wetland buffer;

Scientific Name	Common Name
Phalaris arundinacea	Reed canarygrass
Polygonum cuspidatum	Japanese knotweed
Rubus lacinatus	Cutleaf blackberry
Rubus armeniacus	Himalayan blackberry

 Table 4: Non-native, Invasive Species that Must Be Removed

<u>Performance Standard A.1.4</u>: At least two species of trees and four species of shrubs shall be represented in the enhancement area.

7.1.1 Buffer Enhancement Methods

Approximately 9,636 square feet of Wetland A and B buffer on the property will be enhanced (**Appendix A**).

Prior to installing native plants, invasive species will be removed from the mitigation area. The entire buffer enhancement area shall be sheet mulched to a depth of six inches. Any existing native trees or shrubs should be preserved.

At least two different tree species and four different shrub species shall be chosen from **Table 5** for the buffer enhancement area. All plant materials used at the mitigation site shall be grown in the Puget Sound lowlands. Each plant shall be flagged with bright colored flagging or shall be protected with a "blue tube" to assist with annual monitoring.

Botanical Name	Common Name	Size/Condition ¹	Spacing		
Pseudotsuga menziesii	Douglas fir	1-2 Gal or bareroot	12 feet		
Picea sitchensis	Sitka spruce	1-2 Gal or bareroot	12 feet		
Abies grandis	Grand fir	1-2 Gal or bareroot	12 feet		
Thuja plicata	Western red-cedar	1-2 Gal or bareroot	12 feet		
Acer macrophyllum	Big-leaf maple	1-2 Gal or bareroot	12 feet		
	Total ⁻	Trees = 67	•		
Symphoricarpos albus	Snowberry	1-2 Gal or bareroot	5 feet		
Rosa nutkana	Nootka rose	1-2 Gal or bareroot	5 feet		
Holodiscus discolor	Oceanspray	1-2 Gal or bareroot	5 feet		
Oemleria cerasiformis	Indian plum	1-2 Gal or bareroot	5 feet		
Amelanchier alnifolia	Saskatoon	1-2 Gal or bareroot	5 feet		
Rubus parviflorus	Thimbleberry	1-2 Gal or bareroot	5 feet		
Rhamnus prushiana	Cascara	1-2 Gal or bareroot	5 feet		
Rubus spectabilis	Salmonberry	1-2 Gal or bareroot	5 feet		
Total Shrubs = 318					

Table 5: Planting List for Wetland Buffer Enhancement Area

¹Bare root plantings should be planted December to March – the dormant period.

7.1.2 Mitigation Implementation Schedule

The proposed mitigation requires plant installation concurrent, or during the following planting season if necessary for planting success during the rainy season. Mitigation plantings should be installed in the fall, winter (if bare root) or early spring. The installation will include:

- 1. Pre-construction meeting with the City, identify trees to be retained within the mitigation area;
- 2. Silt fencing/erosion controls installed;
- Removal of any invasive non-native species from the buffer enhancement area (if present);
- 4. Placement of 6 inches of mulch over the mitigation area;
- 5. Installation of plants with either blue tubes or flagging within the mitigation area;
- 6. Removal of erosion controls, silt fencing, as applicable; and
- 7. Installation of split rail-fencing and critical areas signage between the proposed development and wetland buffers per the mitigation site map in **Appendix A**.

Once installed an as-built letter/documentation should be submitted to the City for review and approval. Maintenance of the mitigation areas will occur on an annual basis for the five year monitoring program and monitoring reports will be submitted to the City for review and approval.

7.1.3 Reporting

An as-built letter documenting the mitigation area shall be submitted to the City of Bellingham after installation. Any changes to the approved installation should be noted and described. The as-built letter shall include a brief description of mitigation activities that occurred (invasive removal, plant and mulch installation, fencing, signage, etc.); the date of completion; copies of plant receipts; and photographs of the mitigation area.

Monitoring reports shall be submitted annually for five years beginning the growing season after the mitigation plants are installed. Monitoring reports will then be due in Years 1, 2, 3, 4 and 5. Reports shall be due by December 31 of the monitoring year. The reports will document the condition of the mitigation area and the status of the area with respect to the approved performance criteria. The reports shall include site photographs of the plants.

If a performance standard is not met for all or any portion of the mitigation project the applicant will seek to remedy the situation, i.e., replace plantings and/or conduct maintenance, to bring the site into compliance with performance standards.

Annual reports shall be submitted to:

Mitigation Reviewer City of Bellingham Planning and Community Development 210 Lottie Street Bellingham, Washington 98225

7.1.4 Contingency Plan

If a performance standard is not met for all or any portion of the mitigation project in any year, or if the approved success criteria are not met, the wetland biologist will prepare an analysis of the cause(s) of failure and, if determined necessary by the City of Bellingham, propose remedial actions for approval. If the compensatory mitigation site has not met one or more of the success criteria or performance standards, the applicants' maintenance and monitoring obligations shall continue until the agencies give final approval the mitigation obligations have been satisfied.

The contingency plan will provide for the remediation of aspects of the mitigation that have prevented the achievement of mitigation goals. If the desired mitigation goals, as measured by the monitoring program and compared against the performance standards, have not been met and cannot be achieved through routine maintenance, then the agencies and the applicant will make a joint determination on a suitable contingency plan. If the contingency plan is substantial, the agencies could extend the monitoring period. The City of Bellingham will approve contingency measures prior to implementing changes to the plan.

7.1.5 Hazard Tree Contingency

The proposed project, residences and infrastructure, will be located adjacent to existing forest habitat. Potential future hazard trees may require removal. If a potential hazard tree presents a potential problem for the proposed development, future owners or homeowners association will follow City of Bellingham Code Section 16.55.080.C.6. This applies to the removal and/or pruning of hazard trees within critical areas or their buffers. Per the code section, any potential hazard tree will be reviewed by an ISA (International Society of Arboriculture)-certified arborist. The arborist will prepare a report including a risk assessment, a site plan showing the location of the trees, and a replacement plan. This report will be reviewed the City Director. The applicant shall replace any cut tree with three native replacement trees (3 to 1 replacement ratio), unless determined otherwise by the Director, within six months of cutting. The applicant shall provide documentation to the City demonstrating that the replacement plantings were installed within six months of the tree removal. Cut trees and other vegetation may be left within the critical area or buffer where it does not pose a public threat or nuisance or damage significantly the surrounding vegetation.

7.2.6 Site Protection

In order to increase protection and screening of the wetland buffers from human and pet disturbance, split rail fencing will be installed along the perimeter of the development boundaries. Native Growth Protection Area signs shall be installed along the split rail fencing

- spaced approximately 100 feet apart. The area of wetland and proposed buffer onsite will be placed within a conservation easement.

7.1.7 Mitigation Surety

A mitigation bond or assignment of savings will be submitted to the City of Bellingham Planning and Community Development in the amount of 150 percent of the estimated cost of mitigation installation, maintenance, and monitoring. The bond is required for the City of Bellingham and so is based on the City required 5 years of monitoring. Monitoring for the Corps will continue to Year 10. The estimated costs include:

- Installation cost estimated for plants and installation: 385 plants x \$8.50 = \$3,273
- Split rail fence: 600 linear feet at \$12.00 per linear foot \$7,200
- Mulch 162 cubic yards x \$25 cy = \$4,050
- Signs: 6 at \$50 each = \$300
- Completion of an as-built report by a biologist: \$1,000
- Maintenance costs: \$363 per year x 5 years = \$1,800
- Monitoring: \$720/year x 5 monitoring events = \$3,600

The total estimated cost is \$21,223. The total surety amount (cost x 150-percent) = \$31,835.

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APPENDICES

Appendix A

Project Maps





Botanical Name	Common Name	Size/Condition ¹	Spacing
Pseudotsuga menziesii	Douglas fir	1-2 Gal or bareroot	12 feet
Picea sitchensis	Sitka spruce	1-2 Gal or bareroot	12 feet
Abies grandis	Grand fir	1-2 Gal or bareroot	12 feet
Thuja plicata	Western red-cedar	1-2 Gal or bareroot	12 feet
Acer macrophyllum	Big-leaf maple	1-2 Gal or bareroot	12 feet
	Total	Trees = 67	·
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Rosa nutkana	Nootka rose	1-2 Gal or bareroot	5 feet
Holodiscus discolor	Oceanspray	1-2 Gal or bareroot	5 feet
Oemleria cerasiformis	Indian plum	1-2 Gal or bareroot	5 feet
Amelanchier alnifolia	Saskatoon	1-2 Gal or bareroot	5 feet
Rubus parviflorus	Thimbleberry	1-2 Gal or bareroot	5 feet
Rhamnus prushiana	Cascara	1-2 Gal or bareroot	5 feet
Rubus spectabilis	Salmonberry	1-2 Gal or bareroot	5 feet
	Tatal O		·

lotal Shrubs = 318

1. Bare root plantings should be planted December to March — the dormant period.

PLANTING LIST FOR WETLAND ENHANCEMENT AREA





SPLIT RAIL FENCE

preserved.

- present);



Appendix B

Site Photographs


Photo 1. View north into Wetland A from the south side of the wetland (2/19/21).



Photo 2. View west over house and garage from the eastern portion of the property (2/19/21).



Photo 3. View south over the eastern side of the property from the south side of Wetland A (2/19/21).



Photo 4. View west through north portion of Wetland B (2/19/21).



Photo 5. View west over upland in the center of the property (3/3/21).



Photo 6. View northwest over Wetland C (3/3/21).



Photo 7. View north into Wetland D (3/3/21).



Photo 8. View southeast over the north end of Wetland E (3/3/21).



Photo 9. View east over yard area to the northwest of the house (3/3/21).



Photo 10. View west along the north side of the house (3/3/21).

Appendix C

Wetland Data Forms

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

Project/Site: 4193 Nosthurch DC. Ci	ty/County; Bellingham Sampling Date: 3/3/21
Applicant/Owner: Shyndar	State: W 14 Sampling Point: DP-1
Investigator(s): E.Millec, L. Hansen	Section, Township, Range: N 3.8 N / 0.2 F
Landform (hillslope, terrace, etc.):	ocal relief (concave, convex, none):
Subregion (LRR): Lat:	Long: Datum:
Soil Map Unit Name:	NWI classification; 今 ⊂ ひ
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	ed? 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 sa	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ☑ No □ Hydric Soil Present? Yes ☑ No □	Is the Sampled Area

Hydric Soil Present? Wetland Hydrology Present?	Yes ☑ No 🗖 Yes ☑ No 🗖	within a Wetland	rrea ? Yes ⊠ No 🗆	
Remarks:	welland	A		

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot eizer	Absolute	Dominant Indicator	Dominance Test worksheet:
		<u>Species?</u> <u>Status</u>	Number of Dominant Species
1. Soll X lastanold		. V Juch	That Are OBL, FACW, or FAC:
2. <u>Colif 500</u>	_20	V Mac	Total Number of Dominant
3	<u></u>	·	Species Across All Strata
4			
Sapling/Shrub Stratum (Plot size:)		= Total Cover	Percent of Dominant Species 10 b That Are OBL, FACW, or FAC: (A/B)
1. Rybus SD,	S(C)	, Fac	Prevalence Index worksheet:
2. Rubus at,	10	V Fac	Total % Cover of: Multiply by:
3			OBI species v1 -
4.	· · · · · · · · · · · · · · · · · · ·		
5.			
Herb Stratum (Plot size:)		= Total Cover	rAcU species x4 =
1			UPL species x 5 =
2.			Column Totals: (A) (B)
3		· · · · · · · · · · · · · · · · · · ·	Prevalence Index = B/A =
4		· · · · · · · · · · · · · · · · · · ·	Hydrophytic Vegetation Indicators:
5		· · · · · · · · · · · · · · · · · · ·	Rapid Test for Hydrophytic Vegetation
6.			Dominance Test is >50%
7.			$\square Prevalence Index is < 3.01$
8			
9			data in Remarks or on a separate sheet)
10.	· ····································		U Wetland Non-Vascular Plants
11			Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)		= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			
2			Hydrophytic Vegetation
		= Total Cover	Present? Yes 🛛 No 🗔
70 Date Glourio In Hero Stratum			
110110175			

Compling Point:	D	P_	١
запраго голь.			

2012		Sampling Point:
Profile Description: (Describe to the de	epth needed to document the indicator or confirm	the absence of indicators.)
Denth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-11 10-1R3/2	(silt loan
11-11 7.545/1	10-18-4 LD C M	clay loam
		· · · · · · ·
·		
		2
¹ Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, CS=Covered or Coated Sand Gra	hins. ² Location: PL=Pore Lining, M=Matnx.
Hydric Soli Indicators: (Applicable to	all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Sons .
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Ked Parent Material (172) Voor Shallow Dark Surface (TE12)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Other (Explain in Remarks)
Hydrogen Sulfide (A4)	 Loamy Gleyeu Marix (r2) Deploted Matrix (F3) 	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleved Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Laver (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes 🗹 No 🗆 🔰
Pomarke:		
Nemana.		
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one requ	ired; check all that apply)	Secondary Indicators (2 or more required)
Surface Mater (A1)	Water-Stained Leaves (B9) (except MLR	A 🔲 Water-Stained Leaves (B9) (MLRA 1, 2,
L Suitace Water (AT)	1. 2. 4A. and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	'Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Root	s (C3) 🛛 Geomorphic Position (D2)
Atoat Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
I Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6)	FAC-Neutral Test (D5)
El Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery	(B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface	xe (B8)	
Eield Observations:		
Surface Water Present? Yes	No X Depth (inches):	
Motor Table Present? Vee M	No Depth (inches); -2	· · · · · · · · · · · · · · · · · · ·
Presenter Present?	No Depth (inches): O Weth	and Hydrology Present? Yes 🖾 🛛 🖸
(includes capillary fringe)		Kovellahla
Describe Recorded Data (stream gauge	, monitoring well, aerial photos, previous inspections),	H available.

Remarks:

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

		-
Project/Site: 4192 Nocthurst Dr.	_City/County: _ Bellincham	_ Sampling Date: 3321
Applicant/Owner <u>Shimitar</u>		Sampling Point: 0P-2
Investigator(s): VE.M. H. Hancen	Section, Township, Range: \\ 3	8 W/02 E
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	<u>∧</u> ₹ Slope (%): 2
Subregion (LRR): Lat:	Long:	Datum:
Soil Map Unit Name:	NWI classific	cation: 40
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes 💭 No 🗀 (If no, explain in Remarks	<i>i.</i>)
Are Vegetation, Soil, or Hydrology significantly distu	irbed? Are "Normal Circumstances" pres	sent? Yes 🗵、No 🗌
Are Vegetation, Soil, or Hydrology naturally problem	atic? (If needed, explain any answers in	Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ⊠_ No □ Yes □ No ⊠ Yes □ No Ø		ls the withir	Sampled Area a Wetland?	Yes 🗖	No 🛛	
Remarks:	upland	adj	·1·	south	side	Wes. A.	

VEGETATION - Use scientific names of plants.

Trop Stropurg (Dist size)	Absolute Dominant Indicator	Dominance Test worksheet:
$\frac{1166 \text{ Stratum}}{\Lambda}$ (Plot size:)	<u>% Cover Species? Status</u>	Number of Dominant Species
1. HIMAS FM	_ <u>20 V Fac</u>	That Are OBL, FACW, or FAC: (A)
2. Salix spp	<u> 30 / Fac</u>	Total Number of Dentire - t
3		Species Across All Strate:
4		
Copling/Obsub Obsub (Distainer)	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
1. ICARAS arm.	_ SO / tac	Prevalence Index worksheet:
2		Total % Cover of: Multiply by:
3		OBL species x 1 =
4		FACW species x 2 =
5		FAC species x 3 =
	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size:)		UPL species x 5 =
1. (Canancalus re,	20 V Fac	
2 Agrostic SOD	30 1 540	(A)(B)
3		Prevalence Index = B/A =
4		Hydrophytic Vegetation Indicators:
5		Rapid Test for Hydrophytic Vegetation
6		Dominance Test is >50%
7		□ Prevalence Index is ≤3.0 ¹
8		Morphological Adaptations ¹ (Provide supporting
9	····· ································	data in Remarks or on a separate sheet)
10.		Wetland Non-Vascular Plants ¹
11.	······································	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1		
2		Hydrophytic
E1		Vegetation
% Bare Ground in Herb Stratum	= Total Cover	Present? Yes 🖾 No 🗌
Remarks:		1

Profile Description: (Describe to the de		
Depth <u>Matrix</u>	Redox Features	Tosturo Bemerks
(inches) Color (moist) %	Color (moist) % Type Loc	
0-16 10-12-513		_ Sand to loam
¹ Type: C=Concentration, D=Depletion, RM	M=Reduced Matrix, CS=Covered or Coated San	d Grains. Location: PL=Pore Lining, M-Matrix.
Hydric Soll Indicators: (Applicable to a	ILLRRS, unless otherwise noted.)	
Histosol (A1)	Sandy Redox (S5)	Coll Muck (A10) Pod Parent Material (TE2)
Histic Epipedon (A2)	Stripped Matrix (So) Stripped Matrix (So) Stripped Matrix (So)	1) Very Shallow Dark Surface (TF12)
Black Histic (A3)	Loamy Gleved Matrix (F2)	Other (Explain in Remarks)
Englishingen Sullide (A4) Englished Below Dark Sulface (A11)	Depleted Matrix (F3)	,,,,,,
☐ Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes 🗌 No 🔯
Remarks:		
HYDROLOGY		
HYDROLOGY Wetland Hydrology Indicators:		
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	red; check all that apply)	Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir	red; check all that apply)	Secondary Indicators (2 or more required) MLRA U Water-Stained Leaves (B9) (MLRA 1, 2,
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1)	red; check all that apply)	Secondary Indicators (2 or more required) MLRA U Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3)	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary Indicators (2 or more required) MLRA U Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requin Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquilard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Atgal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (1)	red; check all that apply) UWater-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR B7) Other (Explain in Remarks)	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsety Vegetated Concave Surface	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR B7) Other (Explain in Remarks) (B8)	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) *(C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations:	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR B7) Other (Explain in Remarks) (B8)	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Atgal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsety Vegetated Concave Surface Field Observations: Surface Water Present? Yes	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR B7) Other (Explain in Remarks) (B8)	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsety Vegetated Concave Surface Field Observations: Surface Water Present? Yes H Water Table Present?	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR B7) Other (Explain in Remarks) (B8) No [X] Depth (inches): No [X] Depth (inches):	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes H Water Table Present? Yes H	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR B7) Other (Explain in Remarks) (B8) No [\[2] Depth (inches): No [\[2] Depth (inches):	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Includes capillary fringe)	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR B7) Other (Explain in Remarks) (B8) No [\[2] Depth (inches):	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (includes capillary fringe) Describe Recorded Data (stream gauge, includes capillary fringe)	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR B7) Other (Explain in Remarks) (B8) No [\[2] Depth (inches):	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) c(C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (includes capillary fringe) Vater Table Present? Yes Yes H Water Table Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge, not stream gauge, not s	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR B7) Other (Explain in Remarks) (B8) No [Z] Depth (inches): No [Z] Depth (inches): No [Z] Depth (inches): Immonitoring well, aerial photos, previous inspection	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) *(C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Atgal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (imagery Vegetated Concave Surface) Field Observations: Surface Water Present? Yes Water Table Present? Yes Includes capillary fringe) Describe Recorded Data (stream gauge, managery) Remarks:	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR B7) Other (Explain in Remarks) (B8) No [\[2] Depth (inches): No [\[2] Depth (inches): No [\[2] Depth (inches): monitoring well, aerial photos, previous inspection	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) i(C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Atgal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (in Sparsety Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Includes capillary fringe) Describe Recorded Data (stream gauge, in Remarks:	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR B7) Other (Explain in Remarks) (B8) No [2] Depth (inches): No [2] Depth (inches): Monitoring well, aerial photos, previous inspection	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (includes capillary fringe) Saturation Present? Yes Water Table Present? Yes Includes capillary fringe) Describe Recorded Data (stream gauge, not stream gauge, not	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR B7) Other (Explain in Remarks) (B8) No [\[2] Depth (inches): No [\[2] Depth (inches): No [\[2] Depth (inches): No [\[2] Depth (inches): Monitoring well, aerial photos, previous inspection	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (I Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Includes capillary fringe) Describe Recorded Data (stream gauge, I) Remarks:	red; check all that apply) Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR B7) Other (Explain in Remarks) (B8) No [\[2] Depth (inches): No [\[2] Depth (inches): Imonitoring well, aerial photos, previous inspection	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

WETLAND DETERMINATION DATA FORM -	Western Mountains, Valleys, and Coast Region
Project/Site: 4193 Northwest Dr City	County: <u>Bellingham</u> Sampling Date: 3/3/21
Applicant/Owner:	State: UM M Sampling Point: DP-3
Investigator(s): <u>E.M. : Ilus</u> , <u>L. Hausen</u>	Section, Township, Range: 11 38 W 107 C
Landform (hillslope, terrace, etc.):C	cal relief (concave, convex, none): <u>Constant</u> Slope (%): O
Subregion (LRR): Lat:	Long: Datum:
Soil Map Unit Name:	NWI classification:O
Are climatic / hydrologic conditions on the site typical for this time of year?	/es 🖾 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 san	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes [Ž]. No □ Hydric Soil Present? Yes ⊠ No □ Wetland Hydrology Present? Yes ☑ No □	Is the Sampled Area within a Wetland? Yes ☑ No □
Remarks: method B	, east end

VEGETATION – Use scientific names of plants.

	Absolute	Dominant Indicator	Dominance Test worksheet:
Plot size:)	% Cover	Species? Status	Number of Dominant Species
1. Salix las	50	V FacW	That Are OBL, FACW, or FAC: (A)
2		· · · · · · · · · · · · · · · · · · ·	Total Number of Demissret
3			Species Across All Strate: (P)
4.			
	·	Total Causa	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)		- Total Cuvel	That Are OBL, FACW, or FAC: (0) (A/B)
1 concasa dan	30	1 FurW	Prevalence Index workshoot:
2		<u> </u>	
2			
0	- ·	·	OBL species X1 =
4			FACW species x 2 =
5			FAC species x 3 =
		= Total Cover	FACU species x 4 =
Herb Stratum (Plot size:)			UPL species x 5 =
1	·		Column Totals: (A) (B)
2			
3			Prevalence Index = B/A =
4			Hydrophytic Vegetation Indicators:
5.	·		Rapid Test for Hydrophytic Vegetation
6.			Dominance Test is >50%
7			\square Prevalence Index is <3.0 ¹
Q			
9			data in Remarks or on a separate sheet)
10			Wetland Non-Vascular Plants ¹
11			Problematic Hydrophytic Vegetation ¹ (Explain)
# 14	. <u></u>		¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		= Total Cover	be present, unless disturbed or problematic.
1			
··			Hydrophytic
۷			Vegetation
% Bare Ground in Herb Stratum	<u> </u>	= Total Cover	Present? Yes 🗹 No 🗆
Remarks:			
······································			1

olina Point	-9G	3

			Sampling Point:
Profile Description: (Describe t	to the depth needed to document the indicator or	confirm the abs	sence of indicators.)
Depth Matrix	Redox Features	loc ² Textur	e Remarks
$\frac{(\text{incres})}{2}$ $\frac{(\text{color (molsi)})}{2}$		$\frac{100}{c}$	in the standards
0-10 10 112 1			The I William I I
			content
· · · · · · · · · · · · · · · · · · ·			
	Lation DM-Doduced Matrix CS=Covered or Cogted	Sand Grains	² Location: PL=Pore Lining M=Matrix
Type: C=Concentration, D=Depi	ellon, RM=Reduced Mainx, CS=Covered of Coaled	ln	dicators for Problematic Hydric Soils ³ :
	Sondy Reday (95)	 [2 cm Muck (A10)
Histosof (A1)	Stripped Matrix (S6)		Red Parent Material (TF2)
Black Histic (A3)	I oamy Mucky Mineral (F1) (except M	LRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleved Matrix (F2)		Other (Explain in Remarks)
Depleted Below Dark Surface	(A11) Depleted Matrix (F3)		
S Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ lr	ndicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	····	unless disturbed or problematic.
Restrictive Layer (if present):			
Туре:			
Depth (inches):		Hydri	ic Soil Present? Yes 凶、No 凵
IYDROLOGY			
Wetland Hydrology Indicators:			
Primary Indicators (minimum of o	ne required; check all that apply)		Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (exc	ept MLRA	□ Water-Stained Leaves (B9) (MLRA 1, 2,
💐 High Water Table (A2)	1, 2, 4A, and 4B)		4A, and 4B)
Saturation (A3)	🔲 Salt Crust (B11)		🔀 Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Live	ving Roots (C3)	☑ Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled S	Soils (C6)	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1)	(LKK A)	Kaised Ant Mounds (D6) (LKK A)
Inundation Visible on Aerial Ir	nagery (B/) Unter (Explain in Remarks)		
Sparsely Vegetated Concave	Sunace (B8)		
Field Observations:			
Surface Water Present? Y			
Water Table Present? Ye	es <u> </u> No <u> </u> Depth (inches): <u>()</u>		
Saturation Present? Yes	es 14_No 🔲 Depth (inches): <u>O</u>	Wetland Hyd	arology Present () Yes 🖾 🔍 NO 🛄
Describe Recorded Data (stream	gauge, monitoring well, aerial photos, previous insp	ections), if availa	ble:
Remarks:			

WETLAND DETERMINATION DATA FOR	RM – Western Mountains, Valleys, and	d Coast Region
Project/Site: 4193 Northwest Dr.	_City/County: Rellicham	_ Sampling Date: 3/3/21
Applicant/Owner: Shunder	State: WA	Sampling Point: DP-4
Investigator(s): E.Mills, L. Hansen	Section, Township, Range: 113	2N 102E
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):l	Slope (%): 3
Subregion (LRR): Lat:	Long;	Datum:
Soil Map Unit Name:	NWI classifica	ation: up)
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🗹 No 🔲 (If no, explain in Remarks.)	· · · · · · · · · · · · · · · · · · ·
Are Vegetation, Soil, or Hydrology significantly dist	turbed? Are "Normal Circumstances" prese	ent? Yes 🗷 No 🗍
Are Vegetation, Soil, or Hydrology naturally problem	natic? (If needed, explain any answers in 1	Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects	, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ⊠ 、No ⊡ Yes ⊡ No ⊠ Yes ⊡ No ⊠		Is the Sampled Area within a Wetland?		and? Yes □ No ⊠	
Remarks:	upland	٥٧	East	side	wertand	B

VEGETATION - Use scientific names of plants.

	Absolute	Dominant Indicator	Dominance Test worksheet:
Plot size:)	<u>% Cover</u>	<u>Species?</u> <u>Status</u>	Number of Dominant Species 2
1. HIMUS MM	- 80	- V Jac	That Are OBL, FACW, or FAC: (A)
2. Berturk par.	20	V The	
3			Species Across All Strate:
4.			(B)
		- T-1-1 O	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	•	_ = Total Cover	That Are OBL, FACW, or FAC: (A/B)
1 Rubus 00	30	V Sec	Prevalence Index workshoot
2 Sur plant works of	<u></u>	rat	Total % Course of
2		V them	
4,	·		FACW species x 2 =
5		- <u></u>	FAC species x 3 =
		= Total Cover	FACU species x 4 =
Hero Stratum (Plot size:)			UPL species x 5 =
1			Column Totals: (A) (B)
2			
3			Prevalence Index = B/A =
4			Hydrophytic Vegetation Indicators:
5			Rapid Test for Hydrophytic Vegetation
6.		· · · · · · · · · · · · · · · · · · ·	X Dominance Test is >50%
7			Prevalence Index is ≤3.0 ¹
8			Morphological Adaptations ¹ (Provide supporting
9.	·		data in Remarks or on a separate sheet)
10.	· · · · -	· · · · · · · · · · · · · · · · · · ·	Wetland Non-Vascular Plants ¹
11.		· <u> </u>	Problematic Hydrophytic Vegetation ¹ (Explain)
· · · · · · · · · · · · · · · · · · ·		= Total Cover	Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)			be present, unless disturbed or problematic.
1.			
2.	-	· · ·	Hydrophytic
			Vegetation
% Bare Ground in Herb Stratum	·	- Total Cover	Tresent: Tes 121 NO L
Remarks:		1 1 -	
VVV055 5072 0-	Scon	2 Kyrs	

Sampling Point:	<u>DP-4</u>
ora)	

	pur necuoa to acos			01 00.1111	m the abs	
Depth Matrix	Red	ox Feature	s			
(inches) Color (moist) %	Color (moist)	%	Type	Loc	Texture	<u>Remarks</u>
0-11 10-18-312				<u> </u>	loav	<u>~</u>
11-16 10-18-3/2	10484/2	5	P	\mathcal{W}	100	VA
	·•			<u>.</u>		
					· · · · · · · · · · · · · · · · · · ·	
	<u> </u>					
					·	21
¹ Type: C=Concentration, D=Depletion, RM	VI=Reduced Matrix, C	S=Covere	d or Coat	ed Sand G	Jrains.	Location: PL=Pore Lining, M=Maux.
Hydric Soil Indicators: (Applicable to a	II LRRs, unless oth	erwise no	(ea.)			2 are Muck (A10)
Histosol (A1)	Sandy Redox ((85)				2 cm Muck (A10) Red Parent Material (TE2)
Histic Epipedon (A2)	Stripped Matrix	((SD) Minoral /E	1) (ovconi	MIRAT	, П	Very Shallow Dark Surface (TE12)
Black Histic (A3)		Matrix (E2	i) (evceh-		, <u>с</u> П	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matri	ix (F3)	-,		-	
Thick Dark Surface (A12)	Redox Dark S	urface (F6)			³ In	dicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark	Surface (I	-7)			wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depres	sions (F8)				unless disturbed or problematic.
Restrictive Layer (if present):						
Туре:						
Depth (inches):	·				Hydrid	; Soil Present? Yes 🛛 No 🖾
Remarks:			•••			
HYDROLOGY						
HYDROLOGY Wetland Hydrology Indicators:						
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	red; check all that ap	ply)				Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1)	red; check all that ap	ply) ained Leav	ves (B9) (6	xcept ML	RA	Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2)	red; check all that ap Water-St 1, 2, 4	ply) ained Leav 4A, and 4B	ves (B9) (¢ 3)	except ML	_RA	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requin Surface Water (A1) High Water Table (A2) Saturation (A3)	red; check all that ap ☐ Water-St 1, 2, 4 ☐ Salt Crus	ply) ained Leav 4A, and 4I it (B11)	ves (B9) (¢ 3)	xcept ML	RA	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	red; check all that ap Water-St 1, 2, 4 Salt Crus Aquatic I	ply) ained Leav 4A, and 4I it (B11) nvertebrate	ves (B9) (e 3) es (B13)	except ML	_RA	Secondary Indicators (2 or more required) U Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) U Drainage Patterns (B10) Dry-Season Water Table (C2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	red; check all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydroger	ply) ained Leav 4A, and 4I 4, and 4I 1, and 4I	/es (B9) (6 3) es (B13) rdor (C1)	except ML	_RA	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)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	red; check all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydroger Oxidized	ply) ained Leav 4A, and 4I 44, and 4I 14 (B11) nvertebrate 25 Statistics 20 Statistics	ves (B9) (¢ 3) es (B13) edor (C1) eres along	except ML	_RA	Secondary Indicators (2 or more required) U 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)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	red; check all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydroger Oxidized Presence	ply) ained Leav 4A, and 4E tt (B11) nvertebrate n Sulfide C Rhizosphe e of Reduc	ves (B9) (e 3) es (B13) edor (C1) eres along ed Iron (C	Eliving Rc	_RA	Secondary Indicators (2 or more required) U Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Urainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	red; check all that ap Water-St 3 Salt Crus Aquatic I Hydroger Oxidized Presence Recent Ir	ply) ained Leav 4A, and 4I th (B11) nvertebrate on Sulfide C Rhizosphe of Reduction ron Reduction	ves (B9) (6 3) es (B13) edor (C1) eres along ed Iron (C ion in Tille	Eliving Rc 4) d Soils (C	_RA	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)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	red; check all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydroger Oxidized Presence Recent Ir Stunted of	ply) ained Leav 4A, and 4I at (B11) nvertebrate n Sulfide C Rhizosphe e of Reduc on Reduct on Reduct	ves (B9) (6 3) es (B13) edor (C1) eres along ed Iron (C ion in Tille d Plants (D	Except ML Living Rc 4) d Soils (C	_RA	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)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requin Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (red; check all that ap Water-St 1, 2, 4 Salt Crus Aquatic I Hydroger Oxidized Presence Recent Ir Stunted o B7) Other (E:	ply) ained Leav 4A, and 4I at (B11) nvertebrate n Sulfide C Rhizosphe e of Reduc on Reduct or Stressee xplain in R	ves (B9) (e 3) edor (C1) eres along ed iron (C ion in Tille d Plants (C emarks)	Eliving Rc 4) d Soils (C 1) (LRR /	_RA pots (C3) 26) A)	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)
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WETLAND DETERMINATION DA	ATA FORM –	Western Mountains, Va	alleys, and Coast	Region
Project/Site: 4/93 Northwest	City	County: <u>Bellingha</u>	<u>M</u> Sampli	ng Date: $3 3 2$
Investigator(s): F, Miller, L. Hansen		Section, Township, Rar	<u>יישיו</u> Sampin nae: אן אאר	67 E
Landform (hillslope, terrace, etc.):	Lo	cal relief (concave, convex, nor): <u> </u>	Slope (%):
Subregion (LRR):	Lat:	Long:		Datum:
Soil Map Unit Name:			NWI classification:	Jan
Are climatic / hydrologic conditions on the site typical for thi	s time of year?	Yes 💋 No 🗌 (If no, explain	in Remarks.)	1
Are Vegetation, Soil, or Hydrology signil	ficantly disturbed	Are "Normal Circumst	ances" present? Yes	🖾 No 🗆
Are Vegetation, Soil, or Hydrology nature	ally problematic?	(If needed, explain any	answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sa	npling point locations,	transects, impor	tant features, etc.
Hydrophytic Vegetation Present? Yes ⊠. No □ Hydric Soil Present? Yes □ No ∅ Wetland Hydrology Present? Yes □ No ∅		is the Sampled Area within a Wetland?	Yes 🗖 No 🔀	
Remarks: upland xd;	, 1-0	west side	wellad	в
VEGETATION – Use scientific names of plan	ts.			

Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size:) <u>% Cover Species?</u> Status Number of Dominant Species Alnus CN 80 2 1. Fac That Are OBL, FACW, or FAC: (A) 2. hu' 20 \$ 01 Vac Total Number of Dominant 3 3. Species Across All Strata: (B) 4. Percent of Dominant Species 66 = Total Cover That Are OBL, FACW, or FAC: (A/B) Sapling/Shrub Stratum (Plot size: 1. Rubus FAC 10 Prevalence Index worksheet: turpoc :7-5 2 -inv by me FarU Total % Cover of: Multiply by: A 6.15 3. \sim 15 OBL species _____ x 1 = ____ FACW species _____ x 2 = _____ 4. 5. FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ _____ = Total Cover Herb Stratum (Plot size:) UPL species _____ x 5 = _____ 1. ____ Column Totals: _____ (A) _____ (B) 2. _____ _____ 3. Prevalence Index = B/A = 4._____ Hydrophytic Vegetation Indicators: 5._____ Rapid Test for Hydrophytic Vegetation 6._____ Dominance Test is >50% 7._____ Prevalence Index is $\leq 3.0^1$ Morphological Adaptations¹ (Provide supporting 8.____ data in Remarks or on a separate sheet) 9. U Wetland Non-Vascular Plants¹ _____ 10. Problematic Hydrophytic Vegetation¹ (Explain) 11. ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. = Total Cover Woody Vine Stratum (Plot size:) 1. Hydrophytic 2 Vegetation Yes 🗵 No 🗖 _____ = Total Cover Present? % Bare Ground in Herb Stratum _____ Remarks:

1 tomo 2 occupation (2 occupation of	All lieeded to document the indicator of commit the a	baence of indicatorsi)
DepthMatrix	Redox Features	Descrite
(inches) Color (moist) %	Color (moist) % Type' Loc ² Text	ure <u>Remarks</u>
0-12 101/2/2		<u>, wi</u>
12-14 10-10-112	61	dlam
		·······
······································		
		² Location: PL=Pore Lining, M=Matrix,
Hydric Soil Indicators: (Applicable to a	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
	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)	Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wettang hydrology must be present,
Sandy Gleyed Matox (S4)		diffess distanced of problemate.
Restrictive Layer (if present):		
Depth (inches):	Hve	tric Soil Present? Yes 口 No 祝
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one require	ed; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except MLRA	Water-Stained Leaves (B9) (MLRA 1, 2,
	_ ,,,,,,	
I I I High Water Table (A2)	1, 2, 4A, and 4B)	4A, and 4B)
☐ High Water Table (A2)	1, 2, 4A, and 4B) ☐ Salt Crust (B11)	4A, and 4B)
High Water Table (A2) Saturation (A3) Water Marks (B1)	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) 	 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9)) □ Geomorphic Position (D2)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) 	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4)	 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) 	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	4A, and 4B) 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)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) 	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	4A, and 4B) 4A, and 4B) 5 6 7 7 7 7 7 7 7 7 7 7 7 7
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B 	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 87)	 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)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface 	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks)	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)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface Field Observations: 	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 87) Other (Explain in Remarks)	 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)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes N 	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks) (B8)	 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)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes N Water Table Present? Yes N 	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks) (B8) Io Depth (inches):	 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)
 High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes N Water Table Present? Yes N Saturation Present? Yes N 	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 87) Other (Explain in Remarks) (B8) Io Depth (inches): -10 Depth (inches):	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)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes N Water Table Present? Yes N Water Table Present? Yes N Saturation Prese	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 87) Other (Explain in Remarks) (B8) Io Depth (inches): Wetland H conjugring well aerial photos, previous inspections), if ava	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)
☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (E ☐ Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes ☑ Naturation Present? Yes ☑ (includes capillary fringe) Describe Recorded Data (stream gauge, r	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks) (B8) Io Depth (inches): Io Depth (inches): Wetland Hermonitoring well, aerial photos, previous inspections), if ava	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)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes N Water Table Present? Yes M Saturation Present? Yes M Saturation Present? Yes M Saturation Present? Yes	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks) (B8) Io 🖾 Depth (inches): No 🗌 Depth (inches): Wetland Henonitoring well, aerial photos, previous inspections), if ava	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)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes ☑ Water Table Present? Yes ☑ Saturation Present? Yes ☑ Seturation Present? Yes ☑ Naturation Present? Yes ☑ Remarks:	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks) (B8) Io Depth (inches): Wetland H nonitoring well, aerial photos, previous inspections), if ava	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)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes N Water Table Present? Yes N Water Table Present? Yes N Saturation Present? Yes N Mater Table Present? Yes N Saturation Pres	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks) (B8) Io Depth (inches): No Depth (inches): Wetland Honoitoring well, aerial photos, previous inspections), if ava	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)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes N Water Table Present? Yes N Water Table Present? Yes N Saturation Present? Yes N Saturation Present? Yes N Saturation Present? Yes N Cincludes capillary fringe) Describe Recorded Data (stream gauge, r Remarks:	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) 37) Other (Explain in Remarks) (B8) Io Depth (inches): No Depth (inches): Wetland H nonitoring well, aerial photos, previous inspections), if ava	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)

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

Project/Site: 4193 Worthwest	City/Cour	ny: Bellingham	Sampling Date: 332
Applicant/Owner:		State: <u></u>	\therefore Sampling Point: $\bigcirc \bigcirc \frown \bigcirc \frown$
Investigator(s): E.M. Tho L. Ha	<u>ASta</u>	_ Section, Township, Range: <u>1</u>	38W 02 E
Landform (hilislope, terrace, etc.):	Local re	lief (concave, convex, none):	Slope (%):
Subregion (LRR):	Lat:	Long:	Datum:
Soil Map Unit Name:		NWI classif	ication: <u>PFO</u>
Are climatic / hydrologic conditions on the site typica	I for this time of year? Yes	🛛 No 🔲 (If no, explain in Remark	s.)
Are Vegetation, Soil, or Hydrology	_ significantly disturbed?	Are "Normal Circumstances" pre	sent? Yes 🗹 No 🗖
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answers i	n Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sampli	ng point locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes M	No 🗖		

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ⊠ No ∐ Yes ⊠ No ⊡ Yes ⊠⊸No ⊡	Is the Sampled Area within a Wetland?	Yes 🗹 No 🗖	
Remarks:	ivilland c			

VEGETATION -- Use scientific names of plants.

Tree Ottobury (Distribute)	Absolute	Domina	nt Indicator	Dominance Test workshe	et:
Piot size:)	<u>% Cover</u>	Species	<u>s?</u> <u>Status</u>	Number of Dominant Speci	ies
1. ALANS FU	30	V	1ac	That Are OBL, FACW, or F	AC: (A)
2. Thuik pl	20		Fac	Total Musels of Development	
3				Species Across All Strata	$\leq \omega$
4.		•		opeace Adoss Al Grata.	(D)
		- Total	- <u></u>	Percent of Dominant Specie	es la d
Sapling/Shrub Stratum (Plot size:)			COVER	That Are OBL, FACW, or F	AC: (A/B)
1. A C 85 Ci	40	V	Fre	Prevalence index workshi	eef:
2. Rubins SD.	20	V	Sac	Total % Cover of:	Multiply by:
3.			_ <u>• •(1</u>	OBL species	x1=
4				FACW species	x2=
5				FAC species	x 3 =
		= Total	Cover	FACU species	x 4 =
Herb Stratum (Plot size:)		· /	-	UPL species	x 5 =
1. Manunculus R	20		tal	Column Totals:	(A) (B)
2					, ,
3				Prevalence Index = B	/A =
4	·			Hydrophytic Vegetation In	idicators:
5				Rapid Test for Hydrophy	vtic Vegetation
6				☑_Dominance Test is >50%	%
7				☐ Prevalence Index is ≤3.0	0 ¹
8				🛛 Morphological Adaptatic	ons ¹ (Provide supporting
9				data in Remarks or o	on a separate sheet)
10				Wetland Non-Vascular F	Plants ¹
11		•		Problematic Hydrophytic	c Vegetation ¹ (Explain)
		= Total (Cover	¹ Indicators of hydric soil and	wetland hydrology must
Woody Vine Stratum (Plot size:)		i otai i	00701	be present, unless disturbed	d or problematic.
1					
2				Hydrophytic	
		= Total 4	Cover	Present? Yes 171	No 🗖
% Bare Ground in Herb Stratum		, otar (~~~~	100	
Remarks:				۰۰۰۰۰ m	

	001	
Sampling Point:	1-1	

Profile Description: (Describe	to the dept	needed to docu	ment the ir	ndicator o	r confirm	the abs	sence of indicators.)
Depth <u>Matrix</u>	······	Rede	ox Features	- 1	12	T	- Demodya
(inches) Color (moist)	<u> % </u>	olor (moist)	%	lype'	LOC		e Remarks
0-16 10-16-21				<u> </u>		514	t-100m
	_			<u> </u>			
					<u> </u>		· · · · · · · · · · · · · · · · · · ·
	·				<u> </u>		
					<u> </u>		
¹ Type: C=Concentration, D=Der	letion, RM=f	Reduced Matrix, C	S=Covered	or Coated	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applic	able to all L	RRs, unless othe	rwise note	d.)		In	dicators for Problematic Hydric Soils ³ :
Histosol (A1)	C] Sandy Redox (S5)] 2 cm Muck (A10)
Histic Epipedon (A2)	[Stripped Matrix	(S6)				Red Parent Material (TF2)
Black Histic (A3)	[Loamy Mucky f	vineral (F1)) (except N	ILRA 1)		Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)		Loamy Gleyed	Matrix (F2)			Ц	J Other (Explain in Remarks)
Depleted Below Dark Surfac	e(A11) [Uepleted Matrix Redex Dark Su	(153) Infaco /561			310	policators of bydrophytic vegetation and
St. Thick Dark Surface (A12)	L r	Redux Daik Su	nace (Fo) Surface (E7	7)		41	wetland hydrology must be present.
Sandy Mucky Mineral (01)	L L	Redox Depress	sions (F8)	/			unless disturbed or problematic.
Restrictive Laver (if present):			<u> </u>				· · · · · · · · · · · · · · · · · · ·
Туре:							
Depth (inches):						Hydri	ic Soil Present? 🛛 Yes 🚺 No 🗔
Remarks:			<u> </u>				
HYDROLOGY							
Wetland Hydrology Indicators	;						Quere de la diseñera (Quere recuire d)
Primary Indicators (minimum of	one required;	check all that app	oly)				Secondary Indicators (2 or more required)
Surface Water (A1)		□ Water-Sta	ined Leave	s (B9) (exc	cept MLR	LA .	Water-Stained Leaves (B9) (MLRA 1, 2,
12 High Water Table (A2)		1, 2, 4	A, and 4B)				4A, and 4B)
Saturation (A3)		□ Sait Crust	(B11)	(D40)			Drainage Patterns (B10) Day Seesen Motor Table (C2)
U Water Marks (B1)		Aquatic In	vertebrates	(B13) ac (C4)			Dry-beason water rable (02) Saturation Visible on Aerial Imageou (C9)
Sediment Deposits (B2)		Hydrogen	Sunde Ud	or (U1) on plana 13	vina Past	te (02)	· □ Gaturation visible on Actian imagely (09)
Dontt Deposits (B3)			of Poduce	es along Li Hiron (CA)	MING ROOM	ເລ (ບວງ	Shallow Aquitard (D3)
Algai Mat or Crust (B4)			or Reductio	n in Tilled	Sails (CA	۱	FAC-Neutral Test (D5)
			r Streeged I	Plants (D4)		/	Raised Ant Mounds (D6) (LRR A)
L Surrace Soll Cracks (DD)	maneni (P7)		olain in Rer	narks)			Frost-Heave Hummocks (D7)
Inunuation visible on Aerial Sparsely Vegetoted Coppay	e Surface (D7)						
Field Observatione:						÷	
Curfore Mater Drocont?	/asixi No	Depth (inche	151: J	l			
Water Table Present?		Depth (inche	s).	.			
Valer rable Fleserill	100 IL 110		~). 		Woth	and Hve	drology Present? Yes 区 No 〇
(includes capillary fringe)	ies Ш 190		······		1160		
Describe Recorded Data (strear	n gauge, moi	nitoring well, aerial	photos, pro	evious insp	ections),	if availa	ble:
Remarks:							
L							

WETLAND DETER	VINATION DATA FORM	– Western M	ountains, Valleys, ar	nd Coast Region
Project/Site: 4192 Noc	therest Dr ca	WCountry R	alling	22
Applicant/Owner Sala in disc		yrcounty	Curry nam	_ Sampling Date: _>[>]
Investigatorial: E. M. Wiss 1	Harris		State: <u></u>	_ Sampling Point: <u>\\P -</u>
andform (billolong torrest of the		Section,	, Township, Range:	
Lanotorini (milisiope, terrace, etc.):	<u>> \v(22</u> Lo	ocal relief (conca	ive, convex, none):/	مر Slope (%): <u>م</u>
Subregion (LRR):	Lat:		Long:	Datum:
Soil Map Unit Name:			NWI classific	vation; up [
ve climatic / hydrologic conditions on the	site typical for this time of year?	Yes 🕰 No 🗆	(If no, explain in Remarks)
ve Vegetation, Soil, or Hydro	logy significantly disturbe	d? Are "N	ormal Circumstances" pres	ent? Yes 🗹 No 🗌
re Vegetation, Soil, or Hydro	logy naturally problematic	? (If need	ied, explain any answers in	Remarks.)
SUMMARY OF FINDINGS - Atta	ich site man showing sa	mpling point	Lonationa transact	
	on one map showing sa		riocations, transects	s, important features, e
Hydrophytic Vegetation Present?	Yes 🛛 No 🗹	Is the Sample	od Aros	
Hydric Soil Present?	Yes 🗋 No 🖾	within a Wefl	and? Vec 🗂 ?	is 191
Wetland Hydrology Present?				
Remarks:	South W	etha d	D	
× ×				
EGETATION - Use scientifie m	moo of playte			
	intes of plants.			
ree Stratum (Plot size;)	Absolute Doi % Cover Sp	minant Indicator ecles? Status	Dominance Test work	sheet;
. Alnue Fin	60 v	Free Free	Number of Dominant Sp	pecies 2
Populus ba	22 1	Str.	matrice obe, i Aow, ((A)
Prinnes en.	20 0	Hack	Total Number of Domini	ant 7 m
		<u> </u>	opedes Adross Ali olia	
	=]	fotal Cover	Percent of Dominant Sp	ecies
apling/Shrub Stratum (Plot size:)		1 - 11	That Ale ODL, PAGW, C	(A/B
- Stra phonicapas	$\sim 30 \vee$	- track	Prevalence Index work	sheet:
Commence Ce		<u> </u>	Total % Cover of:	Multiply by:
			OBL species	, x1=
	<u> </u>		FACW species	x2=
			FAC species	x3=
arb Stratum (Plot size:)	= I	otal Cover	HACU species	×4=
Palystichum W	<u>u</u> 30 /	Fach	OPL species	x5=
Pteridium rg	20 1	Vacu	Column Totais:	(A) (B)
Y			Prevalence Index :	= B/A =
			Hydrophytic Vegetation	Indicators:
			Rapid Test for Hydro	phytic Vegetation
			Dominance Test is >	50%
			Prevalence Index is a	53.0 ¹
			Morphological Adapta	ations ¹ (Provide supporting
			data in Remarks o	or on a separate sheet)
-		<u> </u>	Roblematic Luder-to	ir Pianis'
· · · · · · · · · · · · · · · · · · ·		<u> </u>	¹ Indicators of hydrophy	vuc vegetation' (Explain)
oody Vine Stratum (Plot size:)	= To	tal Cover	be present, unless disturb	nd wettand hydrology must ed or problematic.
······································				
			Hydrophytic	
	≂ To	tal Cover	Present? Yes I	No 🕅

.

Compliant	Detet	P.	
Samplind	POINT		
Country			

Profile Description: (Describe to the depth needed to document the indicator or confirm	the absence of indicators.)
Depth Matrix Redox Features	
(inches) Color (moist) % Color (moist) % Type ¹ Loc ²	Texture Remarks
0-10 7.518 2.52	silt laam
10-16 10-1R 3/3	5,14-loan
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils':
Histosol (A1)	2 cm Muck (A10)
Histic Epipedon (A2)	Red Parent Material (1F2)
Black Histic (A3)	Other (Explain in Remarks)
Hydrogen Sulfide (A4)	
Depleted Below Dark Surface (A11) Depleted Mainx (F3)	³ Indicators of hydrophytic vegetation and
Inick Dark Surface (A12) Inick Dark Surface (F7) Denleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Mucky Miletar (S1) Sandy Gleved Matrix (S4) Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	
Туре:	
Depth (inches):	Hydric Soil Present? Yes 🗌 No 🖗
Remarks:	
Wetland Hydrology Indicators:	
Drimony Indicators (minimum of one required: check all that appiv)	Secondary Indicators (2 or more required)
Plinaty indicators (minimum of one required, direct or galactic plant, and the set of th	A Water-Stained Leaves (B9) (MLRA 1, 2,
Li Suitade Water (AT)	4A, and 4B)
C Algri Water Table (A2)	Drainage Patterns (B10)
Acuatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (82)	Saturation Visible on Aerial Imagery (C9)
Diff Deposits (B3)	ts (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5)
□ Surface Soil Cracks (B6) □ Stunted or Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7) Dther (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)	
Field Observations:	
Surface Water Present? Yes 🗌 No 🖾 Depth (inches):	
Water Table Present? Yes 🖄 No 🗆 Depth (inches): <u>10</u>	
Wet	and Hydrology Present? Yes 🔲 No 🖾
Saturation Present? Yes (2) No Li Depar (incides).	
Saturation Present? res (z) No L1 Deput (incres)	if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections),	if available:
Saturation Present? Yes (Zi No Li Depuir (inclues) (includes capillary fringe) (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections),	if available:
Saturation Present? Yes (Al No Li Depuil (include).	if available:
Saturation Present? Yes (Al No Li Depuil (inclues).	if available:
Saturation Present? Yes (All No Linde beguin (includes). 1000000000000000000000000000000000000	if available:

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

Project/Site: 4193 Northwest	City/County: Bellmaloum Sempling Date: 3/3/2/
Applicant/Owner: 56.00 - 65	State: WM Sempling Point: 10 - 8
Investigator(s): E.M. illo, L. Hansen	Section, Township, Range:
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none): $co \sim (a + c)$ Slope (%):
Subregion (LRR): Lat:	Long: Datum:
Soil Map Unit Name:	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes 🔼 No 🗋 (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distu	rbed? Are "Normal Circumstances" present? Yes Z. No
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS Attach site map showing	sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ⊠ No □ Yes ⊠ No □ Yes ⊠- No □	-	Is the Sampled Area within a Wetland?	Yes 🖉 _ No 🗖	
Remarks:	wetterd	0	<u></u>		

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size)	Absolute Dominant Indicator	Dominance Test worksheet:
1.	<u>% Cover Species? Status</u>	Number of Dominant Species
2.		That Are OBL, FACW, or FAC: (A)
3.		Total Number of Dominant
4.		Species Across All Strata: (B)
Sapling/Shrub Stratum (Plot size:)	= Total Cover	Percent of Dominant Species 100 That Are OBL, FACW, or FAC: (A/B)
1. Rubus of	SO V FAL	Prevalence Index worksheet:
2. CORMUS Se	50 V Sac	<u>Total % Cover of:</u> Multiply by:
3		OBL species x 1 =
4		FACW species x2=
5		FAC species x 3 =
Horb Strokum (Distation)	= Total Cover	FACU species x 4 =
1		UPL species x 5 ≈
2		Column Totals: (A) (B)
3		
Δ		Prevalence Index = B/A =
5		Hydrophytic Vegetation Indicators:
6		Rapid Test for Hydrophytic Vegetation
7		Dominance lest is >50%
8		
9.		data in Remarks or on a separate sheet)
10.		Wetland Non-Vascular Plants ¹
11		Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1		
2		Hydrophytic Vogatation
% Bare Ground in Herb Stratum	= Total Cover	Present? Yes' No
Remarks:	· · · · · · · · · · · · · · · · · · ·	

	~ N D
Sampling Point:	05-0

	the sector to document the indicator or confirm	the absence of indicators.)	
Profile Description: (Describe to the de	eptin needed to document the indicator of commin	······································	
Depth <u>Matrix</u>	Redox Features	Texture Remarks	
(inches) Color (moist) 70			
0-5 10-112-2		- ang	
5-13 10-1R-312	10-16-314 10 C 2011	Silt Wan	
¹ Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, CS=Covered or Coated Sand Gra	ains. Location: PL-Pole Lining, M-Mauric.	
Hydric Soil Indicators: (Applicable to a	all LRRs, unless otherwise noted.)		
Histosol (A1)	Sandy Redox (S5)	Z CM MUCK (ATU) Devel Decent Meterial (TE2)	
🔲 Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (112) Fill Venu Shellow Dark Surface (TE12)	
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Other (Evolution in Remarks)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and	
Thick Dark Surface (A12)	Redox Dark Surface (ro)	wetland hydroloov must be present.	
Sandy Mucky Mineral (S1)		unless disturbed or problematic.	
Sandy Gleyed Matrix (S4)			
Restrictive Layer (ir present):			
	<u> </u>	Hydric Soil Present? Yes K No	
Depth (inches):			
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:			
Primary Indicators (minimum of one requi	red; check all that apply)	Secondary Indicators (2 or more required)	
X Surface Water (A1)	Water-Stained Leaves (B9) (except MLR	A Water-Stained Leaves (B9) (MLRA 1, 2,	
High Water Table (A2)	1, 2, 4A, and 4B)	4A, and 4B)	
□ Saturation (A3)	1 Saturation (A3)		

Primary Indicators (minimum of one requireo; cri			
Primary Indicators (minimum or one required, cri A. Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	t MLRA g Roots (C3) Is (C6) RR A)	 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) 	
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (L Other (Exclain in Remarks)	nn n j	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)			
Field Observations:			
Surface Water Present? Yes 🕱 No 🗔	Depth (inches): <u>+ C</u>		
Water Table Present? Yes 🖾 No 🗆	Depth (inches):		
Saturation Present? Yes 🛛 No 🗌	Depth (inches):	Wetland Hyd	
Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previous inspec	ions), ir availai	סוס.
Remarks:		<u> </u>	

WETLAND DETERMINATION DA	TA FORM – Western M	lountains, Valleys, ar	id Coast Region
•			-

SUMMARY OF FINDINGS – Attach site map showing sample	ing point locations, transects, important features, etc.
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Áre "Normal Circumstances" present? Yes 🖄 No 🗆
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	No 🛛 (If no, explain in Remarks.)
Soil Map Unit Name:	NWI classification:
Subregion (LRR): Lat:	Long: Datum:
Landform (hillstope, terrace, etc.): Local re	elief (concave, convex, none): <u>Concave</u> Slope (%): O
Investigator(s): <u>F.M. Ila</u>	Section, Township, Range: 11 38 N(U2E
Applicant/Owner:	State: WK Sampling Point: OP-100
Project/Site: 4193 WW - offsite South City/Cou	unty: <u>Bellingham</u> sampling Date: 10/11/22

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ⊠ No □ Yes ⊠ No □ Yes ⊠ No □	Is the Sampled Area within a Wetland?	Yes 🖾 No 🗌	
Remarks:	welland F	 offsile	South	

VEGETATION -- Use scientific names of plants.

	Absolute	Dominant Indicator	Dominance Test worksheet:
<u>Iree Stratum</u> (Plot size:)	% Cover	Species? Status	Number of Dominant Species
1	·	· · · · · · · · · · · · · · · · · · ·	That Are OBL, FACW, or FAC:
2			
3			I total Number of Dominant
4.			Species Across Air Strata: (B)
			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)		= Total Gover	That Are OBL, FACW, or FAC: (A/B)
1 COMMUS CO	20	Full	Provalance Index weeksharts
2			
2	·		lotal % Cover of: Multiply by:
	·		OBL species x 1 =
4	·	· · · · · · · · · · · · · · · · · · ·	FACW species x 2 =
5	·		FAC species x 3 =
		= Total Cover	FACU species x 4 =
Herb Stratum (Piot size:)		1-	UPL species x 5 =
1. Salannum dul.	40	1 tac	
2			
3			Prevalence Index = B/A =
4			Hydrophytic Vegetation Indicators:
5.			Rapid Test for Hydrophytic Vegetation
6			Dominance Test is >50%
7			
8,			LI Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
10.			Wetland Non-Vascular Plants ¹
11.			Problematic Hydrophytic Vegetation ¹ (Explain)
		- Total Cours	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		- Total Cover	be present, unless disturbed or problematic.
1			
2	·		Hydrophytic
		- Total Cover	Vegetation
% Bare Ground in Herb Stratum			
Remarks:			

Sampling Point:	DP-100
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	epth needed to document the indicator or co	mann me abaence of mandatoroly
Deoth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc	<u>2 Texture</u> Remarks
1-15 10-1R2/1		Silflam
1 7 7 6-1 5/2	10703/41 10 6 100	Gard & Holam
5-14 2131 -12		
·		
	-	
		ad Craina ² Lapotion: BL=Bare Lining M=Matrix
¹ Type: C=Concentration, D=Depletion, F	RM=Reduced Matrix, CS=Covered or Coated Sa	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)	
Histosol (A1)	Sandy Redox (S5)	Z Cm Muck (AT0) Ded Decent Meterial (TE2)
Histic Epipedon (A2)	Stripped Matrix (S6)	Key Parent Material (112)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLR	Other (Evolution in Remarks)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	
L Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and
Thick Dark Surface (A12)	Redox Dark Surface (F0)	wettand hydrology must be present.
Sandy Mucky Mineral (S1)	D Depleted Dark outlatte (F7)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4)		
Restrictive Layer (if present):		
type:		
Depth (inches):		Hydric Soll Presentr Tes, C. No L
Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requ	uired; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1)	uired; check all that apply)	t MLRA Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2)	pired; check all that apply) ☐ Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B)	t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3)	vired; check all that apply) Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B) Salt Crust (B11)	t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Ø, Water Marks (B1)	uired; check all that apply) Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required) t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Destruction Visition of Sector (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) X, Water Marks (B1) Sediment Deposits (B2)	uired; check all that apply) Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Secondary Indicators (2 or more required) t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Image Patterns (B10) Drainage Patterns (B10) Image Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	uired; check all that apply) Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living	Secondary Indicators (2 or more required) t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	uired; check all that apply) Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4)	Secondary Indicators (2 or more required) t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Image Patterns (B10) Drainage Patterns (B10) Image Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Geomorphic Position (D2) Image State Sta
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	uired; check all that apply) Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi	Secondary Indicators (2 or more required) t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Image Drainage Patterns (B10) Dry-Season Water Table (C2) Image Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Geomorphic Position (D2) Image Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestion of the second s	 uired; check all that apply) Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L 	Secondary Indicators (2 or more required) t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Image Drainage Patterns (B10) Dry-Season Water Table (C2) Image Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Geomorphic Position (D2) Image Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery	 uired; check all that apply) Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L (B7) Other (Explain in Remarks) 	Secondary Indicators (2 or more required) t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Image Drainage Patterns (B10) Dry-Season Water Table (C2) Image Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Geomorphic Position (D2) Image Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Image Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface	 uired; check all that apply) Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L (B7) Other (Explain in Remarks) 	Secondary Indicators (2 or more required) t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Image Data Drainage Patterns (B10) Image Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Geomorphic Position (D2) Image Shallow Aquitard (D3) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Image Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations:	 uired; check all that apply) Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L (B7) Other (Explain in Remarks) xe (B8) 	Secondary Indicators (2 or more required) t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Totainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestion of the second s	vired; check all that apply) □ Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Livin □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Soi □ Stunted or Stressed Plants (D1) (L (B7) □ Other (Explain in Remarks) xe (B8) No ⊠ Depth (inches):	Secondary Indicators (2 or more required) t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) J Jorainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes	vired; check all that apply) Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L (B7) Other (Explain in Remarks) xe (B8) No X Depth (inches): No X Depth (inches):	Secondary Indicators (2 or more required) t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) W, Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algat Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Deposit? Yes	vired; check all that apply) Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi Stunted or Stressed Plants (D1) (L (B7) Other (Explain in Remarks) ve (B8) No X Depth (inches): No X Depth (inches): No X Depth (inches):	Secondary Indicators (2 or more required) t MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) g Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 4193 WW- offcile Simplicity/C	autor Rellinghan some 10/11/22
Applicant/Owner: Shunter	State: WIA Sampling Point: DP=101
Investigator(s): E, M, Ills	Section, Township, Range: 138W/02E
Landform (hillslope, terrace, etc.): Local	relief (concave, convex, none): <u>(ou(aut</u> Slope (%):)
Subregion (LRR): Lat:	Long: Datum:
Soil Map Unit Name:	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Ye	s 🕅 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 same	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	

Hydric Soil Present? Wetland Hydrology Present?	Yes⊠~_No∐ Yes⊡ No⊠ Yes⊡ No⊠	i	Is the Sampled Area within a Wetland?	Yes 🗆 No 🗖	
Remarks:	adj to	SW	side we	Ind E	

VEGETATION – Use scientific names of plants.

	Absolute Dominant Indicator	Dominance Test worksheet:
Iree Stratum (Plot size:)	% Cover Species? Status	Number of Dominant Species 2
1. HINNS FU	20 V fac	That Are OBL, FACW, or FAC:
2		
3.	······	Total Number of Dominant
A		Species Across All Strata: (B)
······		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	= Total Cover	That Are OBL, FACW, or FAC: (A/B)
1. Rybus at	BO / Fac	Prevalence Index worksheet:
2. Rubus M.	10 Fac	Total % Cover of Multiply by:
3. Sp. rea do	5 V Frida	OBI species v1 -
4		FACW species x2=
5		FAC species x3 =
	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size:)	1 1 5 11	UPL species x 5 =
1. ICHOUS UT	15 V Fach	Column Totals: (A) (B)
2. AttWinn F.	2 in tac	
3		Prevalence Index = B/A =
4		Hydrophytic Vegetation Indicators:
5		Rapid Test for Hydrophytic Vegetation
6		Dominance Test is >50%
7		Prevalence Index is ≤3.0 ¹
8		Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate speet)
10		□ Wetland Non-Vascular Plants ¹
11		Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.		
2		Hydrophytic
	= Total Cover	Present? Yes V No
% Bare Ground in Herb Stratum		
Remarks:		

Sampling Point: (0 (

Plome Description. (Describe to the de	pla needed to document the maladater of com	
Depth Matrix	Redox Features	The Demarks
(inches) Color (moist) %	Color (moist) % Type' Loc	
0-12.5 10-12-12		- loam
12,5-14 10-18-12	10-12-5/41 3 c m	Gilt have
······································		
	De la contra de la contra de contra	Grains ² Location: PL=Pore Lining, M=Matrix.
Type: C=Concentration, D=Depletion, RM	A=Reduced Mainx, CS=Covered of Coaled Sand	Indicators for Problematic Hydric Solls ³ :
Hydric Soli Indicators: (Applicable to a	Condy Bodoy (S5)	☐ 2 cm Muck (A10)
Histosol (A1)	Stripped Matrix (S6)	Red Parent Material (TF2)
Histic Epipedon (A2) Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA	1) Uery Shallow Dark Surface (TF12)
Hvdrogen 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)	Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	Unless disturbed or problematic.
Restrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes I No para
Remarks:		
HYDROLOGY		
HYDROLOGY Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	ed; check all that apply)	Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1)	ed; check all that apply)	Secondary Indicators (2 or more required) ILRA U Water-Stained Leaves (B9) (MLRA 1, 2,
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2)	ed; check all that apply) Water-Stained Leaves (B9) (except N 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required) MLRA □ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3)	ed; check all that apply) Water-Stained Leaves (B9) (except N 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary Indicators (2 or more required) MLRA □ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2)
HYDROLOGY Wetfand Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ed; check all that apply) Water-Stained Leaves (B9) (except N 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hudreen Suffra Order (C1)	<u>Secondary Indicators (2 or more required)</u> MLRA U Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
HYDROLOGY Wetfand Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ed; check all that apply) Water-Stained Leaves (B9) (except N 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oridinal Ebinaenberge along Living E	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Rects (C3)
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HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ed; check all that apply) Water-Stained Leaves (B9) (except N 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4)	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5)
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HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	ed; check all that apply) Water-Stained Leaves (B9) (except N 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRF	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Surface Water Present? Yes Saturation Present Present Present Present Present Present Present Present Pr	ed; check all that apply) Water-Stained Leaves (B9) (except N 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRF B7) Other (Explain in Remarks) (B8) No X Depth (inches): No X Depth (inches): No X Depth (inches):	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge,	ed; check all that apply) Water-Stained Leaves (B9) (except N 1, 2, 4A, and 4B) Sait Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRF B7) Other (Explain in Remarks) (B8) No X Depth (inches): No X Depth (inches): No X Depth (inches): Wonitoring well, aerial photos, previous inspection	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) RA Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Remarks: Remarks:	ed; check all that apply) Water-Stained Leaves (B9) (except N 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRF B7) Other (Explain in Remarks) (B8) No X Depth (inches): No X Depth (inches): Weight (inches): W monitoring well, aerial photos, previous inspection	Secondary Indicators (2 or more required) MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) RA Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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WETLAND DETERMINATION	DATA FORM -	Western Mo	untains, Valleys, and Coast Region	
Project/Site: 4193 NW-OCC.	le Southcity	County: R	ellura han samoling Date: 2/23/2	
Applicant/Owner: Shutter			State: CLA- Someting Date: P = 1/2	
Investigator(s): F. M. (1105	nvestigator(s): E. Millor Section Townshin Range: 11 38 W 102 E			
andform (billslope terrace etc.): 5 JPL Local ratiof (concours convert none). A plus de local ration				
Landom (misiope, terrace, etc.):	Loc	al relief (concav	re, convex, none): <u> </u>	
Subregion (LRR):	Lat:		Long: Datum:	
Soil Map Unit Name:			NWI classification: <u>up</u>	
Are climatic / hydrologic conditions on the site typical fo	r this time of year? `	res, 🖄 🔍 No 🗖	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology s	ignificantly disturbed	? Are "No	ormal Circumstances" present? Yes X No C	
Are Vegetation , Soil , or Hydrology na	aturally problematic?	(If peed	ed evolain any answers in Remarke)	
SUMMARY OF FINDINGS – Attach site m	ap showing sar	npling point	locations, transects, important features, etc.	
Hydrophytic Vegetation Present? Yes X No		In the Original	4 A	
Hydric Soil Present? Yes I No Z			d Area	
Wetland Hydrology Present? Yes 🗌 No	Ø.	within a Wetla	and? Yes 🗋 No 🕅	
Remarks:				
$N(2' \leq$	w, belo.	w we	2 land	
	•			
/EGETATION – Use scientific names of p	lants.			
	Absolute Don	ninant Indicator	Dominance Test worksheet:	
	<u>% Cover</u> Spe	cies? <u>Status</u>	Number of Dominant Species	
1. MIMUL I'M	_ <u> 50 0</u>	- Lac	That Are OBL, FACW, or FAC: (A)	
2			Total Number of Dominant	
3			Species Across All Strata: (B)	
4	_ ·		Percent of Dominant Species	
Sanling/Shuth Stratum (Plot size)	= T	otal Cover	That Are OBL, FACW, or FAC: (00 (A/B)	
1 Rubha = CO	66 1	E.		
2 Righting	$-\frac{32}{20}\frac{1}{1}$	- the	Prevalence Index worksheet:	
3 Sembored Ca	$-\frac{50}{14}$	- PAC	Iotal % Cover of: Multiply by:	
		FACU		
۳		······	FACW species x2 =	
·			FAC species x3 =	
Herb Stratum (Plot size:)	= Te	otal Cover	FACU species x4 =	
1.			UPL species x 5 =	
2.			Column Totals: (A) (B)	
3.		<u> </u>	Prevalence index $\approx B/A =$	
· · · · · · · · · · · · · · · · · · ·			Hydrophytic Vegetation Indicators:	
5.			Rapid Test for Hydrophytic Vegetation	
).		_	Dominance Test is >50%	
7			\square Prevalence Index is <3.0 ¹	
}_				
)			data in Remarks or on a separate sheet)	
0	<u> </u>		U Wetland Non-Vascular Plants	
			Problematic Hydrophytic Vegetation ¹ (Explain)	
1			Indicators of hydric soil and until and hydric to survey	
11			I mulcators of flydric soll and walland hydrology miler	
11 Noody Vine Stratum (Plot size:)	= Tc	otal Cover	be present, unless disturbed or problematic.	
11 Noody Vine Stratum (Plot size:)	= Tc	tal Cover	be present, unless disturbed or problematic.	
11	= Tc	stal Cover	be present, unless disturbed or problematic.	
11 (Plot size:) Noody Vine Stratum (Plot size:) I	= Tc	tal Cover	Hydrophytic Vegetation Present?	
11.	= To	tal Cover	Hydrophytic Vegetation Present? Yes No	

Sampling Point:	<u> 00-</u> -	(0	<u>Z_</u>
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Profile Description: (Describe to the de	pth needed to document the indicator or con	firm the absence of indicators.)
Denth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-12-10-12-12		loan
17-15 21574/2		5112-10am
· · · · · ·		
Truce Concentration D-Depletion R	A=Reduced Matrix_CS=Covered or Coated San	d Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a	I LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
	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 MLR/	1) Ury Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and
Thick Dark Surface (A12)	Redox Dark Surface (F6)	wetland bydrology must be present.
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	untess disturbed or problematic.
LI Sandy Gleyed Matrix (S4)		
Restrictive Layer (ir present).		
Denth (inches):		Hydric Soil Present? Yes 🛛 No 🗹
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one requi	red; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	MLRA 🔲 Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
U Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
I TI DUIT Debosits (B3)	Oxidized Rhizospheres along Living	Roots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4)	 Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) 	Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Algal Mat or Crust (B4)	 Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils 	Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) D Direct Art Mount (D2) (LDD A)
Init Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	 Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF 	Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) East Heave Hummerin (D7)
 Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks) 	Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
 Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface) 	 Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF (B7) Other (Explain in Remarks) (B8) 	Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Inn Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations:	 Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solids Stunted or Stressed Plants (D1) (LF (B7) Other (Explain in Remarks) (B8) 	Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes	 Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solid Stunted or Stressed Plants (D1) (LF (B7) Other (Explain in Remarks) (B8) 	Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes	 Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solid Stunted or Stressed Plants (D1) (LF (B7) Other (Explain in Remarks) (B8) No Depth (inches):	Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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L Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream nauce)	Oxidized Rhizospheres along Living Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF (B7) Other (Explain in Remarks) (B8) Other (Explain in Remarks) Other (inches): No Depth (inches): No Depth (inches): monitoring well, aerial photos, previous inspecti	Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Lint Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge,	Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solid Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks) (B8) Other (inches): No Depth (inches): No Depth (inches): No Depth (inches): monitoring well, aerial photos, previous inspection	Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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Algal Mat or Crust (B4) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Cincludes capillary fringe) Describe Recorded Data (stream gauge, Remarks:	Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solid Stunted or Stressed Plants (D1) (LF B7) Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches): No Depth (inches): monitoring well, aerial photos, previous inspection	Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes □ Water Table Present? Yes ☑, Saturation Present? Yes ☑, Saturation Present? Yes ☑, Saturation Present? Yes ☑, Remarks: With Mathematical Stream gauge, Remarks:	Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Solid Stunted or Stressed Plants (D1) (LF (B7) Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches): No Depth (inches): monitoring well, aerial photos, previous inspective	Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Describe Recorded Data (stream gauge, Remarks:	Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF (B7) Other (Explain in Remarks) (B8) No Depth (inches):9 No Depth (inches):9 monitoring well, aerial photos, previous inspecti	Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

WETLAND DETERMINATION D	ATA FORM -	Western Mo	ountains, Valleys, and Coast Region
Project/Site: 4193NW - offsile:	south an	Baunha Ba	11.4 0 000 0 0 0 1221
Annlicent/Owner Clause	City	County:	Sampling Date: 41431
lavastigatoria)			State: (DVA Sampling Point: V) P-1
		Section, 1	Township, Range: 1 28 0 02 1
Landform (hillslope, terrace, etc.):	Loc	cal relief (concav	/e, convex, none): Slope (%):
Subregion (LRR):	Lat:		Long: Datum:
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site typical for th	is time of year? `	Yes 🕵 No 🗆	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology sign	ificantly disturbed	Are "No	ormal Circumstances" present? Yes 🕅 No 🗖
Are Vegetation, Soil, or Hydrologynatu	ally problematic?	(If needs	ed explain any answers in Remarks)
SUMMARY OF EINDINGS			
Sommart of Findings – Attach site map	snowing sar	npling point	locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes K No			
Hydric Soil Present? Yes 🖸 No 🕱		Is the Sample	ed Area
Wetland Hydrology Present? Yes 🗌 No 🔀		within a wetla	and? Yes 🗌 No 🖗
Remarks:	().	1 (5)	1 DD
	with		and ISIF FIOL
A SOUL CIVE) 05	Willa	ed for
VEGETATION – Use scientific names of plar	its.		
Trop Stratum (Blat aires	Absolute Don	ninant Indicator	Dominance Test worksheet:
	<u> </u>	<u>scies?</u> <u>Status</u>	Number of Dominant Species
2		- Fac	That Are OBL, FACW, or FAC: (A)
3			Total Number of Dominant
4			Species Across All Strata: (B)
······································		etal Causa	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	= 1	otal Cover	That Are OBL, FACW, or FAC: (A/B)
1. KUSUS AT	35_	1 tac	Prevalence Index worksheet:
2. Kubus p	40_V	-Fac	Total % Cover of: Multiply by:
3. Here ci	15	Fac	OBL species x 1 =
4. Symphoricarpis al	10	- Fail	FACW species x 2 =
5			FAC species x 3 =
Herb Stratum (Plot size:	= To	otal Cover	FACU species x 4 =
1			UPL species x 5 =
2			Column Totals: (A) (B)
3	· ·		Browelence Index - B/A -
4.	<u> </u>		Hydronhytic Vegetation Indicatore:
5.			Rapid Test for Hydrophytic Vegetation
6.			M Dominance Test is >50%
7			$\square Prevalence Index is <3.01$
8			Morphological Adaptations ¹ (Provide supporting
9			data in Remarks or on a separate sheet)
10			Wetland Non-Vascular Plants ¹
11			Problematic Hydrophytic Vegetation ¹ (Explain)
	= To	tal Cover	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		•	be present, unless disturbed of problematic.
1			Hydronhytic
2			Vegetation
	≂ To	tal Cover	Present? Yes 🛛 🖓 No 🗆
% Bare Ground in Herb Stratum			

Sampling Point:	P-lu	3

Profile Description: (Describe to the de	epth needed to document the moleator of		
Deoth Matrix	Redox Features	2 -	Demodra
(inches) Color (moist) %	Color (moist) % Type' 1	<u>_ocTex</u>	
0-125 1071R42			an
12.5-14 IO18 3/2	INTROLUS CI	<u>M 5.</u>	12 loan
	······		
	······································		
		Cand Crains	² Location: PL=Pore Lining M=Matrix
Type: C=Concentration, D=Depletion, RI	M=Reduced Matrix, CS=Covered of Coaled	Sand Grains.	Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to a	The sector (CC)		\Box 2 cm Muck (A10)
Histosol (A1)	Sanay Redox (55)		Red Parent Material (TF2)
Histic Epipedon (A2)	Loamy Mucky Miceral (F1) (except M	LRA 1)	Very Shallow Dark Surface (TF12)
L BIRCK FILSUC (AS)	Loamy Gleved Matrix (F2)		Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		·
☐ Thick Dark Surface (A12)	Redox Dark Surface (F6)		³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		unless disturbed or problematic.
Restrictive Layer (if present):			
Туре:			
Depth (inches):		H	ydric Soil Present? Yes 📋 No 🖗
Remarks:			
HYDROLOGY			
HYDROLOGY Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ	ired; check all that apply)		Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi	ired; check all that apply) ☐ Water-Stained Leaves (B9) (exc	cept MLRA	Secondary Indicators (2 or more required) U Water-Stained Leaves (B9) (MLRA 1, 2,
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requind) Surface Water (A1) High Water Table (A2)	ired; check all that apply) ☐ Water-Stained Leaves (B9) (exo 1, 2, 4A, and 4B)	cept MLRA	Secondary Indicators (2 or more required) U Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3)	ired; check all that apply) Water-Stained Leaves (B9) (exo 1, 2, 4A, and 4B) Salt Crust (B11)	cept MLRA	Secondary Indicators (2 or more required) U Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Drainage Patterns (B10)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ired; check all that apply) Water-Stained Leaves (B9) (exc 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	cept MLRA	Secondary Indicators (2 or more required) URA UNDERSE VALUE
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ired; check all that apply) Water-Stained Leaves (B9) (exc 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	cept MLRA	Secondary Indicators (2 or more required) URA UNDERSE VALUE
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ired; check all that apply) Water-Stained Leaves (B9) (exc 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li	cept MLRA	Secondary Indicators (2 or more required) Uater-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) Scallaw Accident (D2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ired; check all that apply) Water-Stained Leaves (B9) (exc 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4)	ving Roots (C	 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) EAC Neutral Tact (D5)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ired; check all that apply) Water-Stained Leaves (B9) (exc 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled	ving Roots (C Soils (C6)	 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) Deisend Act Moundor (C6) (LPB A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	ired; check all that apply) Water-Stained Leaves (B9) (exc 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1)	ving Roots (C Soils (C6)) (LRR A)	Secondary Indicators (2 or more required) UWater-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) Second Reverse Hummerics (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery	ired; check all that apply) Water-Stained Leaves (B9) (exc 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) (B7) Other (Explain in Remarks)	ving Roots (C Soils (C6)) (LRR A)	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) C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface	ired; check all that apply) Water-Stained Leaves (B9) (exc 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) (B7) Other (Explain in Remarks) e (B8)	ving Roots (C Soils (C6)) (LRR A)	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)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations:	ired; check all that apply) Water-Stained Leaves (B9) (exc 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) (B7) Other (Explain in Remarks) e (B8)	ept MLRA ving Roots (C Soils (C6)) (LRR A)	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) C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes	ired; check all that apply) Water-Stained Leaves (B9) (exc 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) (B7) Other (Explain in Remarks) e (B8) No 🛛 Depth (inches):	cept MLRA ving Roots (C Soils (C6)) (LRR A)	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) C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present?	ired; check all that apply) Water-Stained Leaves (B9) (exc 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) (B7) Other (Explain in Remarks) e (B8) No Depth (inches): No Depth (inches): O	cept MLRA ving Roots (C Soils (C6)) (LRR A) Wetland	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) C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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Appendix D

2014 Ecology Wetland Rating Forms

Wetland name or number

Shiington fsite visit: <u>2</u> (1, 1, 2, 1 No Date of training <u>7</u> o (5 M classes? <u>Y</u> N	oecial characteristics	Score for each function based on three ratings (order of ratings is not important) S = H,H,M 7 = H,M,M 6 = H,M,M 6 = H,M,L 5 = M,LL 5 = M,LL 3 = L,LL 3 = L,LL
Western Wa by Ecology? by Ecology? etland has multiple HG etland has multiple HG tres requested (figures	d on functions for s	Habitut Mabitut M (U) L 1 TOTAL L 1 16 TICS of wetland I I
RATING SUMMARY - ' Name of wetland (or ID #): <u>L1\AZ NW</u> Rated by <u>E M.N. L. U</u> Trained HGM Class used for rating <u>AC</u> w NOTE: Form is not complete without the figu Source of base aerial photo/map	OVERALL WETLAND CATEGORY III (base	A caregory of wetland based on FUNCTION Category I – Total score = 23 - 27 Category II – Total score = 20 - 22 Category II – Total score = 16 - 11 Category IV – Total score = 9 - 15 FUNCTION Improving Hydrologic Category IV – Total score = 9 - 15 FUNCTION Introving Hydrologic Introving Hydrologic Category based on SPECIAL CHARACTERIS Category based on SPECIAL CHARACTERIS Category based on SPECIAL CHARACTERIS CHARACTERISTIC Extuarine Wettiand of High Conservation Value

Coastal Lagoon Interdunal

None of the above

Old Growth Forest

Mature Forest

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N III II Ħ

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Wetland name or number

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Maps and figures required to answer questions correctly for Western Washington

<u>Depressional Wetlands</u> ·Map of:

Cowardin plant classes	To answer questions:	Circuit II
Hydroperiods	D 1.3, H 1.1, H 1.4	2 0 10 11
Location of outlot (can be nicked to much of true	D14, H1.2	
Boundary of area within 150 ft of the until 2, uperoperiods)	D11, D41	
Map of the contributing basis	D 2.2, D 5.2	
1 km Polygon: Arga that extende 1 km 4	D 4.3, D 5.3	
<u>polygons for accessible habitat and undistrument habitations for accessible habitat and undistrument habitat</u>	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303/d) listed water is 1-1-1-1		
Screen capture of list of Thinn second wateria in partin (from Ecology website)	D3.1, D3.2	T
(from web)	D 3.3	
Kiverine Wetlands		
		e.

• .	Editron (1							T				
	To answer questions:	H1.1, H1.4	H12	R 1.1	R2.4	R 1.2, R 4.2	R4.1	R 2.2, R 2.3, R 5.2	H 2.1, H 2.2, H 2.3	831	R32. R42	
Map of:	Cowardin plant classes	Hydro periods	Ponded depressions	Boundary of area within 150 ft of the weeks weeks if	Plant covar of trade, shrinke, and harknown (can be added to another figure)	Width of unit vs. width of atteam fame to be and	Map of the contribution haven	1 km Polygon: Area that extended the Second	polygons for accessible habitat and undisturbed habitat	ocreen capture of map of 303(d) listed waters in basin (from Ecolory website)	and a provide of light of the WRIA in which unit is found (from web)	Lake Fringe Wetlands

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	Elmaro a									
	To answer questions:	L1.1, L4.1, H1.1, H1.4	L1.2	L2.2	H21, H22, H23		L3.1, L3.2	E.S.1		
	202	s shrubs, and herbeconic elected	(this 150 ft of the treat - 1 ft - 1	that extends 1 be to the second (can be added to another figure)	bie habitat and undien rhow habitat odgo - Induding	100 of 303(d) hered water (st of TMDI = for where it must it basin (from Ecology Website)	the work in writen unit is found (from web)		-
Map of:	Cowardin plant cla	Plant cover of tree.	Boundary of area v	1 km Polygon: Area	polygons for access	Screen capture of n	Screen capture of]]		SUDP WELIANDS	

Girreno 4							T		
To answer questions:	H 1.1, H 1.4	H1.2	S13	54.1	\$2.1, \$5.1	H 2.1, H 2.2, H 2.3	\$31,532	S3.3	2
Map of: Cowardin plant classes	Hydroporiods	Plant cover of dense trees, shrups, and herbaceour alarite	Plant cover of dense, rigid trees, shrubs, and herbaceous plants	<u>(can be added to figure above)</u> Boundary of 150 ft hirtfor (ma bandary of 150 ft hirtfor (ma bandary of 150 ft hirtfor)	1 km Polygon: Area that extrante 1 km kron outher figure)	polyrgens for accossible habitat and undisturbed habitat Screen continue of each of the second undisturbed habitat	Screen capture of fist of TMDI s for MPIA 1	Wetland Rating System for Worth William VV.	Rating Form - Effective January 1, 2015 Update

	The wetland class is Riverine ed with water when the river is not ih water ponds, or is saturated to the	utlet, if present, is higher than the interior vetland class is Depressional bvious depression and no overbank	few inches. The unit seems to be ay be ditched, but has no obvious natural wetland class is Depressional	oly contains several different HGM into a riverine floodplain, or a small along its sides. GO BACK AND IDENTIFY STIONS 1-7 APPLY TO DIFFERENT e). Use the following table to identify the reral HGM classes present within the	n the second column represents 10% or area of the HGM class listed in column 2 ass that represents more than 90% of the	HGM class to use in rating	Riverine	Depressional Lake Fringe	Depressional	Depressional Riverine	Treat as ESTUARINE	pply to your wetland, or if you have che wetland as Depressional for the
and name or number	10 J go to 6 10 TE: The Riverine unit can contain depressions that are fill looding s the entire wetland unit in a topographic depression in whic	surface, at some time during the year? <i>This means that any o</i> of the wetland. NO – go to 7 NO – go to 7	flooding? The unit does not pond surface water more than a maintained by high groundwater in the area. The wetland moutlet. NO – go to 8 YES – The	Your wetland unit seems to be difficult to classify and probal classes. For example, seeps at the base of a slope may grade stream within a Depressional wetland has a zone of flooding WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUE AREAS IN THE UNIT (malee a rough sketch to help you decid appropriate class to use for the rating system if you have sev wetland unit being scored.	NOTE: Use this table only if the class that is recommended i more of the total area of the wetland unit being rated. If the is less than 10% of the unit; classify the wetland using the cl total area.	HGM classes within the wetland unit being rated	Siope + Riverine	Slope + Depressional 🐁 Slope + Lake Fringe	Depressional + Riverine along stream within boundary of depression	Depressional + Lake Fringe	Salt Water Tidal Fringe and any other class of freshwater wetland	you are still unable to determine which of the above criteria a tore than 2 HGM classes within a wetiand boundary, classify i ating.
. Wetland name or number	HGM Classification of Wetlands in Western Washington	For questions 1-7, the criteria described must apply to the entire unit being rated. If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.	 Are the water levels in the entire unit usually controlled by tides except during floods? NO- go to 2 XES - the wetland class is Tidal Fringe - go to 1.1 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 Flats Flow 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 when on the surface at any time of the vegal 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 (Lacusume Fringe)	4. Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>),	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.	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 diarneter and less than 1 ft	deep). 5. Does the entire werland 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.

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Wetland name or number A

Water Quality Functions - Indiana - AND-FEATS WETLANDS	1
D 1.0. Does the site have the potential to improve water quality?	
Wetland is a depression or flat depression (QUESTION 7 on leav) with no ninfrontine and the second s	
Wethand has an intermittentiv flowing stream or share on 1.1.	
Marthand har	
Wetlend is a functonstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetlend is a flat depression (QUESTION 7 on Iwn), where a surface outlet that is permanently flowing points = 1	
D 1.2. The soil 2 in below the surface for durff leven is true clause surface to durff leven is true clause and	
D 1.3. Characteristics and distribution of porcievent plants (femeranes 5-1.4.4.4.	
Wetland has persistent, ungrazed, plants > 95% of area	
wouldna has points targrazed, plants >% of area	
Wordman fars possistent, ungrazed plants > ¹ / ₂₀ of area	
vouurun nus persistent, ungrazed piznts ya of area</td <td></td>	
P 14. Sufficientistics of sourcenal bonding of insurdation.	
Areh swessen for a great that is ponded for at least 2 months. See description in manual.	
Area scatsonally bonded to 2 x total area of workand	
Total for D 1 points = 0	
Rating of Site Potential If score is: $12.46 \pm H$ V $6.41 \pm h$ Add the points in the boxes above 1/	
D 2.0. Does the landscape have the content in the content of the father on the first page	
D 2.1. Dees the wetland unit receiver structures to support the water quality function of the site?	
D 2.2. Is > 10% of the area within Tot 4. at	
D23. Are there soptic systems within 250 4 of the mount in land uses that generate pollutionts? Yes (1) No = 0	
$D2.4$. Are there other sources of pollutants conjugnitient the working the working that $1 \text{ No} \neq 0$ \bigcirc	
source Source V_{12} Total for D 2 V_{12} V_{23} V_{22}	
Rating of Landscape Potential If scores is 2 and -10	
0 = 1 Record the rating on the first page	
0.3.0. Is the water quality improvement provided by the site valuable to society?	
U 344. Voos the wetland discharge directly (i.e., within 1 mi) te a stream, river, jaker, or marine water that is an the 303(d) list?	
D 3.2. Is the wetland In a basin or sub-basin where an neurotic control of the second in the FO	
D 3.3. Has the site been identified in a watersheet or local abon as importance is on the 303(d) list? Yesta1 No = 0	
If there is a TMDL for the bacin in which the unit is found)?	

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Wetland name or number

DEPRESSIONAL AND FLATCAMET AND C	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream down	
net and the state state potential to reduce flooding and erosion?	
4-1- 2010 Sciences of surfaces water outflows from the workshold:	
Working is a depression or flat depression with no surface water leaving the factor of the second seco	
Wething the set intermitteently flowing atream or ditch, OR highly construction to outed points = 4	
Worthard has a instructioned (QUESTION 7 on key), whose outlet is a permanently finalized and the permanent of the second s	
D 4.7 Denth of an anomatication of slightly constricted, surface outlet that is permanent wing ultaring points = 1	J
with no successful outling wet periods: fatimate the height of ponding about the horton set.	
Marks of models	
Marks of non-line sectors above the surface or bottom of outlet	
Marks are at the universe 2 at the safe from surface or bottom of outlet	
The wethind free devices of 2010 to 2010 surface of bottom of outlet	
Wethind is fast the horizontal wotand	
Marks of pointing for station of the surface that trap water $$	
D 4.3. Contribution of 44a. www.action.org	_
contributing surface within to the used in the writer the difference of the area of the area of unstrum have	
The area of the basin is here there is not weeden to the wetland unit itself	
The area of the bashin is not not when when area of the unit	
The area of the bacin is more what and the unit	1
Entire workland is in the Eine and	Λ
Total for D4	
Pretra define a construction of the section of the	T
wung ar sus Potential If score is: 12-16 a H V 6-11 a M 0.5 m	
D 5.0. Does the landscape have the notionital to control the rating on the first pe	2000
D 5.1. Does the wetland receive stormwater discharged in yourologic functions of the site?	Γ
	_
D 5.3. Is more than 25% of the contributing back of the working contribution with here chows untout 7 ag # 1 No = 0	
24 residence/ac, urban, commercial, agriculture, etc.)?	
	-
Rating of Landscape Potential H score is: $3 \pm H \int 1 ar 2 = M a - 1$	Γ.
D 6.0. Are the hydralogic function of the first part of the part o	122
D 6.1. The unit is in a horizon to travided by the site valuable to society?	Г
the wedding unit before more internet in the problem. Choose the description that best matcher conditions	1
The working and the second points. Choose the highest scott if MOVE than one contractions around the second s	_
damaged human or nature restrictions from when the strong otherwise flow down-gradient lints areas when flooding	
 Flooding occurs in a sub-bacin that is not required or saimon redds); 	-
 Surface flooding problems are in a sub-basic forthy down-gradient of unit 	
Hooding from groundwater is an issue in the sub-hearing	
The existing or potential outflow from the method and the second se	
water stored by the wetland cannot reach areas that flood Exclude us.	
There are no problems with flooding downstream of the unit of the unit of the problem of the unit of the original set of the o	
D 6.2. Has the site been identified as important for facel and a simple in the site of the	-
Sanda source sources or rigod convergence in a regional flood control plan?	1
Total for D 6 Your 2 No 46 0 0	
Rating of Value if score is: 24=H / 1=M 0=1	1
Record the rating on the first bao	100
	1

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Add the points in the boxes shove Record the rating on the first page

Rating of Value Tf score is: $2.4 = H \frac{1}{1.2} = M = 0 = L$

Wetland name or number _

RIVERINE AND FRESHWATER TIDAL FRINGE-WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quanty	
N.L.U. DOGS THE STRETTARE UP POLITION OF MANY OF A CALL AND SOLIMANTS AUTING A floading event: R.L.L. Area of surface depressions within the Riverine working that can trap sediments during a floading event:	
Depressions cover > 1/1 area of wordand Depressions cover > 1/1 area of wordand	
Depressions present but cover < % area of wetland	
R 1.2. Structure of plants in the wetiand (areas with >90% cover at person height, not Cowardin classes)	
These or shrubs $>^2/_3$ area of the wetland	
Trace or chrubs > Y_{a} area of the wetland Horkhorenic mlants (> 6 in high) > Y_{a} area of the wetland	_
Herbaceous plants (> 6 in high) > $\frac{1}{2}$, area of the wetland Herbaceous plants (> 6 in high) > $\frac{1}{2}$, area of the wetland points = 0	
	
Power 121 A. Record its cating on the first page	. 1
$_{ m R}$ 2 $_{ m I}$ Dress the landscape have the potential to support the water quarky function of the site?	
P 2.1 1 - the working within an incorporated city or within its UGA?	
$0.2.2$ Dress the contributions basin to the wettand include a UGA or incorporated area? Yes ≈ 1 No ≈ 0	
R 2.3. Does at least 10% of the contributing basin contain tilled folds, partness, or forest: that have basin cleanent N $_{2.3}$. Does at least 10% of the contributing basin contain tilled folds, partness, or forest: that have basin $_{2.3}$. The $= 0$ visc $= 1$ N $= 0$	
8.24 [s> 10% of the area within 150 ft of the wetland in And uses that generate pollutants? Yes = 1 No = 0	
R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.4. R 2.4 Other sources $r_{325} + 1$ No $= 0$	
Total for R 2 Add the points in the boxes above	7
Rating of Landscape Potential If score is: $\sqrt{3.6 \text{s}}$ R ± 1 or 2s M $= 0 \text{s}$ L Record the rating on the first page	й [
R 3 0 1s the water cutality improvement provided by the site valuable to society?	-1
R 3.4. Is the wetland along a stream or rivor that is on the 303(d) list or on a tributary that drains to one within 1 mil	
Ycc=1 No=0	
R 3.2, is the watiand along a stream or three that has TMDL limits for nutrients, toxics, or puthogens?	
R 3.3. Has the site year identified in a watershed or local plan as Important for maintaining water quality? (<i>drawer</i> vec is to be a site of the dramans in which the unit is found)	
Add the points in the boxes above	
Rating of Value If score is: $24 = H$ $1 = M$ $0 = L$ Rating of Value If score is: $24 = H$ $1 = M$ $0 = L$	3
,	
,	

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Wetland name or number

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS Hydrologic Functions - Indicators that site functions to reduce flooding and stream erosion 3.4.0. Does the site have the optential to reduce flooding and erosion?	
4.4.1. Characteristics of the overbank storage the wetland provides: Estimate the averge width of the wetland perpendicular to the direction of the flow and the width of the encounter of view characteristics between banks). Calculate the ratio: (average width of wetland)(average	_
width of the returned build be a set of the	_
If the ratio is indice that 20 points = 6	
If the ratio is 5-410	_
If the ratio is 1-45 points = 2 points = 2 points = 1.	
R.4.2. Characteristics of plants that slow down water velocities during floods: Treat large woody debris as forest ar shrub. Choose the points appropriate for the best description (polygons need to have >50% cover at parson	
height. These are <u>NOT COMPARIN</u> cases; $f_{2,3}$, area $f_{2,3}$, $f_{3,3}$	
Forest or shrub for 2^{3} , 2_{10} area OR amorgant plants 2^{3} , area points = 4 points = 0	
Plants do not meet above enteria	
10201 JOF K 4 Reating of Site Potential if score is: 12-46 = H 6-41 = M/ 0-5 = L Record the rating on the first page	1.
R 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	1 1
R5.L is the stream or ther adjacent to the wetland downcut?	
R 5.2. Does the up-gradiont watershed include a UGA or incorporated area? Yes = 1 No = 0	
R.5.3. Is the up-gradient stream or rive/controlled by dams?	
Total for R 5 Add the points in the baxes above	
Reting of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on the first page	6
R 6.0. Are the hydrologic functions provided by the site valuable to society?	
R 6.1. Distance to the nearest areas downstream that have flooding problems? Choose the description that best fits the site.	
The grds-basin immediately down-gradiont of the wettand has flooding problems that reduk in equivage to humble 2 humbles of salimon redde?	
No floading problems are in a sub-basin farther down-gradient No floading problems anywhere down-tream	
R 6.2. Has the alte been identified as important for flood storage or flood convoyance in a regional flood control plan? Yes = 2 No = 0	<u> </u>
Total for R 6 Add the points in the boxes above	
Rating of Value If score is: $2.4 \pm H$ $1 \pm M$ $0 \pm L$ Record the rating on the first page	g

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Wetland name or number \mathcal{M}

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These questions anniv for worknows as a firmer as	
- HABITAT FUNCTIONS - Indicators that site functions to accurate t	
H 1.0. Does the site have the potential to provide hainers or provide important habitat	į
H 1.1. Structure of plant community: indicators are Councils -1	
Cowardin plant classes in the wetland. Up to 10 parties and argin within the Forented class. Check the of X are or more than 10% of the unit if it is smaller than 2.5 ar. Add the number of case class to more the threshold Annut had	}
The stress of a reas where these have > 30% cover)	
Le the unit has a Forestrad alacs, check (f	
that each rown one cass has 3 out of 3 strate (canopy, sub-canopy, shrubs, herbaceous, moss/meimel	
H 1.2. Hydroportods	
Chock the types of water regimes (hydroperiods) present within the wetland. The weter sector sector	
Petronanomikeficada or % ac to count (see text for descriptions of hydroperiods).	
Soaconally flooded or invitated	
Constornally frontier or invariant and a types present points = 2	
Saturated only 2 types present points 1	
Permanently flowing stream or show in a mainteen and the stream of the stream of showing a stream of showi	
Lake Fringe workand	
	-
2 points	
the model of plant species	7
. We have a structure of plant species in the wetland that cover at least 1.0 ${\rm Hz}^2$	
- we have a species of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Financian we were and successing the size threshold and you do not have to name	
If you counted: > 10 species	
5 -19 species	
<5 species	
H 1.4. Interportion of habitats	
Decide from the diagrams below whether interspersion among Cowardin plants classes (deserbed in H.1.1), or the diagrees and unvegetuded areas (can include open water or mudifierb) is high, moderate. <i>Inv. or norm. Iso</i>	Γ
are unused or unused or unused classes and open water, the rating is always high.	
Nonor o pojite Low = 1 point Moderate = 2 points	
	7

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Wetland name or number

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H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The <i>number</i> of checks is the <i>number</i> of points. Early, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). Sanding snage (dbh > 4 in) within the working	
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plante extands 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 musication domining (> 30 degree ologope) (8 algne of recent beaver activity are present (cut shruhs or trees that have notiver wereheed to when where we have beaver activity are present (cut shruhs or trees that have notiver wereheed to when where we have beaver activity are present (cut shruhs or trees that have notiver wereheed to when where were here here activity are present (cut shruhs or trees that have notiver wereheed to be when the second beaver activity are present (cut shruhs or trees that have notiver wereheed to be when the second beaver activity are present (cut shruhs or trees that have notiver wereheed to be when the second beaver activity are present (cut shruhs or trees that have notiver the second to be when the second beaver activity are present (cut shruhs or trees that here notiver the second to be when the second to be whence to be whence to	(
At least X as of thin-stemmed parsistent plants or woody branches are present in areas that are permanent of the seasonaly leundated (<i>structures for agg-daying by amphibians</i>) 	A-
strato) Total for H 1	
Rating of Site Potential If score is: 15-18 = H 7-1.4 - A 6 6 4 he points in the boxes above	-
H 2.0. Does the landscape have the potential to support the habitest and and the rating on t	ie first page
H 2.1. Accessible habitat (include only habitat that directly abits working, which is included on the site?	
Calculate: % undisturbed habitat \underline{O} + [[% moderate and lew intensity land uses]/2] = $\frac{2}{2}$ $\frac{2}{3}$	
> ¹ /s (33.33%) of 1 km Polygon	
ZU-33% of 1 km Polygon 10-19% of 1 km Polygon	¢
Control to the second secon	С
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland	
Calculate: % undisturbed habitat_ + [[% moderate and low intensity land uses]/2] = 2.2.7 % Undisturbed habitat > 50% of Polyrem ?	
Undisturbed habitut 10-50% and in 1-3 patches	
Undisturbed habitat 10-50% and > 5 patches Undisturbed inthe-construction	
H 23, Land use instructs 10% of 1 km Polygon	
> 50% of 1 km Polygon is high intensity land use	
350% of 1 km Polyrican is high intensity. Total for H 2 polinit = 0 polinit = 0 polinit = 0	2
Rating of Landscape Potential France in the boxes above	
H 3.0. Is the heat we want of the rest of	first page
H 31 Promittee to succe by the site valuable to society?	
that applies to the workland being rated.	
Site meets ANY of the following criteria:	
 It is mapped as a location for an indiangered species (any plant or animal on the state or federal lists) It is a Movement of the state of federal lists) 	
The would of fight conservation Value as determined by the Dopartment of Natural Resources Thes been entreprized as an important inabilist site in a lowal on second as a value of the second second second	
Site has 1 or 2 priority habitate (listed on next bare) within storm.	
Site deas not meet any of the orbit above	
A Partie of the rection of the	first name
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WDFW Priority Habitats

Priority inhitats listed by WDFW (see complete descriptions of WDFW priority habitants, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Frierly Habitat and Species List Olympia, Washington. 177 pp. http://wdfw.wa.zox/publications/00165/wdfW00165.pdf or access the list from here: http://wdfw.wa.gov/consertations/00165/wdfW00165.pdf or access the list from here:

Count how many of the following priority indicars are within 330 ft (100 m) of the wedland unit. *NOTE: This question is indopendent of the card* 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 (fail descriptions in WDFW PHS report).

- Old-growth, Mature forests: Old-growth west of Charade crest Stands of at least 2 tree species, forming a multilayered canopy with occasional small openings; with at least 8 trees/as [20 trees/ha] > 32 in (81 cm) dibi or > 200 years of age, Mature forests. Stands with average diameters exceeding 21 in (53 cm) dibi; crown cover may be leas than 100%, docary, decadence, number of smage, and quantify of large downed material is generally less than that found in old-growth; 80-200 years old west of the Casade crest.
- ---- Oregon White Oake Woodland stands of pure oak or cale/confiter associations where cancey coverage of the cale component is important (full descriptions in WDFW PHS report p. 158 – see web link above).
- Ruparian: The area adjacent to aquade systems with flowing water that contains elements of both aquade 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 Puger Sound Nearshore. (fuil 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, lee, 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 basait, andesite, and/or sedimentary rock, including ripting sildes and mine fullings. May be associated with cliffs.

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

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CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Category 1.30 11,112) Cat 38 Car. I NOTE: If you are uncottain about the extent of meases in the understory, you may substitute that efterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is least then 5.0 and the SC 3.2. Does an area within the wetiand unit have orgaine solls, either peats or mucks, that are less than 16 in deep over bedrock, or an impormeable hardpan such as clay or voleznic asti, or that are flasting on top of a lake or species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? $Y_{02} = 1$ so $f_{10} = 0$ more than 30% of the cover under the canopy? Does the wetland (or any part of the unit) meet both the criteria for solls and vegetation in bogs? Use the key below, if you answer YES you will still need to rate the werland based on its functions. western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the SC 3.1. Does an area within the wetland unit have organic soll horizons, either poets or mucks, that compose 16 in or No = is not a bog No - Go to SC3.4 $\frac{1}{1000} + \frac{1}{1000} + \frac{1$ No-Go to SC3.2 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% le the wettand within a National Wildlife Rofugo, National Park, National Extuary Reserve, Natural Acea Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-1517 (Nd-Go to SC2.3 No = Not a WHCV No = Not 2 WHC No-Go to SC1.2 Np= Not an estuarine wetland SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Medands of High SC 3.4, is an area with poats or mucks forested (> 30% covor) with Sitka spruce, subalpine fir, western red codar, ---- At least % of the landward adge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un----- The wettand 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 Sparting, see page 25) Check off any criteria that apply to the wetland. Circle the category when the appropriate ariteria are met. SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? Yes = is a Category i bog Yes = Category 1 Yes – Go to SC3.3 Yes = is a Category i bog Yes – Go to SC 3.3 Yes-Go to SC2.2 SC 2,2, is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yos = Category I SC 2.3. Is the workend in a Soction/Township/Rango that contains a Natural Haritage Wetland? Yes = Category 1 Yes = Category l Yes -Go to SC 1.4' http://www1.dnr.wa.gov/nhp/rcfdesic/dntpsoarch/wnhpwothnds.pdf Does the wetland meet the following criteria for Estuarine wetlands? plant species in Table 4 are present, the wetland is a bog. SC 2.0. Wetlands of High Conservation Value (WHCV) more of the first 32 in of the sell profile? cover of plant species listed in Table 4? ---- The dominant water regime is tidal, With a salinity greater than 0.5 ppt contiguous froshwater wetlands. mowed grassland. Conservation Value? Estuarine wetlands Vegetated, and their website? Wetland Type SC 3.0. Bog SC 1.0. SC 1.1.

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Wetland name or number <u>A</u>

SC 4.0. Forested Wetlands	
Does the workand have at least <u>1 contiguous are</u> of fortest that meats one of these criteria for the WA. Department of Fich and Wildliff's forests as priority habits. If <i>you answer</i> YES <i>you will still need to rate</i> the wetland based on its functions. - Old-growth forests (wast of Cascade areat): Stands of at least two tree species, forming a multi-layered are OR have a diameter at breast height (labh) of 32.1n (83. cm) or more. - Mature forests (wast of the Cascade Crest): Stands of at least strees/ac (20 trees/int) that are at least 200 years a age OR have a diameter at breast height (labh) of 32.1n (83. cm) or more. - Mature forests threast fueld Crest): Stands where the largest trees are 80- 200 years oid OR the species that make up the canopy have an average diameter (dbh) exceeding 22.1 In (53 cm).	
SC 5.0. Wettands in Coastal Lagoons	Cat. I
Does the wetland meet all of the following enteria of a wetland in a coastal lagoon? 	
during most of the year in at least a portion after located contains ponded water that is saline or bracketh (> 0.5 ppt) SC5.1. Does the workload meet all of the following three confidences to SC5.1. One the workload meet all of the following three confidences - The workload is entremed to a the following three confidences.	Cat. I
than 20% cover of aggressive, opportunized thas no diking, ditching, filling, cuityvation, grazing), and has lacs — At least % 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 / ₂₆ as (4350 ft ²)	Cat. II
SC 6.0. Interdunal Wetlands	
is the workland wear of the 12830 line (also called the Weartam Boundary of Upland Ownership or WBUO)? <i>If</i> <i>you answer yes you will still used to rate the wetland based on its habitat functions.</i> In practical terms that means the following geographic areas: — Orng band-Westport India west of SR 103 — Grayland-Westport India west on so	
	Ī
SC 6.1. Is the wetland 1 ac or larger and acores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three sepacts of function)? SC 6.2. Is the wetland 1 ac or larger, or is it in a messic of wetlands that Is 1 ac or larger? No – Go to SC 6.2	Cat. 11
SC 6.3. is the unit between 0.1 and 1. ac, or is it in a mosaic of watlands that is between 0.1 and 1. ac? Yes # Category 11 No = Caterony IV	Cat. III
Category of worland based on Special Characteristics	Cat: JV
readimentation of the full types, enter "Not Applicable" on Summary Form	Å Å

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Wetland name or number

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RATING SUMMARY – Western Washington	Wetland (or 10 #): 4/4/3 NU/ - B Date of site visit 2 / 174/2 / E NU/45 L - 1/0/25/Trained by Ecology? Yes: No Arrive Arriver 22 / 5	ss used for rating A.a. Wetland has multiple HGM classes? Y V	DTE: Form is not complete without the figures requested (figures can be combined). Source of base acrial photo/map
RATI	ame of wetland (ated by E. M.	GM Class used fo	NOTE: Forn Source o

OVERALL WETLAND CATEGORY <u>W</u> (based on functions of spocial characteristics)

Category of wetland based on FUNCTIONS

		Category I - Total score = 23 - 27		
--	--	------------------------------------	--	--

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

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		Circle the a	opropriate ratings	
Site Potential	H (MUL	н (W) н	C W H	
Landscape Potentia!	л (MX) н	H ∕M L	H M ^A L	
Value	H	H ANN L) - (M/ H	TOTAL
Store Bacad on			, ,	2
Ratines	<u>ر</u>) • <u>.</u>	J	1
		q		g

2. Category based on SPECIAL CHARACTERISTICS of wettand

CHARACTERISTIC	CATEGORY
Estuarine	
Wetland of High Conservation Value	4
Bog	
Mature Forest	
Old Growth Fornet	
Control Party	-
CONSTRUCTION	пп
Interdunal	и шли
None of the above	7

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Wetland name or number

Maps and figures required to answer questions correctly for Western Washington

.<u>Pepressional Wetlands</u> Map of:

Cowardin plant classics	To answer questions:	Flouro #
	D 1 5 1 7 1 1 1 4	
Hydroberlods	477 L 777 L (err 2	
	D14.H17	
Location of outlet (can be added to may of hudronichate)		
Boundary of man within also the section of the sect	D 1.1. D 4.1	
the start within 130 it of the Welland (can be added to prother finite)		
Map of the contribution hash	U 4:44 U 3.6	
1 km Bol-more	043 053	
with surgery when that that extends 1 km from antire wetland ador a high-high-		
polygons for accessible habitat and underturbed to be the second of the	FLAN R 424 H 2.3	_
sergen cupture of map of 303(d) listed waters in basin (from Earlow)		
	U 3.1, D 3.2	
and a second of the of the low of the which unit is found (from woh)		
		•

<u>Riverine Wetlands</u>

Man of	j	
	To answer guestioner	Electron II
COMPLETE DIALOT CLASSES		4 mm/12
Hvdroberlods	P. 1.1, H 1.4	-
Dendon doctors	H12	
	1 1	
Boundary of area within 150 ft of the work and fare to are a		
Plant router of trace -Lanks	R 2.4	
the second of a second strates, and herbackous plants	R17 DA7	Ī
Width of unit vs. width of stream fran ha added to	714-11 (919-11	
Man of the second s	R4.1	
1 km Poliveon: Area that active do 7 km s	K 2.2, R 2.3, R 5.2	
- All the second of the second	E01 201 241	ĺ
<u>polygons for accessible habitat and undistructed habitat</u>	5 mg L 4 mg L	
Scroop capture of much of son (1) (1)		
find the second second of the second states in basin (from Ecolory website)	021	
Screen cupture of list of TMDIs for Wrbia in which will be a will be a screen cupture of list of TMDIs for Wrbia in which we have been set of the set of t		
(in the standard st	R3.2, R3,3	

Lake Fringe Wetlands Man of

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

Cowardib a lant classes	SUODSDRD JAMART 1	Figure #
Plant cover of troats should and have a	<u> </u>	
State of the state		
Boundary of arms within 150 th set to set and a set of the set of		
1 Icm Polymon: Aron that are at a	L 2.2	
bolveons for accounties but that a second	0 414, F 24, K 23	
Streep contrine of man ad 2001 at the		-
an even apprend of final of aug of listed waters in basin (from Frohom waters)		ļ
Contract and the state of the s	L3.L, L3.L	
and any appulse of JiviUEs for WRIA in which unit is found from which		
ADM HIGH DEMONSTRATING	5.51	
Slowe Mizeland		

<u> Sigpe Wetlands</u>

Map of		
	To answer auestions:	Elmon #
cowartum plant classes		
Rydroportods	H 1.1, H 1.4	
	H12	
riant cover of dense trees, shrubs, and herbaceous plants	C+0	
Plant cover of dense, rigid troos, shripe, and herbreasus alacted	C-F C	
(can be added to figure above)	54.1	
Boundary of 150 ft hutfas (mails - 14 - 15 - 14 - 15 - 14 - 15 - 14 - 15 - 14 - 15 - 14 - 15 - 14 - 15 - 14 - 15 - 14 - 15 - 14 - 15 - 14 - 15 - 14 - 15 - 15		
1 for the free of the second of the second to another figure)	S21.551	
+ Nut Folygon: Area that extends 1 km from entire wetland adress foot at a -		
polygons for accessible habits and material succession augus and accessible	H Z 1, H Z 2, H Z 3	
	531 523	Ţ
Scroon capture of list of TMDL for WRIA In which welk a second	200 0 1000	
(Itom water a state of the stat	S3.3	
Welland Rating System for Western WA: 2014 Undate		
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HGM Classification of Wetlands in Western Washington

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

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

L Trs the sailuity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – the wetland class is Tidal Fringe – go to 1.1 ND Ago to 2

YES - Freshwater Tidal Fringe NO - Saltwater Tidal Fringe (Estuarine)

Jf your westand can be classified as a Freshwatzr 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.

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 unlt. N

YES – The wetland class is Flats NO Jgo to 3 Yfyour wetland can be classified as a Flats wetland, use the form for Depressional wetlands.

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. (B ha) in size; Does the entire wetland unit meet all of the following criteria?

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

YES – The wetland class is Lake Fringe (Lacustrine Fringe) NO 2 go to 4 YED - Inc we used unit meet all of the following criteria? Does the entire wetland unit meet all of the following criteria?

The wetland is on a slope (slope can be very gradual 4

The water flows through the wotland 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.

YES - The wetland class is Slope NO J go to 5

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and

shallow depressions or behind hummodes (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.

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

Is the entire wethand 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 ൾ

NO - go to 7

YES - The wetland class is Depressional

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 is the entire wetland unit located in a very flat arca with no obvious depression and no overbank outiet. 2

NO - go to 8

YES - The wetland class is Depressional

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

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	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressionai + Riverine along stream	- Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treatas
class of freshwater wetland	ESTUARINE

lfyou are still unable to determine which of the above ariteria apply to your waland, or if you have more than 2 HGM classes within a wedand boundary, classly the wedand as Depressional for the rating.

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51	nprove water quality	r laaving it (no outlet).	points = 3 antiy flowing outlet	tly flowing points a 1 Ing ditch. points a 1	finitions).Yat = 4 No 40	orested Cowardin classeric pointses	C = HIL	points a 1			points = 1	points =0	Int In the boxes shows	ard the rating on the first page	if the site?	Vers m 1 Nom 0	Vos 1 No - 0	Vote 1 Now 0.	attons D 2.1-D 2.3?	Yes = 1 No 40	ints in the boxes above
DEPRESSIONAL AND FLATS WETLAND Water Quality Functions - Indicators that that the functions	1.0. Does the site have the potential to improve water quality?	من مستقدماتها من تعلماتهم بعد المواصفة والمنافعة والمعالمين المعالمين المعالمين المعالمين المعالمين المعالمين ا Wetland Is a depression or flat depression (QUESTION 7 on Koy) with no surface wate.	Wettand has an intermittantly flowing stream or ditch, OR highly constricted perman	Wetland has an unconstricted, or slightly constricted, surface outlet that is pormanen Wetland is a flat depression (JUESTION 7 on key), whose outlet is a pormanently flow 1. The notit to hadrow the statement of the statement o	2.3. Characteristics and distribution of sources of sources in the start of the organic (use NACS de	Wetland has porsistent, ungrazed, plants > 95% of area Wetland has porsistent, ungrazed, plants > 95% of area	we used not persistent, ungrazed, plants > % of area We tiand has persistent, unerazed plants > ۲٫۵٫٫٫٫٬٬۰۰۰	Wettand has porsistent, ungrazed plants $e^2/_{20}$ of area	1.4. Characteristics of seasonal ponding or inundation:	This is the area that is ponded for at least 2 months. See description in manual, Areas second in the second	Area seasonally ponded is > X total area of wetland Area seasonally ponded is > X total area of wetland	Area seasonaily ponded is < X total area of wetland	tai tor D 1 Add the po	ting of Site Potential If score lat $12-16 \approx H$ $1/6-11 = M$ $0-5 \approx L$ here	2.0. Does the landscape have the potential to support the water quality function o	44. Does the wetland unit receive stormwater discharges?	1.2 is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	.3. Are there septic systems within 250 ft of the wetland?	.4. Are there other sources of pollutants coming into the worland that are not listed in que Source	al for D 2	Nare of Landsman Parts of Add the pol

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

		_	_	_		_	
	«	>		{	С	-	
D 3.1. Does the wettend directory directory in the second se	303(d) list?	0 3.2. Is the worthand in a haven or cute haven on cute haven on the second sec	D 3.3. Hins then there is not been the summer of a quarter resource is on the 303(d) list? Yes/G1 No = 0	If there is a TMDL for the basin in which the unit is found?	Total for D 3	Patient Avenue Avenue Add the points in the boxes above	wante of value of score is: 2-4 = H1 = M0 = L Record the rating on the first page

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Wetland name or number

Hvdrologic Functions - Indirators that the first of the first METLANDS	
D 4.0. Does the site have the potential to reduce flording and stream degr	dation
D 4.1. Chaltecter inface water surflame 4.1. Chaltecter in the surflame for the surflame fo	
Watland is a dopression or flat doprozsion with no surface water leaving it (no outlet)	
would naw an intermittantity flowing stream or ditch. OR highly constricted permanently flowing outlotpoint Wotland is a flat depression (QUESTION 7 on kev), whose outlet is a normanently flowing outlotpoint	ر ج
Wetland has an unconstricted, or slightly constricted, surface outlot that is permanently flewing points = D 4.3. Durch of themes of the surface outlot that is permanently flewing points =	7
with no outlet, measure form the surface of normalism of ponding above the bottom of the outlet. For wetle	8
Marks of ponding are 3 ft or more above the surface or hortow of windows	
Marks of pending between 2 ft to <3 ft from surface or bottom of outlet	_
Warks are at least 0.5 ft to < 2 ft from surface or bottom of outlet The number f_{k-1} are a point = 2	(
Wediand is flat but he small Americand	0
Marks of ponding lass than 0.5 ft (6.14)	
D 4.3. Contribution of the working to storage in the watershed: Estimate the wells of the wells of the	
contributing surface water to the wadand to the orea of the wetland unit itself.	
I no area of the bush is less than 10 times the area of the unit	l
The area of the basin is the to the time the area of the unit The area of the unit The area of the basin is more than the time the time the poling #3	$\overline{\mathbf{v}}$
Entire workand is in the Flats class)
Total for D 4 point = 5	
Rating of Site Potential If score is: 12.46 a u 1/ c.a. 2	h
D 5.0. Done the landers a function of the resting of	he first page
DS1 Description device the potential to support hydrologic functions of the site?	
Deal Landou die weuwing receive stormwater discharger?	0
U.S.C. IS ALUX OF THO BROWN WITHIN 150 ft of the webland in land uses that gamerate excess runoif? Yes K 1 Bio A D	, .
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land user (methented	
Total for D 5	
Postro 61 - Add the points in the boxes above	6
Autority or Landscape Potential If score is: 3 = H : 1 or 2 = M 0 = L Record the rating on	te 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 fleeding problems. Choose the description that best matches conditions con-	
ure weading unit baing rated. Do not add points, <u>Choose the hinhost sopre if more than one condition is me</u> t. The Wedland aptures surface water that would otherwise flow down and the more than one condition is met.	
damagod human or natural resources (a.g., houses or salmon rodds):	
riodoung occurs in a sub-basin that is immediately down-gradiant of unit, Surface flooding and sub-basin that is immediately down-gradiant of unit, points a27	
Flooding from groundwatter to an indicate to sho cub-bacin farther down-gradient.	
The existing or potential automatic structure at the second state of the second state	
water stored by the wetland cannot roach areas that flood. Explain why areas that the	
There are no problems with flooding downstream of the wotland.	
D 6.2. Has the site been identified as important for flood stomes are flood and and the site been identified as	
plant and and an and	c
Rating of Value # score is: 2-4 = H V 1 = M 0 = 1	_
Kacord the rating on	e first page
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RIVERINE AND FRESHWATER TIDAL FRINGE WETLAN	<u>8</u>
Water Quality Functions - Indicators that the site functions to improve	water quality
R 1.0. Does the site have the potential to improve water quality?	
R.1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a floor	ng event:
Depressions cover > ³ /, area of wetland	points = 8
Depressions cover > ½ area of wotland	points # 4
Depressions present but cover < X area of wetland	points = 2
No dopressions present	points = 0
R 1.2. Structure of plants in the wotland (areas with >90% cover at person height, not Cowardin clas	(Sa
Trocs or shrubs $> 2/3$ area of the wetland	points = 3
Trees or shrubs $> \frac{1}{2}/3$ area of the wetland	points = 6
Herbacoous plants (> 6 in high) > $^{2}/_{3}$ area of the wetland	points = 6
Herbacoous plants (> 6 in high) > $^{4}/_{2}$ area of the wetland	points = 3
Trees, shrubs, and ungrazed herbaccous $< \frac{1}{2}$, area of the wedand	points = 0
Total for R 1 Add the points in the boxes above	
<u>2.5 − − − − − − − − − − − − − − − − − − −</u>	and the ration on the first no

R 2.0. Does the landscape have the potential to support the water quality function of the site	te?
R 2.1. is the wettand within an incorporated city or within its UGA?	Yes=2 No=0
R 2.2. Does the contributing basin to the wetland include a UGA or incorportied area?	Yes mi No = 0
R Z.3. Does at least 10% of the contributing basin contain tilled fleids, pastures, or ferears that have be within the last 5 years? Y	been clearcut Yosw1 NowD
R 2.4. Iz > 10% of the area within 150 ft of the wetland in land uses that generate pollutantic? $^{ m Y}$	Yes wit No = 0
R 2.5. Are thore other sources of pollutance coming into the wetland that are not listed in questions R $^{\rm 2}$. Other sources	RZI-RZ.4 Yes=1 No=0
Total for R 2 Add the points in th	the boxes above
Rating of Landscape Potential If score is: 3-6 = H 1 or 2 = M 0 = L	cord the rating on the first page
R 3.0. is the water quality improvement provided by the site valuable to society?	
R 3.1. is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to or	one within 1 mi?
	Vor n 1 No n 0

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Yes #1 No = 0 R 3.2. Is the wethand along a stream or river that has TMDL limits for nutrients, toxics, or pathogens? Yes #1 No = 0 R 3.3. Has the size been identified in a watershed or local plan as important for malithaling water quality? (answer Yes #2 No = 0 YES if there is a TMDL for the drainage in which the unit is found) Total for R 3 Rating of Value If score is: _24 =1 = M0 = 1.	R 3.1. is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mir		
R 3.2. It she wethand along a stream or river that has TwiDL limits for nutrients, toxics, or pathogens? Yes = 1 No = 0 R 3.3. Has the site bean identified in a water-thad in a climportant for malithaling water quality? (answer R 3.3. Has the site bean identified in a water-thad in a climportant for malithaling water quality? (answer Yes = 3 No = 0 Total for R 3 Rating of Yahue If score is: _24 = M _1 = M _0 = 1.	Yash1 No mO	_ •	
Yes = 1 No = 0 Yes = 1 No = 0 Yes = 1 Yes = 1	R 3.2. Is the wetland along a stream or river that has TMDU limits for nutrients, toxics, or pathogens?		
R3.3. Has the stor bean identified in a watershed or local plan as important for maintaining water quality? (answer VES) there are is a rively for the degrape in which the unit is found) VES if there is a TWAL for the degrape in which the unit is found) Add the points in the boxes above Total for R Add the points in the boxes above Rating of Value If score is: 2.4 et l	Vose1 Nom0		
YES If there is a TMDL for the drainage in which the unit is found) Yes = 2 No = 0 Total for R 3 Add the points in the boxes shove Rating of Value If score is: 2.4 = M	R 3.3. Has the site been identified in a watershed or jocal plan as important for maintaining water quality? (arewer		
Total for R 3 Add the points in the boxes above Rating of Value If score is: 2-4 e H 1 = M 0 = L	YES if there is a TMDL for the drainage in which the unit is found)		
Rating of Value 11 score is: 2-4 # H _ 1 = M _ 0 = L	Total for R3		
	Rating of Volue H score is: 2-4 = H _ 1 = M _ 0 = L	he first page	

Wetland name or number

RIVERINE AND FRESHWATER TIDAL FRING	E WETLANDS
Hydrologic Functions - Indicators that site functions to reduct	flooding and stream crosion
R 4.0. Does the site have the potential to reduce flooding and erosion?	
R 4.1, Characteristics of the overbank storage the wetland provides:	
Estimate the average width of the wetland perpendicular to the direction of the	flow and the width of the
stream or river channel (distance between banks). Calculate the ratio: (averag	width of wettend)/(average
width of stream between banks).	
If the ratio is more than 20	points = 9
If the ratio is 10-20	points = 6
If the ratio is 5-40	points = 4
If the ratio is 1-45	points = 2
If the ratio is < 1	points = 1
R 4.2. Characteristics of plants that slow down water velocities during floods: Treat l	rge woody debris as forest or
shrub. Choose the points appropriate for the best description (polygons need t	have >90% cover at person
height. These are <u>NOT Cowardin</u> classes).	
Forest or shrub for $h^{1/3}$ area OR emorgant plants $h^{2/3}$ area	points=7
Forest or shrub for $>^{1}/_{10}$ area OR emergent plants $>^{1}/_{13}$ area	points #4
Plants do not moet above critería	points = 0
Total for R 4	I the points in the boxes above
Rating of Sita Potantial If score is: 22-26 a H 6-22 a M 0-5 a L	Record the rating on the first page
R 5.0. Does the landscape have the potential to support the hydrologic funct	ans of the sito?
R 5.1. Is the stream or fiver adjacent to the wetland downcut?	Yes=0 No=1
R 5,2. Does the up-gradient watershod include a UGA or incorporated area?	Yes w I No = 0
R.S.3. is the up-gradient stream or river controlled by dams?	Yes No 12
Total for R.S. Ac	d the points in the boxes above
Rating of Landscape Potantial 14 score is: 3 # H 1 or 2 # M 0 = L	Record the roung on the first page
R 6.0. Are the hydrologic functions provided by the site valuable to society?	

R.C.1. Distance to the nearest areas downstream that have flooding problems?	
Chaose the description that best fits the site.	
The sub-basin immediately down-gradiant of the watiand has flooding problems that result in damage to	
human or natural resources (a.g., houses or salmon rodds)	
Surface flooding problems are in a sub-basin farther down-gradient	
No flooding problems anywhere downstream	
R.G.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	
Yes = 2 No ± 0	
Total for R 6 Add the points in the boxes above	

Record the rating on the first page Rating of Value If score is: 2.4 = H _ I = M _ 0 = L

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These questions apply to wetlands of all HGM classes. - Indicators that site functions to conside the functions to conside the functions to consider the function of the funct	automotion diat site functions to provide important habitat 6 the potential to provide hadden?		as in the works of the variant descent and strate within the Forested dess. Chost the set in the workshold, for 20 perchasmary to combined just cost class to have the threshold n 10% of the unit if it is smaller than 2.5 or Aid the number of strumbur how how how how	4 structures or more: bolints = 4	Satudures: points = 200/	5 whore trees have > 30% cover)	a Forested doss, check if.	ass has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) r 20% within the Encerted noteman		vator regimes (hydroperiods) present within the watend. The water regime has to cover	us weuend or A at to count (see text for descriptions of hydroperiods). Defed or level and the d	ded or inundated	oded or inundated	1 type present points = 0	while second of river in, or adjacent to, the wetland	itig su with in, or adjacent to, the weetand dand	2 points	2 points		Provide a product in the working that cover of least 10 ft.	Include Eurosian milfoli, read cananygrass, purple loosestrife, Canadian thistle	spocies	boints	points #0	rama cama below whether Interspersion among Cowardin plants classes (described in H. 1.4), or ceated areas (can include open water or mudiitus) is high, moderzer, low, or none. <i>If you</i> <i>int classes</i> or three <i>classes</i> and open water, the rothin is always high.	(Low = 1 point Modarato = 2 points		
These que: HABITAT FUNCTIONS - Indicators that	H 1.0. Does the site have the potential to p	H 1.1. Structure of plant community: Indicator	Cowardin plant classes in the worland. L of X ac or more than 10% of the unit if it			Forested (areas where trees have >	if the unit has a Farasted class, cha	The Forestad class has 3 out of 5 str that each cover 20% within the Fore	H 1.2. Hydroparlods	Chock the types of water regimes (hydro more than 10% of the under a set of	Barmanentiv ficeded or loundated	L Seasonally flooded or inundated	Occusionally flooded or inundated	L Saturated only	Sessentific flowing stream is a sub-	Lake Fringe wetland	Freshwater tidal wetland		- 445. Nonness of plant species Obtain the number of almatraneits for the	Different patches of the same species can	the species. Do not include Eurasian mi	so poet of trattant	v - JY species < 5 species	4.1.4. Interspersion of habitute	Decide from the clagrams below whether the classes and unvegetated areas (an in have four or more plant classes or three cl	() (None o points	It three diagrams (100 M)	

Wetland name or number

H 1.5. Spotch habitar features: Clock tho habitar features that are present in the workand. The number of checks is the number of paints. Marker of another features within the workland (> 4 in diameter and 6 it long). Standing range (dain > 4 in within the workland (> 4 in diameter and 6 it long). Undercut banks are present for at least 6.6 it (2 m) and/or overhanding plants extends at least 3.3 it (1 m) over a stream for dital) in, or configuous with the workland (for at least 23 it (10 m) Stable streep banks of the material that might be used by beaver or muskers for danning (> 20 degree where wood is exposed) alope) OR signs of non-stremmet persistent plants for some or muskers for danning (> 20 degree where wood is exposed) where wood is exposed) where wood is exposed) where wood is exposed) Total (or H 1.	
Rating of Sito Potential If core is: 15-13 = H 7-14 = M 1_66 = L Record the ration on An Area	
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat factude only habitat their directly abots wetland unity. Weth Weth E.S. Accessible habitat factude only habitat their directly abots wetland unity. Weth Weth E.S. 2022 at factors a understanded habitat it: > 1/3 (33.3.38) of 1 km Polygon 20-33% of 1 km Polygon 20-23% of 1 km Polygon H 2.2. Understanded habitat in 1 km Polygon	
Calculate: % undistructed habitat = 1(56 modarate and low intensity land uses)/21 = 22 3 % Undistructed habitat 5.50% and in 1.3 patches Undistructed habitat 10.50% and in 1.3 patches Undistructed habitat 10.50% and 5 parthes Undistructed habitat 1.20% of 3 km Polygen Patches H 2.3. Land use intensity in 1.4m Polygen	
> 50% of 1 km Polygon is high intensity land use = 50% of 1 km Polygon is high intensity Total for H 2 Radia for H 2 Radia for inadscape Potential if score is: 4+6 = H _ 1-5 = M _ 4-1 = 1 Record the rating on the first page	
H 3.0. is the habitat provided by the site valuable to society? 13.1. Does the site provide habitat for species valued in laws transferiors or or instance of a	
that applies to the wetland being reted. It has 30 more priority habitars within 100 m (see not page) The provides habitat for Threaten do a fudangered special start or animal on the state or federal lites) The provides habitat for Threatened or Endangered special start or animal on the state or federal lites) The served of High Conservation Volte as detarmined by the Department of Natural Resources. The a Wetland of Figh, Conservation Volte as detarmined by the Department of Natural Resources. The a Wetland of Figh, Conservation Volte as detarmined by the Department of Natural Resources. The a Wetland of Figh, Conservation Volte as detarmined by the Department of Natural Resources. The a Wetland of Figh, Conservation Nature as detarmined by the Department of Natural Resources. The a successful polarizet filtered on next page) within 100 m Site has I or 2 priority habitats (listed on next page) within 100 m Site does not meet the order the order of the order of the reted on the filter apped. Accord the reter of the order of the order of the order of the retering of the polar of the filter polar of the order	

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Site does not meet any of the attendabove Rating of Value If score is: $2 \equiv H$ $\Delta = M$ $0 \equiv L$ Wotland Rating System for Western WA: 2014 Update Rating Form – Effective January 1, 2015

WDFW Priority Habitats

Priority inducts: listed by WDEW (see complete descriptions of WDFW priority inducts; and the counties in which they can be found in: Washington Dopartments of Fish and Wildlin, 2008. Priority Habitat: and Species Lizt: Olympia, Washington, 1377 pp. Math.//wdfaw.mo.gov/publications/00165/wdfw00165.pdf or access the list from here:

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 index* before the wetland unit and the priority habitet.

- Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- Blodiversity Areas and Corridors: Areas of inbitat that are relatively important to various species of native fish and wildlife (full descriptions in WDFW PHS report).
- ---- Herbaccous Balds: Variable size patches of grass and forbs on shallow soils over bedrock
- Old-growth/Mature forests: <u>Old-trowth west of Castado trust</u> Stands of at least 2 two species, forming a multilayered canopy with occasional small oponings; with at least 8 twost/so (20 tress/ha) > 32 in (31 cm) doh or > 200 years of rgo, hailant: Operat - Stands with verstey diameters acceeding 21 in (53 cm) doh; crown caver may be least than 100%; docay, decadoneo, numbers of snags, and quantity of largo downod material is genorally less than that found in old-growth; 80-200 years old west of the Cascado erest
- Oregon White Oals: Woodland stands of pure oak or oak/conflor association: where catopy coverage of the cale component is important (full descriptions in WDFW PHS report p. 136 - 222 web link above).
- Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and tecreactivial eccoyetoms which mutually influence onch other.
- Westside Prairies: Herbacoous, 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. 162 – see web link above).
- Instructure: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instructure fish and wildlife resources.
- Nearshore: Raintvely undisturbed nearshore includes These include Coastal Nearshore, Open Coast Nearshore, and Paget Sound Nearshore. (*juil 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.
- Tatus: Homogenous areas of rock rubble ranging in average size 0.5 6.5 ft (0.15 2.0 m), composed of basalt, andeste, $\sqrt{n}a_l$ or sociations that rectifics. May be associated with cliffs.
- Snags and Logs. These are considered snags if they are deed or dying and oxhibit an filetant decay characteristics to anable 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 (7 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 oleewhere.

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CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Category 5 ≓ 5 ī ī Gt I NOTE: If you are uncortain about the extent of mosters in the understary, you may substitute that citerian by measuring the pH of the water that scops into a hole dug at least 16 in doop. If the pH is less than 5.0 and the Doos the wediand (or any part of the unit) meet both the criteria for sails and vegetation in bogs? Use the key SC3.1. Doers an area within the wetland unit have organic soil horizons, aithar poats ar mucks, that composa 16 in or more of the first 321 in of the soil pointie? SC3.2. Doers an area within the wetland unit have organic soils, aither poats or mucks, that are leas than 16 in doep over bedrack; on a impromizable hardpin such as clay or volcanic soil, or that are floating on top of a lake or SC3.4, is an area with peats or mucks forested (> 30% cover) with Stike spruce, subalphe fir, wertem red coder, western hemlock, lodgepole pine, quaking aspen, Engelment spruce, or wertern withen AND any of the species (or combination of species) listed in Table 4 provide mort way 30% of the sover under that anony? Age is a Cangory I bog /No y is not a bog SC 1.1. Is the wetland within a National Wildlife Refugo, National Park, National Edwiry Rezervo, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-1537 SC 2.0. Wethands of High Conservation Value (WHCV) SC 2.1. Matte WA Department of Natural Resources updated their website to include the list of Wethands of High Conservation Value? SC 2.2. Is the worthing listed on the WDNR database as a Wethand of High Conservation Value? SC2.4. Haz WDNR lientified the wottand within the S/T/R as a Wetland of High Conservation Volue and listed it on their wobsite? No = Is not a bog Yes = is a Catagory i bog No- Go to SC 3.4 Yes = Catagory | No - Go to SC 1.2 The workland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. No = Not a WHCV SC3.3, Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% The wethand is relatively undisturbad (frast no diking, altating, altating, autivation, grazing, and has less than 10% cover of non-native pleat species. (if non-native species are Spartine, see page 25) At least X of the landward edge of the wethand has a 100 ft buffer of shrub, forest, or un-grazed or un-Check off any oriente that apply to the wetland. Chele the category when the appropriate arteria are met. SC 1.0. Estuarine wetlands SC 1,2. Is the wotland unit at least 1 ac in size and meets at least two of the following three conditions? below. If you answar YES you will still need to rate the wetland based on its functions. Yes – Go to SC 3.3 SC 2.3. Is the wetland in a Soction/Township/Range that contains a Natural Heritage wetland? <u>adrrwn, gov/nhp/refdrak/datragarch/wnhpwetlands.edf</u> Yes – Contact WNHP/WDNR and go to SC2.4 Yes a Category I Yes-Go to SC 11 Does the wetland most the following criteria for Estuarino wetlands? plant species in Table 4 are present, the wetland is a bog. cover of plant spacies listed in Table 47 The dominant water regime is tidal, contiguous froshwater wetlands. mowod grassland. ---- Vegetated, and http://www1 pond? Wetland Type SC 3.0. Bogs

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SC 4.0. Forested Worthands	
Does the wedtand have at least 1 <u>conflicuent acr</u> of forest that meets one of these orthona for the WA Doportment of Fish and Wildlife's forest as priority habitate? <i>If you onswer YES you will still need to rets</i> the westland based on its junctions. — Old-growth forests (west of Cascade creat): Stands of at least two tree apoclas, forming a multi-hayared across the constant openhorg, with at leasts it trees/for (20 trees/ha) that are at least 200 years of age OR have a diamator at breach helph (dbh) of 32 ln (12. cm) or more. — Mature forests (west of the Cascade Cross): Stands where the largest trees are 80-200 years oid OR the spocks that make up the canade Cross): Stands where the largest trees are 80-200 years oid OR the spocks that make up the canade Y have an average diamoter (dbh) exceeding 21. In (53 cm).	
SC5.0. Wethinds in Control 1 - access	ц. С
Dees the weishand meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lices in a denosition adjacent to marine waters that is whelly or partially separated from marine waters by sandbanks, gravel banks, shinglo, or leas frequently, recis — The ingoon in which the wetland is located contains ponded water that is saline or brackich (> 0.5 ppt) during most of the year in at least a portion of the lagoon forceds prag measured action)	- G
SC5.1. Does the workand meet all of the following three conclusions. I (No 9 Not a workand in a coastal lagoon — The wethand is relatively under the conclusions.	
than 20% cover of taggets, opportunities plants, actional fulling, authoration, grazinty, and has lees - Af least X of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un- mowing graziond. - The wetland is larger than ¹ / ₂₆ ac (4350 ft ²)	Cat. II
Yes a Category I No a Category II SC 6.0. Interclural Workshoeds	-
Is the webban west of the 1889 line (also called the Westorn Boundary of Upland Ownership or WBUO)? <i>If</i> you answeryns you will still naced to rate the westond based on its habitat functions. In prostein terms that moans the following geographic areas: - Oro: Based Pendinals: Incel worst the following geographic areas:	
Crayland-Westport: Lands west of SR 115 Cosan Shores-Copalis: Lands west of SR 115 Cosan Shores-Copalis: Lands west of SR 115	Cat (
Yes – Go to SC 6.1.1 k the wethand 1 ac or larger and scores in 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three expects of function)?	Cat
council is une workand that or largery or is it in a mossife of workands that is the or larger? You in Category II No – Go to SC 6.3 SC 6.3. Is the unit between 0.1 and 1.a., or is it in a mossife of workands that is between 0.1 and 1.a.?	Cat. II
Tos # Lattoory of worland intervel on Enorth Channess and and the second of worland intervel on Endorry IV	Cat ∣<
If you answered No for all types, onter "Not Applicable" on Summary Form	32

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Wetland name or number

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ishinaton	of site visit: 2 1 + 2 Mo Pata de 1 + 2 0 5	M dasses? Y N	s can be combined).	
RATING SUMMARY – Western W	ime of weetland (or 10 #): 4/9 3 NW - C Date ted by E.M.Ilur L. H. A. C. Trained by Ecology of Nor	in Class used for rating 20 Wetland has multiple H	NOTE: Form is not complete without the figures requested (figure Source of base aerial photo/map $7.0.(5$	RALL WETT AND CATEGORY TY

OVERALL WETLAND CATEGORY <u>V</u> (based on functions or special characteristics)



2. Category based on SPECIAL CHARACTERISTICS of wetland

	CATEGORY
Estuarine	L I
Wettand of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	-
Coastal Lagoon	× +
interrel until	VN II II
None of the above	~

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Wetland name or number ____

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands Map of:

Cowardin alaat dataa	To answer questions:	Figure #
Hudronerhole	D13, H1.1, H1.4	
	D1.4, H1.2	
Boundary of arrs withthe 150 th at the of hydroperiods	011,041	
Map of the contribution true to use we want (can be added to another figure)	D 2.2, D 5.2	
1 (th Polyson: Arm that orthonic 1 (m 2)	D43, D5.3	
Polygons for accessible habitat and underweeden wetland odgo - Including	H 21, H 22, H 23	
Screen capture of map of 303(ch) leved unterning to the tert		
Screen capture of lint of thirds	D3.1, D3.2	
Distance in the second of the	D3.3	
Riverine Metionals]

SBUR

Viab off		
	To answer auestions	Element of
		# 7 17 5
Hodropæriocis	_H_1.1, H_1.4	
	H1.2	ļ
Buildher of accountly and on an	RII	
and a start of a start and it of the wedging (can be added to another figure)	R 2 4	
Plott cover of trees, shrubs, and herbaracus alarte		
Wildth of instance of the second picture	R 1.2, R 4.2	ľ
reaction of any vitant of stroam (can be added to another finite)		
Map of the contribution have	1.4.1	
	82.7 872 957	
A KU POVEON: Area that extends 1 km from entire unstand and a second	712 11 6012 11 121211	
מטעאמטיני להר ההההולון לעור ווייד ביווי וייזיו שיווי שיוויים שטעמות פספס - וחכועמות	H 2.1, H 2.2, H 2.3	
restriction of accessing indication and undicative habitat		
Screen capture of map of 303(d) listed writtee is here is		
Same and the second market and basin (from) beology websito)	R3.1	T
34 doi: 10 doi: 10 tist of 110DLs for WRIA in which must be formed re-		
(GDA LIDIT) DUPOT OF STATE S	R3.2. R3.3	

<u>Lake Fringe Wetlands</u>

	Ì	
Cownredin a last states	To answer questions:	Elmire #
	111 141 014 014	
riant cover of troas, shrubs, and herbacoous plants		
Boundary of area within 150 to 14 to 150 to	112	
1 hm har in the second of the	L22	
- Hur revision: Area that extends 1 km from onthe wetland adre - including	1211221121	
polygons for accessible habitat and undirturbed hubbles	ח גייא, ה גיב, א 2.3	
		-
contraction of the state of a subject to the state of the	C C I E I	
Screen capture of list of TMDIs for WRIA in which not left	2	
(gow more strong	13.3	

Slope Wetlands

Map of:		
Cowardin niam classes	To answer questions:	Figure 6
Hydromontoute	H11, H14	
	H 1.2	
Plant cover of downs while the shirubs, and herbaccous plants	S13	
can be added to figure above)	54,1	
Soundary of 150 it buffer (can be addeed to another flaver)		•
Likin Polymon: Aron that write due 1 a to 2	S 2.1, S 5.1	
olygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
creater capture of map of 303 (d) listed waters in basin (from Ecology website)	53.1.53.2	
which until or list of IMDLs for WRIA in which unit is found (from web)	S3.3	
vouand Rating System for Western WA: 2014 Update tating Form – Effective January 1, 2015	62	

Wetland name or number	Wetland name or number
HGM Classification of Wetlands in Western Washington	NO- go to 6 NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding. Is the entitie wetland unit in a topographic depression in which water ponds, or is saturated to the
For questions 1-7, the criteria described must apply to the entire unit being rated. If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.	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 7. Is the entire wetland unit located in a very flat area. With no obvious depression and no overbank
 Are the water levels in the entire unit usually controlled by tides except during floods? Are the water levels in the entire unit usually controlled by tides is Tidal Fringe - go to 1.1 	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.
1.1 Is the salinity of the water during periods of annual low now below u.5 ppt (parts per unousand):	
 NO - Saltwater Tidal Fringe (Estuarine) YES - Freshwater Tidal Fringe If your wetland can be classified as a Freshwatar 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. 	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 floodplatin, or a small stream within a Depressional wetland has a zone of flooding into first sides. GO BACK AND IDENTIFY WHIGH 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 the identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland turb being score.
NO- go to 3 Hyour wetland can be classified as a Flats wediand, use the form for Depressional wetlands. 3. Does the entire wetland unit meet all of the following criteria? The vegentied part of the wetland is on the shores of a body of permanent open water (without any shores on the service ar any time of the vect) at least 20 ac (8 ha) in size:	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 wedand 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.
A_{t} least 30% of the open water area is deeper than 6.6 ft (2 m).	HGM classes within the wetland unit HGM class to
VDS - The working class is Laike Fringe (Lacustring Fringe)	being rated use in rating
	Stope + Destressional Depressional
4. Does the entire wettand unit meet an up to no to the rout with with a first of the wettand is on a slope (slope can be very gradual).	Slope + Lake Fringe
The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheefflow, or in a swale without distinct banks,	Depressional + Riverine along stream . Depressional within boundary of depression
The water leaves the wetland without being impounded.	Depressional + Lake Fringe Depressional
/ NO- ro to 5 YES ~ The wetland class is Slope	Riverine + take Fringe Riverine
NOTE: Surface water does not pond in these type of welands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft	Salt Water Tidal Fringe and any other Treat as class of freshwater wetland ESTUARINE
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 Piver, the Averbank flooding occurs at least once every 2 years.	Ifyou are still unable to determine which of the above arteria apply to your wetland, or ifyou have more than 2 HGM classes within a wetland boundary, classlfy the wetland as Depressional for the rating.
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Water Quality Functions - Indicators that the circuit WEIT ANDS	· · · · ·
D 1.0. Does the site have the potential to improve water and the 3.00 minutes to improve water quality	
D 1.1. Characteristics of surfaces water curfitmer from the model	
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	
Wortland has an unconstitutated, or slightly constricted, surface outlet that is parmanently flowing points = 1 Wortland is a fitte depression (OUESTION 7 on key), whose outlet is a permanently flowing dirth. points = 1	
D 13. Characteristics and distributions of $\frac{1}{2}$ and $\frac{1}{2}$ is the clay or the organic (use NRCS definitions). Yes = 4 No = 0 $\frac{1}{2}$	
Wetland has porsistent, ungruzed, plants > 95% of areas	
Wotland has persistent, ungrated, plants > X of area	
Wetland has persistent, ungrazed plants > 1_{10} of area Wetland has persistent untraved higher e^{2} , e^{4} , $e^{$	
D 14. Characteristics of summary and the point of the poi	
This is the area that is ponded for at least 2 months. See description to maximal	
Area sossonally ponded is > X total area of wedand	
Area seasonally ponded is > % total area of workind	
Area socionally ponded is < X total area of wetland	
Add the points in the boxes above &	
waung of Site Potential f score is: 12-16 = H LG-11 = M 0-5 = L Record the rating on the first pape	
D 2.0. Poos the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges?	
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that Renorate pollutinote? Voc. = 1 N-2/2	
0 2.3. Are there septic systems within 250 ft of the working?	
D 2.4. Are there other sources of pollutinets control for a source of the sources of pollutinets control for a sources of pollutinets control for a source of the source o	
Source Source 0 2.1-0 2.3?	
Total for D 2	
Rating of Landscape Potential If score is: 3 or 4 H Y 1 and 2 h Y	
-1 of $2 = 100$ -1 of $2 = 100$ -1 of $2 = 100$ -1 for a start of the star	

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

re that is on the Yes = 1 No Yes = 1 No = 0 Yes = 2 No = 0 Yes = 2 No = 0	
3.1. Does the worland discharge directly (i.e., within 1.ml) to a stream, river, lake, or marke wat and its charge directly (i.e., within 1.ml) to a stream, river, lake, or marke wat and its rank wat stream and stream and its rank wat stream and str	Record the rating on the first page

Wetland Rating System for Wostern WA: 2014 Update Rating Form – Effective January 1, 2015

Wetland name or number

DEPRESSIONAL AND FLATS WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradations	ы
0 4.1. Characteristics of surface water elucitiows from the wethand:	
Vetland is a depression or flat depression with no surface water leaving it fram with the	
we dand nas an intermittonity flowing stream or ditch. OR highly constituted permanently flowing neuron survey	
Wotland has an unconstricted, or slightly zonational and a set a permanently flowing ditch points = 2	5
D 4.2 Depth of storsen during wort periods. Extension 4.4 Extension of the la permanently flowing points = 0	1
with no outlet, measure from the surface of terminer with a poor the bottom of the outlet. For wetlands	
Marks of ponding are 3 ft or more above the surface or the surface or if any the deepest part.	
Marks of ponding botween 2 ft from surface or bottom of ourset.	
Marks are at least 0.5 ft to <2 ft from auflace or bottan of outlot	
The wetland is a "headwater" wetland	6
Wetland is flat but has small depressions on the surface that trap water	- С
Wartes or pondung lease than 0.5 ft (5 in)	
- + <u>contractions of the working to storate in the watershad</u> : Estimate the ratio of the area of unstroam havin	
unitatuary support water to the wetland to the area of the wetland unit itself. The reas of the heads in the reasons and the second of the wetland unit itself.	
The area of the brief of the track of the track of the unit	
The area of the brach is more than the stream of the unit	1
Entire wethand is in the Flats class	1
Total for D 4 polnts + S	
Rating of Size Derements is a second se	h
Record the rathe on the first and the first state of the first state o	at nane
U 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
U 3.1. Doos the watand receive stormwatar discharges	
D5.2 is >10% of the area within 150 the weether is here is a manual in the is a manual of the area within 150 the of the methematical is a manual of the area within 150 the of the methematical is a manual of the area within 150 the area within 150 the of the area within 150 the of the area within 150 the area within	0
D5.3 is more than see, at the answer of the use that use that behavior of the access function of the access of the acces of the acces of the access of the access of the access of the a	2
>1 residence/or urban, commercial, arriculture, are 17	0
Total for D 5	
Rating of Landscape Potential If score is 3 = 4 1 2 2 2 1 1	p
PEO A. H. W. P. C. M. L. M. D. L. M. D. L. M. D. L. M. C. M. L. M.	st page
or a survive une inversion functions provided by the site valueble to society?	
Vous <u>intenties</u> in a landsence that has flooding problems. Choose the description that best matches conditions and a	T
The Wetland conturns surface, <i>No not add point</i> , <u>Choose the highest scole if more than one condition is mot</u>	
damaged human or natural recources (e.g., houses or railmon rad 4-).	
 Flooding occurs in a sub-basin that is immediately down-stradient of unit 	
Surface flooding problems are in a sub-basih farther down-gradient.	
riecond from groundwater is an issue in the sub-basin.	
I he existing or potential outflow from the wetland is so constrained by human or natural conditions that the	2011
and stored by the westing cannot reach areas that flood. Explain why	
Intere are no problems with flooding downstream of the wotland.	
U e.e. Has the site brean identified as important for flood storage or flood conveyance in a regional flood control plan?	
Total for D 6	
Rating of Value if score is: 2-4 = H V = M A = 0	~~
Record the rating on the first	t page
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RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality	برياني
R 1.0. Does the site have the potential to improve water quality?	_
R 1.1. Arca of surface depressions within the Riverine wetland that can trap codiments during a flooding event:	
Depressions cover > // area of wetland	
Depressions over 2 A area of wedland	_
No depressions present	
R 1.2. Structure of plants in the wotland (areas with >90% cover at porson height, not Cowardin classes)	
Treas or shrubs $> 7/_{2}$ area of the wothand	_
Trace or shrups > 7, area of the wetland	
Herbaccous plants (256 in high) 2/2 artee of the workand	
Herbaceous plants (> 6 ln high) > 7/2 area of the wetland Trees: shrubs: and untrazed herbaceous < ² /3, area of the wotland	
Total for R 1 Add the points in the boxes above	 1
Rating of Site Potential If score is: 22-15 = H	. 1
R.2.0. Does the landscape have the potential to support the water qualify function of the site?	
R 2.1. is the workand within an incorporated dry or within its UGA? λ^{23}	
R 2.2. Does the contributing basin to the wetland include a UGA or instruction area? Yes = 1 No = 0	
R 2.3. Doors at least 10% of the centributing basin contain tilled figlids, paztures, or forcets that have been clearcut within the last 5 years?	· · · ·
R 2.4, is > 10% of the area within 150 ft of the wedland in jand uses that generate pollutants? Yes = 1 No = 0	-1
R 2.5. Are there other cources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4 Other sources	
Total for R 2 Add the points in the bester above	1
Rating of Landscape Potential If 20010 life and 1 or 2 m 0 = L Record the rating on the first pag	្រ
R 3.0. Is the water quality improvationt provided by the site valuable to society?	
R.3.4. Is the wetland along a strong or river that is on the 303(d) list or on a tributury that drains to one within 1 mi?	
Yessel NomO	
R 3.2. Is the workand along a stream or river that has TMOL limits for nutrients, taxies, or pathogents? Yes $= 1$ No $= 0$	
R 3.3. Has the stopbeen identified in a watershed or local plan as important for maintaining water quality? (<i>answer</i> vec <i>toted</i> , is <i>interversed</i> , is <i>interversed</i> , in which the <i>un</i> it is framed	
- Tratail for R.3. Add the points in the boxes above	
Rating of Valua If score is: 2-4=H1=M0=L	2

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Wetland name or number

RIVERINE AND FRESHWATER TIDAL FI Hudrologic Functions - Indicators that site functions to re	INGE WETLANDS duce flooding and stream erosion
R 4.0. Does the site have the potential to reduce flooding and erosion?	
R 4.1. Characteristics of the overbank storage the wetland provides:	
Estimate the average width of the wetland perpendicular to the direction	of the flow and the width of the wrone width of worland // neurone
stream of river channer (alstance porveced burke). Universe un rivere (a width of stream between banks).	
If the ratio is more than 20	points = 5
If the ratio is 10-20	points = 6
If the ratio is 5-410	points = 4
If the ratio is 1.—S	points = 2
If the ratio is < 1	× points =1
R 4.2. Characteristics of plants that slow down water velocities during floods: 7	eat large woody debris as forest or
shrub. Choose the points appropriote for the best description (polydons i howner three are NOT Cowardin elesses).	ecd to have serve at person
for the state of $x^{1/2}$ area OR emerant blants $x^{2/2}$ area is	points = 7
Forest or shrub for $> \frac{1}{2}$, area OR emergent plants $> \frac{1}{2}$, area	points = 4
Plants do not meet above criteria	points = 0
Total for R 4	Add the points in the boxes above
Rating of Site Potential if score is: $12-16 = H$ $26-0.1 = M$ $0-5 = L$	Record the roting on the first page
R 5.D. Does the landscape have the potential to support the hydrologic	unctions of the site?
R.S.1. is the stream or river adjacent to the wotiand downcut?	YOS # D NO # 1
R 5.2. Does the up-gradient watershod include a UGA or incorporated area?	Yes 1 No # 0
R 5.3. is the up-gradient stream or river controlled by dams?	Yes = 0 No h 1
Total far R S	Add the paints in the boxes above
Rating of Landscape Potential If score is: 3=H 1 or 2 = M 0 = L	Record the rating on the first page
R 6.0. Are the hydrologic functions provided by the site valuable to soc	sty?
R 6.1. Distance to the nearest areas downstream that have flooding problems	
, the sub-basis immediately down-madiat of the wetland has flooding i	roblems that result in damage to
human or natural resources (a.g., houses or salmon rodds)	points # 2
Surface flooding problems are in a sub-basin farther down-gradient	points = 1
No flooding problems anywhere downstroam	boint = U
R 6.2. Has the site been identified as important for flood storage or flood com	oyance in a regional flood control plan? Yos # 2 No # 0
Total for R 6	Add the points in the boxes above
Bather of Value If score list 2-4 = H 3 = 0 = L	Record the rating on the first page

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Wetland name or number <u>C</u>

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	Those and a second s		
HABITAT FUNCTION	- Indicators that site functions to provide immediate NS - Indicators that site functions to provide immediate	HGM classes.	
H 1.0. Does the site !	lave the potential to provide habitat?		
H 1.1. Structure of plan	t community: indicators are Cowardin closes and an even		ĺ
Cowardin plant o of K ac or more t	lasses in the wotland. Up to 10 patches may be combined for them 10% of the units fets to many the combined for	un the Porested class. Chock the each class to meet the threshold	
Aquatic bed	קשחע פות ממי אפת האוויה היוא היוא איז איז איז איז איז איז איז איז איז אי	st of structures checked.	
Emergont		4 serviciants or mora: points = 4	
Beub-chrub	(aroas whore shrubs have > 30% cover)	3 structures: points = 2	
Forested (ar	out where trees have > 30% cover)	2 structures: points 1	
If the unit h	as a Forested class, check if:		
The Foresto	d dats has 3 out of 5 strata (canopy, sub-canopy, shrubs, ho	baceous, moss/mound-course)	
M + 2 DATEST	over 20% within the Forestod polygon		
n			
more then 10% -	of water regimes (hydroporiods) present within the wetland.	The water regime has to cover	
Annunation.	ship we we and on y ac to count (see text for descriptions of hy	traperiods).	
Sensonally fi	A control of Liperparts 4 c	" more types present; points = 3	
Occasionally	flooded or initiated	3 types present: points = 2	
Saturated on	uly.	2 types present: points 2	
Permanently	flowing stream or divor in, or adjacent to the motioned	I type present: points = 0	
Soosonally fi	owing stream in. or adjacent to the working		
Lako Fringo	wotland		
Freshwater t	Stal wettand	2 points	
		2 pointr	
H 1.3. Richness of plant:	species		
Count the number	r of plant spocies in the wotiand that cover nt lenst 10 $4a^2$		
Different patches	of the same species can be combined to meet the size thresh	ild and vou do not hours to come	
the species. Do I	tot include Eurasian miljoli, reed canarygrass, purple looses	rife, Canadian thirtle	
< tootuhoo nak m		pointr = >>	
<u> </u>	- LV species 5 species	points	
R14 Internoreion of h		points # 0	-
Docide from the d	abitats Jagrams bolow whothor intersporsion amone Cowardin ninn	t el attende falorenelle est te de	
the dasses and un have four or more	vegetated areas (can include open water or mudilars) is high plant decess or three classes and open water, the rading is a	r cuasta (accorbed in H.1.1), or Modarate, low, or none. <i>If you</i> <i>ways high</i> .	
((
)			~
None o points	Law = 1 point	Moderate a 2 miles	
)			
All three diagrams			
are AlGH = 3points			
Wetland Rating System	far Wortsaw 1974, 264,4,71-2-4-4]
Rating Form - Effective	January 1, 2015	13	

Wetland name or number

To prove the and traduce that are present in the wedged. The number of checks is the number of points. Check the habitat fourture that are present in the wedged. The number of checks is the number of points. I standing snog (ddh) A lh) within the wedged (> 4 ln diametar and 6 ft long). Undersurt banks are present for at least 6.6 ft (2 m) and/or overhand(1) gints extends at least 3.3 ft (1 m) Undersurt banks are present for at least 6.6 ft (2 m) and/or overhand(1) gints extends at least 3.3 ft (1 m) over a stream of cafeth) in the reentigous with the weeking, for at least 3.3 ft (1 m) adopt 0.7 fthe material that might be used by beever of muskatifer denning (> 30 degree where wood is common theorem activity are present (eur sinuls or trees that here not yet weethard pormatent X are of thin-material that might be used by beever of muskatifer denning (> 30 degree where wood is thin-material that might be used by beaver of muskatifer denning (> 30 degree where wood is thin-material that might be used by beaver of muskatifer denning (> 30 degree where wood is thin-material that might be used by beaver of muskatifer denning (> 30 degree where wood is the material that might be used by beaver for a stress that are permanently or scareband (stresters plants or woody branches are present in areas that are permanently or scareband (stresters plants or woody branches are present in areas that are areadol. Investor plants cover feas than 25% of the weekind area in overy stretum of plants (see H 1.1 for list of arted).	M
Rating of Site Potential If score is: 15-13 = H 7-14 = M 0-6 = 1.	9
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	first page
Collectors: the number of the product and forced points we form unit, $M_{\rm scale} = 33 \frac{1}{\sqrt{3}}$, the point of the points of	0
Colculate: % under whether 1 + {{% moderate and low interactly land uses}/2] 2 % Underturbed habitat 20-50% and h 1-3 patches Underturbed habitat 20-50% and h 1-3 patches Underturbed habitat 20-50% and > 3 patches Underturbed habitat < 10% of 1 km Polymon	
> 50% of 1 thr Polygon in the Directly land uso	1
H 3.0. Is the habitat provided by the site valuable to society? H 3.1. Does the site provided by the site valuable to society?	rat page
ther applies to the work of the following extended in taws, regulations, or policies? Choose only the highest score Site moets ANY of the following extends. — It has 3 or more priority habitate within 100 m (see next page) — It provides habitate for Threatened or Endangered species (any plant or animal on the state or federal lites)	
Le transport as a location for an individual WDRV priority spector Le fit a Wetland of MIR Consorration WDRV priority spector I that beom comportant babitation as distarmined by the Oppartment of Natural Recources Shoraline Minater Plan, or in a waterched plant Ste has 1 or 2 priority habitats (litered on noter pergo) within 100 m Ste has 1 or 2 priority habitats (litered on noter pergo) within 100 m Ste has 1 or 2 priority habitats (litered on noter pergo) within 100 m Ste has 1 or 2 priority habitats (litered on noter pergo) within 100 m Ste has 1 or 2 priority habitats (litered on noter pergo) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergo) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergo) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergo) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergo) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergo) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergo) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergo) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergo) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergent) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergent) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergent) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergent) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergent) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergent) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergent) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergent) within 100 m Ste has 2 or 2 priority habitats (litered on noter pergent) within 100 m Ste habitats (li	
Nectoral the rating on the fil	irst page

Wedand Ruting System for Western WA: 2014 Update Rating Form – Effoctive January 1, 2015

WDFW Priority Habitats

Prostry.Inducts.Instrock.WDEW (see complete descriptions of WDFW priority inducts, and the counties in which they can be found, in: Washington Dopartment of Fish and Wilalifs. 2008. Priority Habitatiand Species List. Olympia, Washington. 1777 pp. Hutty://waffw.was.gov/publications/2001/65.pvf(w00165.pdf) or access the list from heres.

Count how many of the following priority inddints are within 330 fc (100 m) of the wetland unit: *NOTE: This question is independent of the junt* of the junt.

- ---- 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).
- ---- Merbaccous Baids: Variable size patches of grass and forbs on shallow solls over bedrock
- Old-growth/Mature forests: <u>Old-growth west of Casendo crest</u> Stands of at least 2 the species, forming a multilayered canopy with occucional small openings; with at least 8 troos/ac [20 troos/hn] > 32 in (§1, en) dain or > 200 years of arge, <u>Mature.Intrast</u> - Stands with average diameters occeeding 21 in (§5 en) dain; erown cover may be less than 100%; decary, decardons, munkers of smaps, and quantity of large downed material is generally less than that found in old-growth; 80-200 years of west of the Casende creat.
- Oregon White Oak: Woodland stands of pure oak or oak/sonifer associations where statopy coverage of the cak component is important (full descriptions in WDFW PHS repart p. 156 – see web liak above).
- Riparian: The area adjacent to aquade systems with flowing water that contains elements of both aquade and barrastrial ecceptations 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).
- Instructur: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- --- Nourshore: Relatively underurbed nearshore habitats. These include Coustal Nearshore, Open Coust Nearshore, and Paget Sound Nearshore. (full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page).
- Cavos: A naturally occurring cavity, recess, void, or system of interconnected passages under the carth in soils, reck, ico, or other geological formations and is large anough to contain a human.
- Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- Talus: Homegenous areas of rock rubble ranging in average size 0.5 6.5 fc (0.15 2.0 m), composed of basalt, andesite, and control of or the control of the control
- Snags and Logs: Trees are considered stargs if they are dead or dying and exhibit califictent decay characteristics to enable cavity excavation(use by wildlife, Priority ange have a clanteer at breast height of > 22 in [51 cm] in wastern 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.

No ter: All vegetated wetlands are by definition a priority habitar but are not included in this list because they are addressed alsowhere.

Wetland Rating System for Western WA: 2014 Update Rating Form – Effective January 1, 2015

Wetland name or number

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type Greek off any estands that sophy to the wetdond. Orde the category when the appropriate exited are met.	ategory
SC 1.0. Estuarthe wetlands Does the wetland most the following criteria for Estuarihe wetlands? — The dominant water regime is tidal, — With a satihity reater than 0.5 pet 'Yes -Go to SC 1.1 / No) Not an estuarihe wetland	
SC.1.1. Is the wedand within a National Wildlife Kafugo, National Park, National Editary Resorve. Natural Area Preserve, State Park of Educational, Environmental, of Scientific Resorve designated under WAC 332-30-1531? Yes = Cattogrov I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wordand unit at least 1 as in size and meets at least two of the following three conditions? — The wethend is relatively undisturbed (has no differ, distribute, filling, authwater) grantly, and has less than 10% cover of non-native plant species. (If non-native species are Specifica, see page 25) — At least X of the handward dego of the wethen has a 100 ft buffer of shrup, forest, or un-grazed or un- ditional specification.	Cat. 1
mowed grassland. — The votiand has at least two of the following features: tidal channels, depressions with open water, of configuous freshwater wetlands.	Cat. II
SC 2.0. Wretbands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their websito to Include the list of Workprds of High SC 2.1. Has the WA Department of Natural Resources updated their websito to Include the list of Workprds of High SC 2.2. Is the weekind listed on the WDNR dutabase as a Woliand of High Conservation Value? SC 2.2. Is the weekind listed on the WDNR dutabase as a Woliand of High Conservation Value? SC 2.2. Is the weekind listed on the WDNR dutabase as a Woliand of High Conservation Value? SC 2.2. Is the weekind listed to the WDNR dutabase as a Woliand of High Conservation Value? SC 2.2. Is the weekind in the SC 7/K as a Woliand of High Conservation Value and the WHCV SC 2.2. Here WDNR Identified the weekind within the S/T/K as a Woliand of High Conservation Value and the WHCV their wolldre?	Ger. Ger.
SC 3.0. Bogs Does the versional (or any part of the unit) meat both the arternia for solis and vegetation in bogs? Use the key bost and within the working unit stall need to rate the weekand based on lis functions. SC 3.1. Does an area within the working unit have organic solil horizons, alther pasts or mucks, that compose 16 in or more of the first 22 in of the soli profile of SC 3.2. Does an area within the working unit have organic solil horizons, alther pasts or mucks, that compose 16 in or work bedrock, or an inpormabile hardban such as day or volcank each, or that are list art 16 in doep over bedrock, or an inpormabile hardban such as day or volcank each, or that are loading on top of a lake ar SC 3.2. Does an area with pasts or mucks have more than 70% cover of mozes at ground lovel, MD at least a 30% SC 3.2. Does an area with posts or muck have more than 70% cover of mozes at ground lovel, MD at least a 30% cover of plant podes listed in the water that eccept into understory, you may abstitute the strater of a lake ar worstor in the avait the water that eccept into understory, you may abstitute that releast a 30% SC 3.4. Is an area with posts or muck for exact y with Stka apruce, subpline fit, weetern red cads, weetern hornlock, lodgepole pline, quaking azom, Engelmenn sprace, or weetern white pine, AND any of the weetern hornlock, lodgepole pline, quaking azom, Fingelmenn sprace, or weetern white pine, AND any of the weetern hornlock, lodgepole pline, quaking azom, Fingelmenn sprace, or weetern where pine, and a vola vectorn hornlock, lodgepole pline, quaking azom, Fingelmenn sprace, or weetern and sole the one of vectorn hornlock, lodgepole pline, quaking azom, Fingelmenn sprace, or weetern where pine, AND any of the weetern hornlock, lodgepole pline, quaking azom, Fingelmenn sprace, or weetern be aver with part to active weetern hornlock, lodgepole pline, quaking azom, Fingelmenn sprace, or weetern be aver work the pine to be specied of the weeter beast the specied of the weeter beast specied of the	- gt

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		5	ð	ð			ð	4 C	ť	ខី
SC 4.0. Forested Wetlands	Does the wetland have at least <u>1 centronours are</u> of foreat that moets one of these orients for the WA Dopartment of Fid. and Wildlife's forests as priority hobitars? <i>If you answer YES you will still need to rate</i> the working based on <i>IP</i> functions. — Old-growth forests (were of Cascade creat): Stands of at least two tree species, forming a multi-layared arrowy with occasional small openforgs; with at least 8 trees/ac (20 trocs/ha) that are at least 200 years of arrowy with occasional small openforg; with at least 8 trees/ac (20 trocs/ha) that are at least 200 years of arrowy with occasional small openforg; with at least 8 trees/ac (20 trocs/ha) that are at least 200 years of arrowy with occasional small openforg; with at least 8 trees/ac (20 trocs/ha) that are at least 200 years of arrowy with occasional small openforg; with at least 8 trees/ac (20 trocs/ha) that are at least 200 years of arrow fracts (were at breest); Stands whore the larget trees are 80 - 200 years of species that make up the canopy have an average diameter (job) oxes of 10 ft the species that make up the canopy have an average diameter (job) oxes at least 10 for the context of work at the canopy have an average diameter (job) oxes at least 10 for the context of work at the canopy have an average diameter for the context of the tree context of the tree canopy have an average diameter (job) oxes of work at first for the context of the attempter at the canopy have an average diameter (job) oxes of work of the tree for the context of the canopy have an average diameter (job) oxes of the canopy have an average diameter (job) oxes of work at the first have one canopa the pre-context of the canopy have an average diameter (job) oxes of work at the first the context of the canopy have an average diameter (job) oxes of the canopa the pre-context of the canopa the	SC 5.0. Wetlands in Coastal Lagoons Does the wetland more all of the following criteria of a wetland in a coastal lagoon? — The wetland lise in a degression adjacent to monthe wetters that is knowled or partially separated from marine wetland lise in a degression adjacent to monthe wetters that is shallow or partially separated from marine with the wetland is located contains ponded wetter that is sailho or braddish (> 0.5 ppt) durine more why show we an a sum of the ponded wetter that is sailho or braddish (> 0.5 ppt)	SC 5.1. Does the wetland most all of the following three about (needs polar measured near the bettom) SC 5.1. Does the wetland most all of the following three conditions. (No >Not a wetland in a coastal lagoon Than 2005, more of sements of marked plas to a collicing, ditching, ditching, authoration, grazing), and has leas	— At least % of the landward odge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un- moved grazabad. — The wetland has a 100 ft buffer of shrub, forest, or un-grazed or un- The wetland is larger than ¹ / ₂₀ ac (4350 ft ²)	SC 6.0. Interdunal Westands	ts the working wast of the JBS9 line (also called the Worktorn Boundary of Upland Ownarship or WBUD)? <i>If</i> year answer yes you will still need to rate the wethind blaced on its habitat functions. In practical torms that means the following geographic areas: ————————————————————————————————————	- country success that were of SA 105 Occurs Shores-Copalitie Lands were of SA 115 and SR 109 Yes - Go to SC 6.1 / 100 not an interdunal wetland for ratius	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,A,H or H,M,M for the three aspects of function)? SC 6.2. Is the wetland 1.ac or larger, or is it in a mosale of wetlands that is 1.ac or larger?	Yos ■ Cutopory II No – Go to SC 6.3 Yos ■ Cutopory II No – Go to SC 6.3 Yos ■ Cutopory III No = Catogory III No = Catogory III No = Catogory III	Category of wetland based on Special Characteristics

Wetland Rating System for Western WA: 2014 Update Rating Form – Effective January 1, 2015

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Wetland name or number

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Wedand Rating System for Western WA: 2014 Update Rating Form - Effoctive January 1, 2015

· · · · · . · ·

Date of site visit: 21/7 |2|Name of wetland (or 10 #): -1/6/3 NW - () Date of site visit: 2/17/2 Rated by E. M. (W. L. H. W. C. Trained by Ecology 2 Vec. No Date of training 20:5 - Wetland has multiple HGM classes? Y V NOTE: Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map RATING SUMMARY – Western Washington HGM Class used for rating 22

OVERALL WETLAND CATEGORY <u>1</u> (based on functions or special characteristics)

 Category of wetland based on FUNCTIONS Category I – Total score = 23 - 27

	 Category II – Total score = 20 - 22	Category III – Total score = 16 - 19	V Category IV = Total Proces = 0 - 1E

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

					TOTAL		ų	
Habitat		stopriate ratings	H M L	Ю м н	л (м) н		J-	
Hydrologic		Circle the app	H (M) L	H M ('L)	H		ŝ	
Improving	Vvator Quality		L M L	ч	ч М) н		و	
FUNCTION		4 - 12	site Patential	Landscape Potential	Value	Score Based on	Ratings	

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

3 = 다나나

Estuarine I II Wetland of High Conservation Value I I Bog I I Mature Forest I I Old Growth Forest I I Coastal Lagoon I I Interdunal I I	CHARACTERISTIC	CATEGORY
Wetland of High Conservation Value I Bog I Mature Forest I Nature Forest I Old Growth Forest I Coastal Lagoon I Interdunal I None of the shove I	Estuarine	
Bog I Mature Forest I Mature Forest I Old Growth Forest I Coastal Lagoon I Interdunal I None of the above I	Wetland of High Conservation Value	
Mature Forest I Old Growth Forest I Coastal Lagoon I Intordunal I None of the above I	Bog	
Old Growth Ferest I Соазка Lagoon I Interdunal I None of the above I	Mature Forest	
Соазда Lagoon <u>1</u> <u>п</u> Interdunal <u>1 п ш ди</u> Nono of the above <u>1 п ш ди</u>	Old Growth Forest	< -
Interdunal I II II III III Nono of the above	Coastai Lagoon	, <u>,</u>
None of the above	Interdunal	
	None of the above	

Wetland Rating Systom for Wostern WA: 2014 Update Rating Form – Effoctive January 1, 2015

Wetland name or number ____

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands Map of:

Cowardin alant darrar	To answer questions:	Figure #
	D 1 2 U 1 1 U 1 A	
Hydroberlods	+'T LI 'T'Y LI /my	
	D14.H12	
Location of outliet (can be added to map of hydrocortorie)		
Boundary of aros within 1ch & -4-b	U 1.1, D 4.1	
the state of the state of the would be added to another figure in	022 062	
Map of the contribution heals	7.0 4 47 4	
	043,053	
- with rungeons Area that extends 1 km from antire wothand adres a holiver of		
polycons for accossible habitat and under us to the test accossible to the	L 441 R 272 H 273	
adden capture of map of 303(d) listed waters in bach (from Froham wohrks)		
Stroop rooking of light of the Anti- 6 10 million	U 3.2 U 3.2	
from web	03.3	

<u>Riverine Wetlands</u>

Map of		
	To answer auestions:	Elmon H
Constitution plant classes		1
Hvdroborlode	F 11, N 1, 4	
	H12	
Boundary of array within 150 th 44 th and an array	TTV	
and a start of the second second second second to another floure)	R2.4	
Plant cover of trace, shrubs, and horhnoosie nights		
	R1.2. R4.2	
whath of anitys, whath of stream (can be added to another figure)		
	R4-1	
	827 873 867	
1 km Polypon: Aron that extends a longer and the features		
Zujonjuj - ogo ougood alitim montritiv - primera and a solo	Н 2.1. Н 2.2 Н 2.3	
<u>Polygons for accessible habitat and undisturbed habitat</u>		
	Î	
an any capture of map of 303(d) listed waters in basin (from Ecolory wobsite)	124	
Screen capitity of list of TMD) - for Weight - 1		
(from web) the standard of which in which unit is found (from web)	832 833	

Lake Fringe Wetlands

	To answer directioner	Cherren II
-owardin plant classes		10002
Plant resource frances in the second s	L1.1, L4.1, H 1.1, H 1.4	-
white events of every solutions, and horbaceous plants	- +	
Reindent of hear with the reader of the		
to a start of a start of the Medand (can be added to mother verse)		ļ
km Dolvanov, Area these and all a line and all a line and all a line and a	L 4.4	
	L 2 4 L 2 2 L 2 2	ſ
00/vitons for accredible habitat and malitaria and an interview	C 2 L 477 L 477 L	
Green capture of man of 303(4) listed instant is have a second		
I LOW FOR A CONTRACT WALKED IN DASIN (TOM ECOLOGY WEDSITE)	00100	
creen capture of list of TMINI's for while Is while the set		_
(40M WOLL) DIDIOLISI MURCHANING MARKEN PARTICIPATION (410 MARK)	133	ľ
		-

Slope Wetlands

Map of:		
	To answer questions:	Elmino II
Hydroneriods	H T.J, H J.4	
	H1.2	
Plant cover of dense trees, shrubs, and herbaccould alarme		
Plant cover of donen Meld trade charles and line	513	
(can be added to floure about)	54.1	
Boundmark of 1 EO 44 budgets 1		
www.ew y of 200 it builder (can be added to another figure)	571 557	
1 km Polygon: Area that extends 1 km from antice	Little 2 June	
	H21.H22.H33	
Pointsons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(c) listed unstand to be the second		
Commentation of the second waters in basin (from Ecology wabsite)	53.1, 53.2	
server capture of list of TMDLs for WRIA in which unit is foliard (from unit)		
Wethind Bartiar Sustain frantis and a second s	23.3	
The ansats are used and the Western WAI 2014 Update		
kating Form – Effective January 1, 2015	*2	

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Wetland name or number	MOJ go to 6 YES - The wetland class is Riverine not contain depressions that are filled with water when the river is not flooding 6 1c the entire wetland unit in a tonorraphic 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 in. of the wetland. NO - go to 7 The wetland class is Depressional 7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank 	fio.odlng? 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 wedand may be ditched, but has no obvious no outlet. NO – go to 8 VIC – go to 8 VIC – go to 8	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 DER WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS. THE UNIT (make a rough sketch to help you decide). Use the following table to identify appropriate class to use for the rating system If you have several HGM classes present within the weelnah unit being scored.	NOTTE: Use this table only if the class that is recommended in the second column represents 10: more of the total area of the wetland unit being rated. If the area of the HGM class listed in colu is less than 10% of the unit; classify the wetland using the class that represents more than 90%. total area.	HGM classes within the wetland unit HGM dars to	Slope + RiverIne Riverine	Slope + Depressional Depressional	Depressional Riverina along stream . Depressional within within a working and stream .	Depressional + Lake Fringe Depressional	Riverine + Lake Fringe Riverine	Salt Water Tidal Fringe and any other Treat as class of freshwater wetland ESTUARINE	lf you are still unable to determine which of the above eriteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as Depressional for the rating.
Wetland name or number	HGM Classification of Wetlands in Western Washington	For questions 1-7, the criteria described must apply to the entire unit being rated. If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.	 Are the water levels in the entire unit usually controlled by tides except during floods? Are the water levels in the entire unit usually controlled by tides except during floods? Are the value 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 welland can be classified as a Freshwater Tidal Fringe use the jorms for Riverine wellands. Saltwater Tidal Fringe its an Estuarine welland and is not scored. This method cannot be used to score functions for estuarine wellands. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and suffice water runoff are NOT sources of water to the unit. 	 (NO) go to 3 YES - The 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 wegented part of the wetland is on the shores of a body of permanent open water (without any other sorties wetland is on the sciences of a body of permanent open water (without any other sorties wetland) and the vech of the vech of the heat 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 wetaint is out a stope (angle can be very a careful the initial control of the wetaint) and usually comes from the water flows through the wetaind in one direction (unitiarcetional) and usually comes from second. It may flow substrated, as sheetflow, or in a swale without distinct banks,	The water leaves the wetland without being impounded.	(NO ² go to 5	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 entre werland unit meet all of the following criteria? rhe unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

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				M	¢		S			J	~	2				q	0	ଚ	0
Water Quality Functions - Indicators that the the fire functions -	D 1.0. Does the site have the potential to improve water quality?	D 1.1. Characteristics of surface outflows from the working: Working is a depression or flat depression (QUESTION 7 on key) with no surface water lawing it (no outled).	Wetland has an intermittantly flowing stream or ditch, OR highly constricted permanantly flowing outlet.	Wordand has an uncoractricted, or slightly contraited, surface outlet that is permanently flowing points = 2 Wordand is a flat depression (QUESTOR) on keyl, whose outlet is a permanently flowing ditch. Pointe = 1 D 12. The result of holowards	01.3. Characteristics and distribution of acceleration (New Joint of the organic (use NRCS definitions), Yes = 4 Nor 30	Wethand has posiziont, ungraced, planta soff of area Wethand has posiziont, ungraced, planta soff of area Wethand has persistent, ungraced, plants x, x, et non-	Watdond has pertificant ungrazed plants > //1.0 of area Watdand has perdiatont, ungrazed plants of area<br Watdand has perdiatont, ungrazed plants </td <td>D 1.4. Characteristics of sevenal poorlise or hundrate.</td> <td>This is the area that is ponded for at loost 2 months. See description in manual.</td> <td>Area seasonally ponded is > X total area of wetland Area seasonally ponded is > X total area of wetland</td> <td>Area seasonally ponded is < X total area of wetland</td> <td>Total for D 1 Add the points in the boxes above</td> <td>Rating of Site Potential If score is: 1/12-16 # H</td> <td>D 2.0. Does the landscape have the potential to support the water quality function of the site?</td> <td>D 2.1. Does the wetland unit receive stormwater discharges?</td> <td>D 2.2. is > 10% of the area within 150 ft of the weitined in land incention of the area within 250 ft of the weitined</td> <td>D 2.3. Are there septic systems within 250 ft of the working of the working of the of the working of the sector of</td> <td>D 24. Are there other sources of polliutrate contract -11.</td> <td>Source.</td>	D 1.4. Characteristics of sevenal poorlise or hundrate.	This is the area that is ponded for at loost 2 months. See description in manual.	Area seasonally ponded is > X total area of wetland Area seasonally ponded is > X total area of wetland	Area seasonally ponded is < X total area of wetland	Total for D 1 Add the points in the boxes above	Rating of Site Potential If score is: 1/12-16 # H	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?	D 2.2. is > 10% of the area within 150 ft of the weitined in land incention of the area within 250 ft of the weitined	D 2.3. Are there septic systems within 250 ft of the working of the working of the of the working of the sector of	D 24. Are there other sources of polliutrate contract -11.	Source.

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D D D T T T	oints in the boxos above	Record the rating on the first
	Addrep	Lor2=M VO=L
		3 or 4 = H
		te Potential If score lo:
Total for D 2		Particles or Landscap

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

l		8	•••	0			
D 3.1. Doos the worthand discrimination of the state of t	303(d) list?	D 3.2. is the wetland in a barle or eit-hand when a metal of the second	0.3.3. Has the site been identified in a unstantion of the standard is on the 303(d) list? Yes #1 No H 0	If there is a TMDL for the basin in which the unit is found?	Total for D3	Retine of the points in the boxes above	Autor H accrete Ist 2-4 # H _ J = M _ O = L Record the rating on the first page

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Wetland name or number

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SSIONAL AND FLATS WETLANDS that the site functions to reduce flooding and stream degradation educe flooding and streams?
of from the worlands
with no surface water leaving it (no outlet) point and point and the no surface water leaving it (no outlet) flowing outleties and the nor distribution for the north of the n
istricted, surface outlet that is permanently flowing points a 0
ure ways of panang above the bottom of the outlet. For wetlands stranent water or flay, the deepest part.
surface or bottom of outlot bolints #7
b or bottom of euclid
the surface that trap water points = 1 [
points (0)
the area of the wedand unit itself.
area of the unit points (5)
the area of the unit beints = 3
points = 5
Add the points in the boxes above
Stinnort hurtricate frames of the rating on the first page
In land uses that generate excess runoff? Yes = 1 No *O
. wottand covered with intensive human land uses (residential at etc.)? O
Add the peints in the boxes above
I or 2 = M 0 = L Record the rating on the first page
na site valuable to society?
autor. vivoes the obstrated that base matches conditions around the state that hithest score if more than and score difficing is mut- otherwise flow down eradient into areas where flooding has ass or salmon redds):
distcky down-gradiant of unit, points = 2
b-basin.
nd is so constrained by human or natural conditions that the that flood, <i>Explain wh</i> y
m of the wetland.
od storage or flood conveyance in a regional flood control plan?
O CON ZHSON
Add the points in the boxes above
Record the rating on the first page
date 6

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RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
R 1.0. Does the site have the potential to improve water quality?	
R 1.1.1. Area of surface depressions within the Riverino wetland that can trap sediments during a flooding event:	
Depressions cover > ¹ /4 area of wettand	/
Depressions cover > % area of wotland	
Depressions present but cover < X area of wetland	
No depressions present	
R 1.2. Structure of plants in the workand (areas with >90% cover at person height, not Cowardin classes)	
Trades or shrubs $> 2/_{3}$ area of the wordand	
Trees or shrubs: > ¹ / ₃ area of the wottand	
Harbaceous plants (> 6 in $h(gh) > 2/_{a}$ area of the wetland	
Herbacoous plants (> 6 in high) > ³ / ₃ area of the wetland	
Trees, shrubs, and unstracted herbaceous $< \frac{1}{2}$, area of the wetland	
Tatal for R 1 Add the points in the boxes above	
Rathing of Sites Potential If score is: 12-15 = H _ 6-11 = M _ 0-5 = L	aßad
R 2.0. Does the landscape have the potential to support the water quarkly function of the site?	
R.2.1. Is the weitiand witchin an incorporated city or witchin its UGA?	
R.2.2. Does the contributing busin to the wetland include a UGA or incorporated area? Yes = 1 No = 0	
R 2.3. Does at least 10% of the cantelbutting busin contain tilped fields, pastures, or forests that have been clearest within the basis 5 veers? No = 0	
R24, is > 10% of the area within 150 ft of the wetbyd in land uses that generato pollutantz? Yes = 1 No = 0	
R 2.5. Are there ather sources of pollutants comfile into the wetland that are not listed in questions R 2.1-9.2.4 Other sources.	
Total for R 2 Add the points in the boxes above	
Rating of Landscape Potontial If sports: 3-6 = H _ 1 or 2 = M _ 0 = L Record the rating on the first p	page
R 3.0. is the water quality improvement provided by the site valuable to society?	
R.3.1. Is the workind along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?	
Ves = 1 No = 0	
R.3.2. is the worland along a stream or river that has TMDL limits for nutrients, toxics, or pathogene?	
R.3.3. Has the site boon identified in a watershed or local plan as important for maintaining water quality? (answer	
χ_{ES} if there is a TMDL for the drainage in which the unit is found) χ_{ES} if there is a TMDL for the drainage in which the unit is found)	

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		ult in damago to	points = 2	points = 1	points = 0	anal flood control plan?	102 NO 7 NO 2 N	ts in the boxes above	
sable to society?	ng problems?	has flooding problems that res		gradient		or flood conveyance in a regio		Add the poin	
as provided by the site value	downstream that have flood	est jus the sue . own-gradient of the wotland l	a.g., houses or salmon redds)	e in a sub-basin farther down	are downstream	s important for flood storage			
.0. Are the hydrologic function	.1. Obtance to the nearest areas	The sub-basin immediately de	human or natural resources (Surface flooding problems an	No flooding problems anywh	.2. Has the site boen identified a		tai for R 6	
	6.0. Are the hydrologic functions provided by the site valuatie to society?	6.0. Are the hydrologic functions provided by the site valuable to society? 6.1. Oftence to the nearest areas downstream that have flooding problems?	6.0. Are the hydrologic functions provided by the site valuable to society? 6.1. Other to the nearest areas downstream that have flooding problems? Choose the description that best fits the site. Choose sub-static himselfately down-gradients of the wedtand has flooding problems that result in damage to	6.0. Are the hydrologic functions provided by the site valuable to society? 6.1. pictures to the nearost areas downstream that have flooding problems? Choose the description that best fits the site. The submediate picture site to exclude the site. The number of the nearost is not best fits the site. The number of the nearost is not best fits the site. The number of the nearost is not best fits the site. The number of the nearost is not best fits the site. The number of the nearost is not best fits the site. The number of the nearost is not best fits the site. The number of the nearost is not best fits the site. The number of the number of the number of the nearost is not best is not best is not best is not nearest is not best is not nearest	6.0. Are the hydrologic functions provided by the site valuable to society? 6.1. Diffunce to the nearest areas downstream that have flooding problems? Choose the description that best fits the site. The sub-bash humaditority down-gredient of the wetland has flooding problems? The sub-bash human or natural resources (e.g., huese realmy down-gredient of the wetland) Subman or natural resources (e.g., huese realmy realmy realist) Subman or natural resources (e.g., huese realmy realmy real to an event of the wetland in a sub-bash human or natural resources (e.g., huese realmy real to an event of the wetland)	6.0. Are the hydrologic functions provided by the site valuable to society? 6.1. Difference to the nearest areas downstream that have flooding problems? 6.1. Difference to the nearest areas downstream that have flooding problems? 7.10 sub-bash immediately down-gredient of the wetland has flooding problems that result in damage to human or natural resources (e.g., huese or salmon redds) 1. No flooding problems are an arbebasin father down-gredient to the wetland has flooding problems that result in damage to points = 2 support flooding problems anywhere down-gredient to the workshow gredient to the points = 2 support flooding problems anywhere downstream 1. No flooding problems are in points = 0	6.0. Are the hydrologic functions provided by the site valuable to society? 6.1. Are the hydrologic functions provided by the site valuable to society? 6.1. Defense to the nearest areas downstream that have flooding problems? Choose the description that best fits the site. Choose the description that best fits the site. Choose the description that best fits the site. Defense a name of the nearest downstream that have flooding problems? Defense a points = 1 Nonescence (e.g., house or statem readed) No flooding problems any where downstream No flooding problems any where downstream 6.2. Has the size boan lisentified as important for flood storage or flood conveyance in a regional flood control plan?	6.0. Are the hydrologic functions provided by the site valuable to society? 6.1. Optimate to the nearest areas downstream that have flooding problems? 6.1. Optimate to the nearest areas downstream that have flooding problems? 6.1. Optimate the description that best fits the site. 7.10 sub-basin immediately down-gradient of the wetland has flooding problems that result in damage to human or natural resources (e.g., houses or ealing needed) 8.1. Surface flooding problems are in a sub-basin farther down-gradient 9.1. No flooding problems are in a sub-basin farther down-gradient 9.1. No flooding problems are in a sub-basin farther down-gradient 9.1. No flooding problems are in a sub-basin farther down-gradient 9.2. Has the site boan identified as important for flood storage or flood conveyance in a regional flood control plan? 6.2. Has the site boan identified as important for flood storage or flood conveyance in a regional flood storage or 2 No = 0	6.0. Are the hydrologic functions provided by the site valuable to society? 6.1. Difference to the nearest areas downstream that have flooding problems? 6.1. Difference to the nearest areas downstream that have flooding problems? 7.10 sub-basin immediately down-gradient of the wetland has flooding problems that result in damage to human or natural resources (e.g., houses or estimon redds) 2. Surface to fooding problems are in a sub-basin farther down-gradient 3. And flooding problems are in a sub-basin farther down-gradient 3. And flooding problems are in a sub-basin farther down-gradient 3. And flooding problems are in portant for flood storage or flood conveyance in a regional flood control plan? 6.2. Has the size boan identified as important for flood storage or flood conveyance in a regional flood control plan? 6.2. Has the size boan identified as important for flood storage or flood conveyance in a regional flood control plan? 9.2. And the points in the boxes above obtained and the points in the boxes above

Add the points in the boxes above Add the points in the first page

· Zetai for R 3 Rating of Volue If score is: 2-4 = H _ 1 = M _ 0 = L

Yes = 2 No = 0 Add the points in the boxes above Record the railing on the first page nce in a regional flood control plan? Rating of Value If score is: $2.4 \pm H$ $1 \pm M$ $0 \pm L$

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Wetland name or number

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS	
Hydrologic Functions + Indicators that site functions to reduce flooding and stream crossion	
R 4.0. Does the site have the potential to reduce flooding and erosion?	
R 4.1. Characteristics of the overbank storage the wotland provides:	
Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the	
straam ar river channel (distance batwoon banks). Calculate the ratio: (average width of wotland)//éverage	
width of stroam botween banks).	
If the radio is more than 20	
If the ratio is 10-20 points = 6	
If the ratio is 520 points = 4	
If the ratio is 1-5 points # 2	
If the ratio is < 2 Points = 1	
R 4.2, Characteristics of plants that slow down water velocitics during floods: <i>Freet large woody debris as forest or</i>	
shrub. Choose the points appropriate for the best description (polygads need to have >90% cover at person	
height. Thase are <u>NOT. Connerdin</u> classec).	
Forest or shrub for >1/3 area OR emergent plants > 2/3 area	
Forest or shrub for > ¹ / ₁₀ area OR emergent plants > ³ / ₁₀ area	
Plants do not meet above critoria	
Total for R 4 Add the points in the boxes above	
Rating of Site Potential If score is. 12-16 # H 0.5 # L Record the rating on the.	rst page
R 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
R.S.1. is the stream or river adjacent to the wetland downcut?	
R 5.2. Does the up-gradiant water the include a UGA or incorporated area?	
R S.3. is the up-gradient stroam or river controlied by dams?	
Total for R.S Add the points in the boxes above	
Rating of Landscape Potential If score is: 3 = H or 2 = M 0 = L Accord the rating on the	list page
R 6.0. Are the hydrologic functions provided by the site valuable to society?	

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These questions apply to wetlands of all High along	HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	 H L.L. Structure of plant community: indicators are Cowardin classes and events weeks at a	Convertin plant classes in the weetand. Up to 10 patchear may be combined for each class to meet the threshold of X ac or more than 10% of the unit (if this smaller than 2.5 or Add the number of reminiments	Aquatic bed	Structures being a structure being a s	2 - The data where strutes have > 30% cover)	I structures points (1 to 1 to 1 to 2 to 2 to 2 to 2 to 2 to	y un une nos a rorestoa dates, check (f. 	that back cover 20% within the Forested polygon	the state of the s	Hour us types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wathord and new here and the second within the wetland.	Bormanently flooded or foundated	Z Soaronally flooded or inundated	 2 types present pointed	Permanently flowing stream or river in, or adjacent to, the workbard	——Seasonally flowing stream in, or adjacent to, the wetland	Lake Fringe wetland	 H 1.3 Stehenor of all	The state of plant spoctes	Different instructions of the accurate process in the westigned that cover at least 10 ft. ²	the species. Do not include Eurosian milliolit rood renormence must be size threshold and you do not have to name	If you counted: > 19 spacies	5 - 19 speedes	<5 spodes	H J.4. Interspection of habitate	uedae intom the diagrams balow whether intersportion among Cowardin plants dazses (described in H 1.1), or the dazses and unregetated arous (annicules open wetter or mutalles) is high moderate, jow, or none, <i>tf you</i> hove four or mare plant dazses or three dazses and open wetter, the retroin is owner him.			Moderate # 2 point	All three diagrams In this row In this row are High a sponts.	

Wetland name or number

H 15. Speedal habiter fortures:	
Ling-troi hollart fastures that are present in the workland. The number of chaode is the number of points. Lings, dowined, woody dushrs within the workland [> 4 in diameter and 6 ft long]. Sandings anary (b) + 4 in Mutin the workland Undorent banks are present for at laast 6.6 ft [2 m] and/or overhanging plaint extends at least 3.3 ft (1 m) over a stream (or dita) in, or contiguous with the workland, for at least 33 ft (10 m) subject (0 ft edge of the material thrut might be used by baswer or muskent for deming (> 30 degree where wood is exposed) alope) OR stope of the material thrut might be used by baswer or muskent for deming (> 30 degree where wood is exposed) alope) OR stope of the material thrut might be used by baswer or muskent for there that hare not yet weathered where wood is exposed) alope) OR stope of the material thrut might be used by baswer or muskent for deming (> 30 degree where wood is exposed) alope) OR stope of the material thrut might be used by baswer or muskent for the there there that hare a than 25% of the weather four an over y streature of area the stope basher cover least than 25% of the weather area in every streature of plaints [see H 1.1 for list of area that for H 1.1 for list of	Ч
ating of Site Potential If score is: <u>15-18 H</u> 7-14 = M = 0-6 = L Record the rother on the fi	
2.0. Does the landscape have the potential to support the habitat functions of the site? 2.1. Accessible habitar function only to have a support the habitat functions of the site?	allad sont
Calculate:	
Calculate: % undisturbed habitation + [[% moderate and low intensity land uses]/2] = 223 m/2 Undisturbed habitation -00 -00 -00 -00 1.3.4 -00 -00 -00 -00	
> 50% of 1 km Polygon is high intensity land uso $\frac{550\%}{550\%}$ of 1 km Polygon is high intensity $\frac{550\%}{510}$ of 1 km Polygon is high intensity but for H 2 that of Landscape Potential if score is: $46 \pm H$ $_{2.3} \pm M$ $< 1 \pm L$ Add the points in the bouse above -1 is the of Landscape Potential if score is: $46 \pm H$ $_{2.3} \pm M$ $< 1 \pm L$ Recetting for the house above -1 is	2
3.0. Is the habitat provided by the site valuable to society? .1. Dees the site provide habitat for conclementary is a society?	a bod y
that opplies to the vertice instance, specied in laws, regulations, or policies? Choose only the highest score that opplies to the vertice of policies of the factors. Site moets ANY of the following enteria: I had 30 entroper policies of the following enteria: I that 30 entroper of policy habitats within 100 m (see next page) I that 90 vertices and the full for Threatened or Enhyperent policy (any policy species) I is mapped as a lowed nor on individual WDEW phontry species I is a Westand of High Conservation Value as determined by the Ospatitment of Natural Resources I is a Westand of High Conservation Value as determined by the Ospatitment of Natural Resources I is shored for what are The in a unprovent habits at the in a lecal or regional comprohensive plan, in a Stechna Undate The fuller of numerication and any the local Stechna Lor 2 priority habitats (litted on nost page) within 100 m	
Jite does not meetany of the diportations Ing of Value # core is: _ 2=H _ L=M _ 0=L _ Record the rading on the first	st page

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WDFW Priority Habitats

Priority hubitms listed by WDFW (see complete descriptions of WDFW priority hubituts, and the coundae in which they can be found, in: Washington Departments of Fish and Wildlin, 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://www.sov.publications.foil.of.s./wdfw001.68.pdf or access the list from here:

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

- Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- Biodivorsity Areas and Corridors: Areas of indutat that are relatively important to various species of native fish and wildlig (Juli descriptions in WDFW PHS report).
- Old-growth,/Mahure forests: <u>Old-growth.wart of Caractale creat</u> Stands of at least 2 tree speeles, forming a multilayered canopy with occasional small openings; with at least 8 trees/cs (32 threas/11) > 32 in (31 cm) dbh or 200 years of age, <u>Abdunt Growth</u> - Stands with an energy dimeters exceeding 21 in (53 cm) dbh; crown cover may by least than 100%; docay, docadono, numbers of smags, and quantity of large downed matrial is gonorally least than that found in old-growth; 80-200 years old wost of the Casarde creet.
- Orogon White Oale: Woodiand stands of pure oak or oak/conflor associations where canopy coverage of the oak
 component is important (fuil descriptions in WDFW PHS reports, J.58 220 web link above).
- Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial consystems which mutually influence each other.
- Messide Prairies: Horbaceous, non-foreated plant communities that can elthor take the form of a dry prairie or a wot
 prairie (fuil descriptions in WDFW PHS reports, 164 see web link 200v3).
- Instream: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream flah and wildlife recources.
- Nearshore: Relatively undicturbed noarshore habitata. These include Coastal Nearshore, Opon Coast Nearshore, and
 Puget Sound Nearshore. (*full descriptions of habitats and the dofinition of relatively undisturbed are in WDFW report - see web link on provious page)*.
- Gravest A naturally occurring cavity, recease, void, or system of interconnected parages under the carth in solls, rock, lee, or other geological formations and is large enough to contain a human.
- ---- Cliffs: Greater than 25 ft (7.6 m) high and occurring bolow 5000 ft elevation.
- Tobus Homogenous areas of rock rubbin ranging in average size 0.5 6.5 ft (0.15 2.0 m), composed of basalt, andesite, find/or sodimentary rock, including riperp silder and mine tailings. May be associated with elifes
- L Snags and Logs: Trocs are considered stagg if they are dead or dying and exhibit sufficient deary characteristics to enable exvity exervation/use by wildlife. Priority angs have a character actomost height of > 20 in (54, cm) in western Washington and are> 5.6.7 (2 m) in height. Priority logs are> 1.2 in (30 cm) in diameter active largest end, and > 20 ft (6 m) long.

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

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Category Bt.1 -B 3 ;; ;; Gt i NOTE if you are uncertain about the extent of mosses in the understory, you may substitute that efterden by measuring the pH of the water that seeps into a hole dug at least 16 in doop. If the pH is less than 5.0 and the Does the wetland (or any part of the unit) most both the criteria for solls and vegetation in bogs? Use the key below, if you arswer YES you will still need to rate the wetland hazed on its functions. more or une turst 3.2 In or the soil profile? Yaz = Go to SC3.3 No = Ge to SC3.2 SC3.2.2 Door an area within the workband unit have organic soils, either parts or muck, that are fixed with the doop over bodrodd, or an importmosable handpen such as day or volcanic tesh, or that are fixed for on top of a lake or pool? SC3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or 5C 3.4. Is an anawarene of muck forecard (> 30% caver) with Stka spruce, subalpine fit, vector red cedar, vector help parts of the space of provession water with the parts of the part of the species) if the part of the parts of the part of the parts of theparts of the parts of the parts of the parts of the parts mowed grazsland. — The wettand has at laast two of the following features: tidal channels, depressions with open water, or Yes # Category II No # Category II SC 2.1. Hust the WA Department of Natural Resources updated their website to indude the list of Wardands of High Conservation Value? SC 2.2. Is the wethind ilsted on the WDNR database as a Wetland of High Conservation Value? SU 2.4. IS THO WOUND WITH A SOLVMAN THE AND A SUBJECT OF Yos = is a Catagory i bog No - Go to SC 3.4 SC3.3. Does an area with poats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% No = Not D WHCV Yos m Category 1 No - Ga to SC 1.2 — The wetland is relatively undisturbed (has no diking, ditching, filling, cuitivation, grazing, and has less than 10% cover of non-native plant species. (if non-native species are Sparting, see page 25) — At least & of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS Cheek off any articula that apply to the wetland. Circle the cateoory when the appropriate articula are mat. SC 1.0. Estimation wetlands SC 1.2, is the wetland unit at least 1 ac in size and mosts at least two of the following three conditions? Yes Cutogory I SC 2.3. is the wetland in a Section/Township/Range that contains a Natural Horitage wotland? Dees the wotland meet the following eriteria for Estuarine wetlands? plant species in Table 4 are present, the wetland is a beg. SC 2.0. Wotlands of High Conservation Value (WHCV) cover of plant species listed in Table 4? ---- The dominant water regime is tidal, Vogetated, and thoir website? pond? Wetland Type SC 3.0. 8ogs

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SC 4.0. Forested Wetlands	
Does the wetland have at least <u>1 contraleous nerro</u> of forest that meets one of these articrla for the WA Does the working based on R fullifie's forest as priority habitat? If you answer YES you will still need to rate the working based on R fullifie's forest at priority habitat? If you answer YES you will still need to rate - Old-growth forest iwst of Cascade creat): Stands of at least two troe sportes, forming a multi-layored arrowy with occastional small openhogs; with ar least throes/ne [20 troes/ha] that are at least 200 yours di arrow of diamtor at fromst height (dbh) of 32 in [81 cm) or marc. - Mature forest (west of the Cascade Creat): Stands whore the larget these are 0 200 years oil OR the species that make up the canopy have an average diamoter (dbh) exceeding 21 in [33 cm).	
Yes a Catagory 1 (No Not a forestal formation for this section SC 5.0. Wethinds in Constal Formation	Cat. 1
Doot the working meet allowing criteria of a wedand in a coastal lagoon? — The wedand lice in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or less frequently, node: — The lagoon in which the wedand is leasted contains ponded water that is saling or bindedsi 1,5.0.5 envi-	
uturing intex of the Year in at least a portion of the layoon (needyna be measured near the bottom) SC 5.1. Does the wordand meet all of the following three conditions?	
 The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cown of aggressive, opportunistic plant species (see list of species on p. 100). A fleast K of the landward edge of the wetland has a 100 ft buffer of zhrub, forest, or un-grazed or un- mowed graziand. The wetland is larger than ³/₄₀, as (2350 ft²) 	E St C
SC 6.0. Interdianal Workmande	
15 the wetand wounds 15 the wetand wate of the 1289 line (also called the Western Boundary of Upland Ownership or WBUO)? If you answer yes you will still need to rate the wetand based on its habitat functions. In practical terms that means the following geographic areas: - Our Boach Peninsula: Landa west of SN 103 - Gavland Mennenner in Jours west of SN 103	
- Occan Shares-Copolis: Lands west of Sh115 and SR 109 Yes - Go to SC 6.1 (No) not an Intervienel wethand for rating	Catl
SC 6.1. It the wetland 1 as 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]? SC 6.2. It the wetland 1 ac or larger, or is it in a mecale of wetland: that is 1 ac or hereer?	= 55
Yes = Catapory II No - Go to SC 6.3. Is the unit between 0.1 and 1 ac? SC 6.3. Is the unit between 0.1 and 1 ac? Yes = Cutegory II No = Category IV	Cer III
Category of wetland based on Spactal Characteristics	≥ 8
lf you answorod No for all types, ontor "Not Applicable" on Summary Form	Z ₹

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Wetland name or number

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10/5/22 2 Trained by Ecology کرده می ماه ماد ماد الماده الم Date of site visit: 21121 OVERALL WETLAND CATEGORY W (based on functions K or special characteristics Wetland has multiple HGM classes? Y V Score for each function based on three rathings (order of ratings is not important) NOTE: Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map **RATING SUMMARY – Western Washington** Name of wetland (or ID #): 4/193 NUU - Em 1. Category of wetland based on FUNCTIONS HGM Class used for rating NOD

					TOTAL	ĽŅ.	
0,	Habitat	priate ratipas	(T)W	M (L)	M) L	1-	
score = 16 - 1 score = 9 - 15	lydrologic	Girble the appro	H J (M)	H (1) W	H CL W	t	
tegory III – Total tegory IV – Total	Improving I	Ċ	H Y M)	≖ G) ¥	M L H	IЛ	
\$ 8 _	FUNCTION		Site Potential F	Landscape Potential F	Value F	Score Based on Rutings	

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	-
Bog	H
Mature Forest	I
Old Growth Forest	1
Coastal Lagoon	п і
Interdunal	лу ш п т
None of the above	1

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Maps and figures required to answer questions correctly for Western Washington

<u>Depressional Wetlands</u>

	1.2.2	1	
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	I V BIRMAN UNCOUNTS IN TRUCK	
Cowardin plant classes	D13. H1.1. H1.4	Γ
Hydroperlods	014 H12	Т
Location of outlet (can be added to map of hydroperiods)	D1.1.0.4.1	Τ
Boundary of area within 150 ft of the wetland <i>lean be added to another floure</i> !	D22.052	T
Map of the contributing basin	D43 D53	Ι
1 km Polygon: Area that extends 1 km from entire wetland edge - Including	H21.H22.H23	T
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D31D32	Ţ
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D3.3	Т
		1

Riverine Wetlands

Map off. Particle and any data of the second website and we have a second s	To answer questions:	Figure #
Cowardin plant classes	H11 H14	
Hydroperiods		
Ponded depressions	D 1 1	
Boundary of aroa within 150 ft of the wetland (can be added to another flaure)	177 V	
Plant cover of trees, shrubs, and herbaceous plants	R17 R47	ĺ
Width of unit vs. width of stream (can be added to another floure)	R4.1	
Map of the contributing basin	R 2.2 R 2 2 R 5 2	
1 km Polygon: Area that extends 1 km from entire wetland edge - Including	H21. H22 H23	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R3.2 R3.3	

Lake Fringe Wetlands

	I O ADDANCE CONCERSION I FIGURE A	L11, L4,1, H11, H1.4	1112	to another flaure) 1.2.2	lge - including H 2.1, H 2.2, H 2.3		cology wobsite) L3.1, L3.2	d (from web) L 3.3
Map of the reserves several sev		-owargin piant classes	Plant cover of trees, shrubs, and herbaccous plants	Soundary of area within 150 ft of the wetland (can be added to	I km Polygon: Area that extends 1 km from entire wetland odg	polygons for accessible habitat and undisturbed habitat	screen capture of map of 303(d) listed waters in basin (from Ec	screen capture of list of TMDis for WRIA in which unit is found

Slope Wetlands

Map of: Structure - A control structure to the structure of the structure	To answer griestions:	Cimits #
Cowardin plant classes		
Hydroperiods	E 4 3	
Plant cover of dense trees, shrubs, and herbacoous plants	513	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	\$41	
(can be added to flaure above)	4	
Boundary of 150 ft buffer (can be added to another figure)	\$21.551	
1 km Polygon: Area that extends 1 km from entire wetland edge - Including	H21, H22, H23	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	53.1.53.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	533	
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HGM Classification of Wetlands in Western Washington

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

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

^ NO _pc to 2 Errfs the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

lf 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.

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.

ND روه در 3 Tryour 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?
____fle wetland and the following criteria?
___fle 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;
____fleast 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)

 Does the entire wetland unit meet all of the following criteria? The units of shore following mention of the province of the following for the second second

_____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**.

YES - The wetland class is Slope

NO Ago to 5

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 down).

deep). Does the entire wetiand unit **meet all** of the following criteria?

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.

stream or river, The overbank flooding occurs at least once every 2 years.

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The -logo to 6 NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding 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 ides. 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 sorred.

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; classlfy the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit	HGM class to
Deing rated	use In racing
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Sait Water Tidal Fringe and any other	Treat as
ciass of freshwater wetland	ESTUARINE

Jf 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.

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DEFRESSIONAL AND FLAIS WELLAND Water Quality functions - Indicators that the site functions to Improve water quality	
0 1.0. Does the site have the potential to improve water quality?	
0 1.1. <u>Christeristics of surface water outlows from the wotland</u> : Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).	
Wetland has an intermittentity flowing stream er ditch, OR highly constricted permanently flowing out C C C C C C C C C C C C C C C C C C C	r
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points *	1
01.2. The soll 2 in bolow the surface for duff layer) is true day or true organic (use NRCS dofinitions). Yes = 4 No = 0	6
0 1.3. <u>Chitratruitities and distribution of portistrent plants (E</u> mergent, Scrub-shrub, and/or Forested Cowardin classed): Wetland has portistent, unstrated, plants > 55% of area	
Wetland has porsistent, ungrazed, plants > % of area	1
Wetland has persistent, ungrazed plants > ¹ /1 ₅ of area Wetland has persistent, ungrazed plants < ¹ / ₁₀ of area	۵
D 1.4. <u>Characteristics of sensoral spuding or inundation</u> ; This is the area that is ponded for at least 2 months. See description in manual.	Ţ
Area saasonally ponded Is > 1/2 total area of wetland	
Area soasonally ponded Is > X total area of wetland Area seasonally ponded Is < X total area of wetland	г-
Total for D 1 Add the points in the boxes above	_
Rading of Site Potential If score is: 12-16 = H // 6-11 = M 0-5 = L Record the rating on the first page]

1

D 2.0. Does the landscape have the potential to support the water quality function of the	tte?	
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No(=0)	
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yess = 1 No/6 0	
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes a 1 Nord	0
D 2.4. Are there other sources of pollutants coming into the wedand that are not listed in question:	02.1-0237) {
Source	Yes # 1 No f0	- -
Total for D 2 Add Afre points in	the boxes above	C
Rating of Landscope Potential If score is: 3 or 4 = H 1 or 2 = M 1 0 = L Recor	f the rating on the first p	Dage

	0	-	0		
County Provider States (County)	vater that is on the Yes # 1 Nor 0	Yds=1 No=0	cor quality (answor YES Yes = 2 No(= 0	s in the boxes above	ting on the first page
e valuable to society?	stream, river, lake, or marine	ource is on the 303(d) list?	important for maintaining wo	Add the poin	L Record the ra
ovement provided by the slt	directly (i.e., within 1 ml) to a	ub-basin where an aquatic res	In a watershed or local plan as sin in which the unit is found)?		24=H /1=W 0
D 3.0. Is the water quality impr	D 3.1. Does the wetland discharge 303(d) list?	D 3.2. Is the wetland in a basin or :	D 3.3. Has the site been identified If there is a TMDL for the ba	Tetal for D 3	Rating of Value If score is:

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Hydrologic Functions - Indicators that the site functions to reduce flooding and stream decendarie	Ę
D 4.0. Does the site have the potential to reduce flooding and erosion?	10001
D 4.1. <u>Characteristics of surface water outflows from the wetland:</u> Wetland is a depression or flat depression with no surface water leaving it (no outlet) Wetland has an intermittenth flowing stream or diteh, OR highly constricted permanently flowing outlet = 4 Wetland is an intermission (QUESTION 7 on key), whose outlet is a permanently flowing drift. Pooline = 1 Wetland has an unconstricted, or fightly constricted, surface outlet is a permanently flowing and no points = 1 Wetland has an unconstricted or fightly constricted, surface outlet is a permanently flowing and no points = 1	6
D 4.2. Depth of stormer during wet periods: Estimate the height of pening above the bettom of the outlet. For we dands with no outlet, measure from the surface of permanent water or if dry, the deepest part. The wedands with no outlet, measure from the surface of permanent water or if dry, the deepest part. The wedands Marks of ponding there above the surface or bottom of outlet. The wedand surface of permanent water or if dry, the deepest part. The wedands and the active above the surface or bottom of outlet. The wedand surface of the auther of outlet applies = 3. Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet the water and bottom of outlet applies and the wedand is a "headwater" wethind. Wethind is a "headwater" wethind the surface of the trape water that water applies and the wethind the surface that trap water that water applies and the wethind the surface of the surface surface of the surface sur	©
D 4.3. <u>Contribution of the wetland to storage.</u> In the watershed; Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the watershed. Estimate the ratio of the area of upstream basin The area of the basin is less than 10 times the area of the unit. The area of the basin is 10 to 100 times the area of the unit. The area of the basin is not 200 times the area of the unit.	IN
Total for D 4 Add the points in the boxes above	p
Rating of Site Potential if zone is: <u>12-16 + 12 6-11 + M</u> 0-5 = L Record the rating on the <i>f</i>	first page
ω 2.5.0. Looss the wardscape frave the potential to support hydrologic functions of the site? $\gamma_{\rm CS} = 0.5$	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/	6
0 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential) at 25.0 × 1 residence/ac, urban, commercial, agriculture, etc.)?	0
lotal for D5 Add the potential If score is3=H1 or 2=M <u>0=L</u> Record the potential or the function or the full	list 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 flooting problems. Choose the description that best matches conditions around the write in the write is a landscape, that is a landscape, that is a landscape with the second problems. Choose the description that best matches conditions around the write is the weather and captures unbase water that would obtomy the description that has a landscape of the description that has the weather and the write is a landscape of the description that the write is a landscape of the description that the description that a landscape of the description that the description that the description that a landscape of the description that a landscape of the description that the description of t	Q
0.6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plant.	0
otal far D 6 Add the points in the boxes above	b
taching of Value if score is: 24 = H I a M V 0=L Record the roting on the fit	irst page
Wedand Rating System for Western WA. 2014 Update Rating Form - Effective January 1, 2015 6 (1 2) Co. C. S. H. D. W. F. C. J. U. F. C. J. C.	* 100 march 100

restricted outlet - which thur drains to regional solar water posed

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RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS	
Water Quality Functions + Indicators that the site functions to improve water quality	
R 1.0. Does the site have the potential to improve water quality?	
8 1.1. Area of surface depressions within the Riverine wetland that can trap sodiments during a flooding event:	
Depressions cover > ³ / ₄ area of wetland	
Depressions cover > ½ area of wotland	
Depressions present but cover < X area of wetland	
No depressions present	
R 1.2. Structure of plants in the wetland (areas with >90% covor at person height, not Cowardin classes)	
Trees or shrubs > ² / ₃ area of the wetland	
Trees or shrubs > ¹ / ₃ area of the wetland	
Herbaceous plants (> 6 In high) > $^{2}/_{3}$ area of the wetland	
Herbaccous plants (> 6 in high) > ¹ / ₂ , area of the wetland	
Trees, shrubs, and unstrated herbaceous $<^{1}/_{2}$ area of the wotland points = 0	
Total for R 1 Add the points in the bexes above	
Rating of She Potential # score ic. 12-16 = H _ 6-11 = M _ 0-5 = L	he first page
R 2.0. Does the landscape have the potential to support the water gdality function of the site?	
R 2.1. Is the wetland within an incorporated city or within its UGA? $/$	
R 2.2, Does the contributing basin to the wetland include a UGA or incorporated area? Yes # 1 No # 0	
R 2.3. Does at least 10% of the contributing bash contain tilled fields, pastures, or forests that have been clearcut	

	3.0. Is the water quality improvement provided by the site valuable to society?	œ
he first page	ting of Landscape Potential (Lécore is: 3-6 = H1 or 2 = M0 = L Record the ration on the fi	8
	tal for R 2 Add the points in the boxes above	ĥ
	2.5 Are thore other sources of pollutants confing into the wetland that are not listed in questions R 2.1-R 2.4 Other sources Yes = 1 No = 0	<u>ه</u>
	1.4. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	œ
	.3. Does at least 10% of the contributing basin contain tjued fields, pactures, or foreest that have been clearcat within the last 5 years? Yes = 1 . No ± 0	a l
	2.2. Does the contributing basin to the wetland include a UGA of incorporated area? Yes # 1 No # 0	₩
	1.1. Is the wetland within an incorporated city or within its UGA?	~
	co, poes dia tanacape liave dia potential to sepont any wave years, internal of the sec.	Ċ

				t page
ר סה פירוט ער איז	utrients, toxics, or pathogens? Yes = 1 No = 0	stant for maintaining water quality? {answer b}	Add the points in the boxes above	Record the rating on the firs
iver that is on the 303(d) list a	river that has TMDL limits for r	ratershed or local plan as Impo inoge in which the unit is found		1#M0=L
the wetland along a stream or I	thewetland along a stream or I	as the site been identified in a v ES if there is a TMDL for the dra	r R 3	of Value If score is: 2-4 = H
R3.1.15	R 3.2. IS	R3.2.H	Total fo	Rating c

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RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS Huddebook Excertions - Indiancer than the dimension of continue and stream mericine
R 4.0. Does the site have the potential to reduce flooding and erosion?
R 4.1. Characteristics of the overbank storage the wetland provides:
Estimate the average width of the wedand perpendicular to the direction of the flow and the width of the
stroam of fiver channel (distance between banks), wateridue une ravio, raveridue micuri of weaving) average width of stream between banks).
If the ratio is more than 20 points = 9
If the ratio is 10–20 points # 6
if the ratio is 5-<10 points = 4
if the ratio is 1-S points * 2
If the ratio is < 1 points = 1
R 4.2. Characteristics of plants that slow down water velocitles during floods. Treat large woody debris as forest or shrub. Choose the points apsropriate for the best description (polygors need to have >50% cover at person
holght. These are <u>NOT Cowardin</u> classes).
Forest or shrub for >1/5 area OR emergent plants > 2/5 area
Forest or shrub for $^{3}/_{10}$ area OR emergent plants $^{3}/_{10}$ area
Plants do net meet above criteria
Total for R 4 Add the points in the boxes above
Rating of Site Potential If score is: 12-16 = H _ 6-11 = M _ 0-5 = L Record the rating on the first page
R 5.0. Does the landscape have the potential to support the hydrologic functions of the site?
R.5.1. Is the stream or river adjacent to the wetland downcut? Yes ± 0 No ± 1
R.S.Z. Does the up-gradient water-thed include a UGA or incorporated area?
R.S.J. is the up-gradient stream or river controlled by dams?
Total for R.5 Add the points in the boxes above
Rating of Landscape Potential If score is3 = H1 or 2 = M0 = L Record the rating on the first page
R 6.0. Are the hydrologic functions provided by the site valuable to society?
R.G.1. Distance to the nearest areas downstream that have flooding problems?
Choose the description that acst jits the site. The sub-hasin immediately down-scridlent of the wetland has flooding problems that result in damage to
human or natural resources (e.g., houses or salmon rodds) points = 2
Surface flooding problems are in a sub-bacin farther down-gradient No flooding problems anywhere downstream
R.6.2. Has the site been identified as important for flood storage or flood convoyance in a regional flood control plan?
Yes a No # O
Total for R 6 Add the points in the baxes above
Rating of Value if score is: 2-4 # H _ 1 # M _ 0 # L

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	0		-	0
apply to wetlands of all MGM dasses. Unctions to provide important habitat • habitat?	Wordin dosses and strate within the Forceted lease. Check the pottches may be compiled for each lease to meet the threshold lier than 2.5 e.c. Add the number of structures checked. 3 structures points = 4 5 structures points = 2 5 structures and the structures of the structure of the structures of the structure o	s) present within the wetland. The water regime has to cover (see text for descriptions of hydroperiods). 4 or more types present: points = 3 3 types present: points = 1 3 type present: points = 0 0, the wetland 0, the wetland 2 points 2 points	d that cover at least 10 ft ² . Tabled to most the size threshold and you do not have to nome ced canarygress, purple loosestrife, Canadlan thistle points = 2 points = 0	perden among Cowardin plants classes (described in H.1.1), or ppen water or muditars) is high, moderato, low, or nono. <i>If you</i> and open water, the retirg is always high. Moderate * 2 points the Moderate * 2 points
These questions HABITAT FUNCTIONS - Indicators that site f H 1.0. Does the site have the potential to provide	H. 1.1. Structure of anti community indicators are Covardin labit distrsc in the wethand. Up to 10 of % ac ar more than 10% of the unit if it is smaller aquatic bad Aquatic bad Aquatic bad Covarden for the structure thave > 30% for Forested Carcus where trees have > 30% for if the unit is a forested carcus thas 3 out of 5 archoid for that each covar 20% within the Forested Carcus 20% within the Forested Carcus and Structure that a structure that are structure to a	H 1.2. Hydroperiods H 1.2. Hydroperiods more than 10% of the wetland or % acto count Permanently flooded or hundated Zestonally flooded or hundated Sestonally flooded or hundated Sestonally flowing stream or river in, or Lake Fringe wetland Freshwater tidal wetland	H.1.3. Rehness of plant species. Count the number of plant species can be cold Different patches of the same species: can be cold the species. Do not include Eurasian miljoll, re if you counted: - 13 species < - 5 species.	H 14. Interspersion of habitats Dedde from the diagrams below whether interspectation to diagrams below whether interspectation aroos (can include or have glour or more plant classes or three classes or three classes or three diagrams low and light three diagrams in this row are too and the sponta

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Ê	e <u>t †</u> 1 on the first page				3	n the first page		rgterri	
the number of points. h entends at least 3.3 ft (1 entends at least 3.3 ft (1 entends (2 30 degree our not yet weathered in areas that are ft (see H 1.1 for list of ht (see H 1.1 for list of	points in the baxes abov Record the ratin	ia site?	urses)/2]	uses)/2] = = 23 %	0 points e(-2 points e1	ooints in the boxes above Record the rating (se only the highest score	the state or federal list withural Resources hensive plan, in points	Darand the second
The number of checks is diameter and 6 ft long, for overhading plants. or overhading at 6 at and, for at least 33 ft (1 and, for at least for th the shrubs or trees that h the shrubs of the shrub at the streng by emphibians in every stratum of plar	Add the	to bitat functions of th	tland unit). a and low intonsity land	s and low intensity land	77	<pre>/ Add the p / <1 = L</pre>	ations, or policies? <i>Choc</i>	ago) (any plant or animal on (any plant or animal or psecies by the Department of h by the Department of h ocal or regional compred 0 m	
scont in the wortland. J hin the wortland (> 4 in the wortland the wortland is the second to the wortland the second is the word is workly are present (a activity are present (a defined is area) and of the wortland area)	H7-14= M	itial to support the h	t that directly abuts we tat - + [[% moderate	ound the wetland. Lat+ [[% moderate Patches Atches Atches	land use	4-6 = H4	aluable to society? s valued in laws, regula	t thin 100 m (see next p or Endangered species Minduai WDFW priority 1 v2iue as determined rath habitat site in a le rated plan n next page) within 100 over	
Returns: that are for an features that are pro- med, woody debris within age (dbh > 4 ln) within age (dbh > 4 ln) within age (dbh > 4 ln) within age of free materia an for a freent beaver ad is expassed ad is expassed by a reasonably inund, an so cover less than 35 ants cover less than 35	al If score is: 15-18 -	scape have the poter	at (include <i>only habita</i> % undisturbed habi e habitat is: t km Polygon Polygon Sygen	oltat in 1 km Polygon ar % undisturbed hab! % undisturbed hab! oltat > 50% of Polygon altat 10-50% and > 3 pa sitat < 10% of 1 km Poly	ty in 1 km Polygon: If olygon is high intensity olygon is high intensity	otential If score is:	provided by the site v wide habitat for specie	re werdand being roted. If the following critedia nore priority habitars wi abitat for Throatened (abitat for Throatened (abitat for an ine abitat for an ine ority habitat (jitted or ority habitat (jitted or	ak: 2≊H 1⁄2=N
H 15. Special Jushtar 1 Check the habit Internet in anyone ware Standing at wore same Mere wore Mere wore internet in the second matche of the internet of the	Total for H 1 Ruting of Site Potentic	H 2.0. Does the land	H 2.1. Accessible habit Calculate: If total accessibl > ¹ / ₃ (33.3%) of 1 km 20-33% of 1 km 10-19% of 1 km	H Z.Z. Undisturbed hat Calculate: Undisturbed hat Undisturbed hat Undisturbed hat	H 2.3. Land use intensit > 50% of 1 km Pr s 50% of 1 km Pr	Total for H 2 Rating of Landscape Po	H 3.0, Is the habitat p H 3.1. Does the site pre	that applies to the Site moets AW of the moets AW of the the same the same the same shoreline in Site and and Site adoes not mo	Rating of Value If score

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WDFW Priority Habitats

Priority.Inditats.listed by WDRW (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. Type hitty://wdfw.wa.gov/tonsbrandstol/05/06/wdfw000.65.pdf or access the list from here: http://wdfw.wa.gov/tonsbrandstol/hdf.kt.)

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).
- Blodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlie (full descriptions in WDFW PHS report). T
- Herbaccous Balds: Variable size patches of grass and forbs on shallow solls over bodrock 1
- 014-growth/Mature forests: <u>014-growth west of Castande crest</u> Stands of at loast 2 tree species, forming a multi-layered canopy with occasional small openings; with at loast 8 trees/as (20 trees/ha) > 32 in (31 cm) dab or > 200 stars of age, <u>dature forests Stands</u> with average damenter exceeding 21 in (55 cm) dab; crown cover muy be loss than 100%; decay, <u>decandence</u>, numbers of snaps, and quantity of large downed material is genorally less than that found in old-growth; 80-200 years old west of the Cascade crest. ł
- Oregon White Oak: Woodiand stands of pure oak or oak/conller associations where canopy coverage of the oak component is important (fuil descriptions in WDFW PHS report p. 158 see web link above). T
- Riparian: The area adjacent to aquatle systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- Weststide Prairless: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*Juli descriptions in WDFW PHS report p.* 161 see web *link above*). l
- 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. I
- Nearshore: Rolatively 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 WDEW report* see web liak on previous page). I
- Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, lee, or other geological formations and is large enough to contain a human. 1
- Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- Talpas Homogenous areas of rock rubble runging in average size 0.5 6.5 ft [0.15 2.0 m], composed of basalt, andesite, apd/or sedimentary rock, including riprap sticles and mine milings. May be associated with cliffs.
- Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to which each exampter of the state of the sta

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

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CALEGURIZATION BASED ON SPECIAL CHARACTERISTICS	
tland Type	Category
ck off any criteria that apply to the wetland. Orde the category when the appropriate criteria are met.	
.0. Estuarine wetlands	
Does the wegang meet the ionowing united ion extenting weakings. — The dominant water regime is tidal,	
- Vogetated, and	
 Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Prosorve, State Park or Educational, Environmental, or Scientific Reserve designed under WAC 332-301517 Vesa Category 1 No - 660 is SC1.2 	Cat. I
2. Is the wethand unit at least 1 as in size and meets at least two of the following three conditions? — The wethand is relatively undisturbed (has no diking, ditching, diliking, cultivation, grazing, and has less than 10% cover of non-tarker plant species. (It is non-tarker appedies are 3pecifients, grazing, are 225) — At heart & the and wate deso of the wethand has a 100 ft buffer of simub. Foresi, or ungrazed or un-	ŧ
mowed grazdand. — Tho wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	Gt ::
20. Wetlands of High Conservation Value (WHCV) J. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?	Cat, I
.2. Is the wetland listed on the WDNR database as a Wotland of High Conservation Value?	
.3. It the wetland In a Section/Township/Range that contains a Natural Heritzge wetland? <u>https://www.l.dnr.wn.gov/hb//refdeak/datarceard/andc.off</u> Yes-Contact WNHP/WDNR and ge to SC2.4 No. P Not a WHCV	
.4. Has WDNR Identified the wetland within the S/T/R as a Wetland of High Conservation V2Her and listed it on their website?	
1.0. Bogs Does the wetland (or any part of the unit) meet both the enteria for soils and vegetation in bogs? <i>Use the key</i> below. If your answer YES you will still need to rate the wetland backed on its functions. Does an area within the wethat unit have organic soil horizons, either pacts or mucks, that compass 16 in or more of the first 32 in of the soil profile? Nos – Go to SC 3.3	
(2. Does an arcs within the workand unit have organic solid; either pears or muck; that are less than Ju in doep over bedrock, or an impermuable hardpan such as clay or volcanic azh, or that are floating on top of a lake or vvv = contact or an impermuable hardpan such as clay or volcanic azh, or that are floating on top of a lake or vvv = contact or an impermuable.	
pond? .3. Does an area with pears or mucks have more than 70% cover of mostes at ground level, AND at loads a 30% cover of junt species listed in Table 4? Yes = is a Caregory I bog No = Go SC SC 3.4 NOTE if you are not encirclent bound to extend of mostes in the understory, you may attend to that orther on by NOTE if you are not encirclent bout the extent of mostes in the understory, you may attend to that orther on by	
moasuring 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.	Gt. 1
3.4. Is an area with peats or mucks (orested (> 30% cover) with Sitka spruce, subalpine fir, worstern red ceckr, worstern hemiods, lodgopole plne, quaking aspon, Engelmann spruce, or worstern white plne, AND any of the species (for combination of species) listed in Table 4 provide more than 30% of the cover upder the subopy logg / No = 15 anopy?	

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SC 4.0. Forested Wetlands Does the wetland have at least <u>1.cont[pueus acr</u> of forest that meets one of these criteria for the WA	
Department of Fish and Wildlife's forests as priority habitate? If you answer YES you will still need to rate the wethand based on his functions.	
 — Old-growth forests (west of Cascade erest): Stands of at least two troco species, forming a multi-layered canopy with occastational small openings; with the castas it treeds (20 trocs/ho) that are at least 200 years of are OR have a character the horder helest (this) at 20 in (27 and a character); 	
 Muture forests (west of the careado Creatly Stands where the largest threes are 80-200 years old OR the species that make up the canopy have an average diameter/dtbk) exceeding 21 in (53 cm). 	
Yes = Category / No = Not a forested wetland for this section	Cat.
SC 5.0. Wetlands in Coastal Lagoons	
Does the workand meet all of the following criteria of a wetland in a coastal lagoon?	
mus wetwite new in a uppression adjacent to manne 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 pended water that is sailne or brackish (> 0.5 ppt)	į
during meat of the year in at least a portion of the lagoon (needpro by meetured near the bottom) Yes - Go to SC 5.1 // No + Not a weband in a coastal logoon	5
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	ŧ
when zero works of aggressive, upper unitate plant species (see just of species on p. 100). At least % of the landward ories of the warland has a 100 ft huffer of shuth forest or us corrected at us	- - -
mowed grassland.	
The wetland is larger than $^{2}/_{50}$ ac (4350 ft ²)	
Yes = Category I No = Category I	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Westorn Boundary of Upland Ownership or WBUO)? If	
you answer yes you win som need to rate and wationa based on its napitat junctions. In practical terms that means the following concernatic arcase	
Long Boach Peninsula: Lands west of SR 103	
Grayland-Westport: Lands west of SR 105	- Cet
 Ocean Shores-Copalis: Lands west of SR 115 and SR 109 Yes - 60 to SC 6.1 No April 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	Cat. II
for the three aspects of function)? Yes = Category 1 No - Go to SC 6.2	
oc out to the weaking A do of ballent of the tent of metanes that is used of larger? Yes a Category I No - Go to SC 6.3	Gt ∥
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?	
Ycs = Category III No = Category IV	Srt ⊵ Crt
Category of wetland based on Special Characteriztics If you answered No for all types, enter "Not Applicable" on Summary Form	42

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Wetland name or number

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

OVERALL WETLAND CATEGORY

Category of wetland based on FUNCTIONS Category 1- Total serve - 23 - 37

								TOTAL	Ũ
	- 22	- 19	15	Habitat	propriate ratings	M H)∡ ∓	H (W)	ť
1 201 C - 20 C - 10	al score = 20 -	tal score = 16	tal score ≖ 9 •	Hydrologic	Greiethe ap	- M H	H (M) L	н м С	V
and on you want	ategory II – Tot	ategory III – To	ategory IV – To	Improving Water Quality	6	H LAV L	н (Уу г	нÇMar)-(
	5)	Ĭ	FUNCTION		Site Potential	Landscape Potential	Value	Score Based on Ratines

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	п т
Wetland of High Conservation Value	r
Bog	I
Mature Forest	I
Old Growth Forest	Г
Coastal Lagoon	II I
Interdunal	уг ш п I
None of the above	2

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Wetland name or number

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands Map of:

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		-
Cowardin plant classes	D 1.3, H 1.1, H 1.4	r
Hydroperlods	D1.4, H 1.2	r
Location of outlet (can be added to map of hydroperiods)	D1.1, D4.1	1
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	τ
Map of the contributing basin	D4.3, D5.3	T
1 km Polygon: Area that extends 1 km from ontiro wetland edge - Including	H2.1, H2.2, H2.3	1
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D3.1, D3.2	T
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D3.3	T
		1

Riverine Wetlands

Wep of:	To answor questions:	Figure #
CowardIn plant classes	H 11, H 1.4	
Hydroperiods	H12	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another flaure)	R 2.4	
Plant cover of trees, shrubs, and herbaccous plants	R1,2, R4,2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H Z.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R3.2, R3.3	

Lake Fringe Wetlands

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

Map off	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	N
Plant cover of trees, shrubs, and herbacoous plants	L12	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L3.1, L3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	1.3,3	

Slope Wetlands

Map of the second s	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	51.3	
Plant cover of donse, rigid trees, shrubs, and herbacoous plants	S4.1	
(can be added to flaure above)		
Boundary of 150 ft buffer (can be added to another figure)	5 2.1, 5 5.1	
1 km Polygon: Area that extends 1 km from entire wetland odge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat	•	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	\$3.1, 53.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	53.3	
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<i>,</i> ~	•	
and the second second	number	
	name or	
Y = 1 = 1 = 1	wenand	
		Wetland name or number

HGM Classification of Wetlands in Western Washington

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

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

1.1 is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES - the wetland class is Tidal Fringe - go to 1.1 NO}-go to 2

lf 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 YES - Freshwater Tidal Fringe NO - Saltwater Tidal Fringe (Estuarine) score functions for estuarine wetlands.

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. N

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

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; Does the entire wetland unit meet all of the following criteria? Ī

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

YES – The wetland class is Lake Fringe (Lacustrine Fringe) Does the entire wetland unit meet all of the following criteria? NO/- go to 4

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.

YES - The wetland class is Slope NO ,- go to 5 -VOTE. 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).

Does the entire wetland unit meet all of the following criteria? ທ່

____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.

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-NOTE: The Riverine unit can contain depressions that are filled with water when the river is not YES - The wetland class is Riverine NO $\frac{1}{2}$ go to 6 flooding

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

NO - go to 7

YES The wetland class is Depressional

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 Is the entire wetland unit located in a very flat theat with no obvious depression and no overbank outlet 2.

NO – go to 8

YES - The wetland class is Depressional

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 stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small Your wetland unit seems to be difficult to classify and probably contains several different HGM wettand unit being scored. ŵ

NOTE: Use this trible 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	Depressional
within boundary of depression	
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	Treat as
class of freshwater wetland	ESTUARINE

lf 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.

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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 wedand that are not listed in questions D 2.1-D 2.37	•
Source Yes = 1 No # 0	С
Total for D 2 Add the points in the baxes above	2

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

Rating of Landscape Potential If score is. 3 or 4 \pm H $\frac{1}{2}$ I or 2 \pm M $_{0}$ = L Record the rating on the first page

	arine water that is on the	st? Yes 1 No = 0 1	Ing water quality (enswer YES 0	o points in the boxes above	the rating on the first page
3.0. Is the water quality improvement provided by the site valuable to sociesy	3.1. Does the wetland discharge directly (i.e., within 1 ml) to a stream, river, lake, or n 303(d) ilar?	3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) i	3.3. Has the site been identified in a watershed or local plan as important for maintair if there is a TMDL for the basin in which the unit is found??	ttal for D 3 Add tt	oting of Value of score is: 2-4 = H 1/1 = M 0 = L Recore

Record the rating on th	
2-4=H1=M 0=L	
if score is:	
Rating of Value	

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Wetland name or number _____

DEPRESSIONAL AND FLATS WETLANDS	N (900 N / 100 N
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradat	io.
D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water, outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland is an intermittently flowing stream or dicto, OR highly constricted permanently flowing outletpoints = 2 Wetland is a flat depression (OUESTON) on keyly, whose outlet is a permanently flowing duct points = 1 Wetland is a flat depression (OUESTON) or keyly, whose outlet is a permanently flowing then points = 1 Wetland is a flat depression (OUESTON) or keyly, whose outlet is a permanently flowing then points = 1 Wetland is a flat depression (OUESTON).	5
D 4.2. <u>Dorthin of storage, during were periods</u> : Estimate the height of ponding above the sectmentor proving points = 0 with no outlet, measure from the surface of permanent water or if dry, the despect part. Marks of ponding zure 3 ft or more above the surface or bottom of outlet Marks of ponding zure 3 ft or an envice above the surface or bottom of outlet Marks are at least of it to < 3 ft from surface or bottom of outlet Darks of ponding it is a fixed s it then surface or bottom of outlet Marks are at least of it to < 3 ft from surface or bottom of outlet Marks are at least state < 2 ft from surface or bottom of outlet Marks are at least state < 2 ft from surface or bottom of outlet Methand is a "headwarer" wethend Methand is flat but has small depressions on the surface that trap water Marks of ponding (sing)	<i>a</i>
D 4.3. <u>Contribution of the wethend to storate in the wasterchool</u> : 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 The area of the basin is less than 100 times the area of the unit The area of the basin is more than 100 times the area of the unit The area of the basin is more than 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire wetland is in the Flats class	N/
Total for D 4 Add the points in the boxes above	
Rating of Site Potential If score is: 12-16 = H 2 6.11 = M 0-5 = L Record the rating on the	first page
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	2012 A. 22 - 24
D 5.2. Is >10% of the area within 150 if of the wetland in land uses that generate exercis runoff? Yes(a 1,No = 0	
D 5.3. Is more than 25% of the contributing basin of the wothand covered with intensive human land uses (residentiarity 3.1 residence/se, wham, commercial, agriculture, etc.)?	0
Total for D.5 Add the points in the boxes above	4
Rating of Landscape Potential If score is:3 = H1 of 2 = M0 = L0 = LRecord the rating on the	first page
D 6.0. Are the hydrologic functions provided by the site valuable to society? Second and the second s	
D 6.1. The util is in a limit stan that has fload the archivents <i>thoses the description that best matches conditions around</i> the wetland and the ling rated. Do not add points. <u>Shoses the highest score if none than one condition is met</u> The wetland capture studies whether that would obtanvise flow down-gradient into areas where flooding has damaged human or natural resources (o.g., houses or raimon redds):	
 Invariant occurs in a sub-usin tract is immediately down-gradient of unit, points = 2 Surface floating from groundwator is a sub-basin farther down-gradient. Floading from groundwator is an issue in the sub-basin. 	(
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. <i>Explain why</i> points 60. There are no problems with flooding downstream of the wetland.	2
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	0
Transfer-D C	

s Cores tos port ک محرک م 2 Ş Junitor م محدم there 9 the way 7 2 CULVIN meteral controlled high where -}-5 0 regiona 6.1 CONSTRAND Wedand Rating System for Western WA: 2014 Update Rating Form – Effective January 1, 2015 <u>_</u> 20105 3

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Rating of Value If score is: 24 # H _ 1 = M _ 0 = L

Total for D 6

Record the rating on the first page

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Add the points in the boxes above

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	looding event:	points = 4 peints = 4	points = 2 points = 0	diasses)	points = 8	points = 6	points # 6	points = 3	points = 0		Record the rating on the first µ	ie site?	Varia Viano
2.1.0. Describe site have the potential to improve water quality?	t 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a f	Depressions cover >½, arca of wetland Depressions cover >½, arca of wetland	Doprezions present but cover < X aroa of wetland No doprezsions present	3.1.2. Structure of plants in the wetland (areas with >90% cover at person height, not Cowardity.	Trees or shrubs $>^{2}/_{2}$ area of the wetland	Trees or shrubs $>^{1}/_{3}$ area of the wotland	Herbaccous plants (> 6 In high) > $\frac{3}{2}$, area of the wetland	Herbaceous plants (> 6 in high) > $t_{1/3}$ area of the wotland	Trees, shrubs, and ungrazed herbaceous $<^{1}/_{3}$ area of the wetland	Total for R.1 Add the points in the boxes above	Rating of Site Potential If score is: 12-16 # H _ 6-11 # M _ 055 # L	R 2.0. Does the landscape have the potential to support the water quality function of th	

R 2.0. Does the landscape have the potential to suppory the water quality function of the site?	
R 2.1. Is the westand within an Incorporated sity or within its UGA? Yes = 2 No = 0	
R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area? Yes # 1 No = 0	
R 2.3. Does at least 10% of the contributing bash contain tilled floids, partures, or forests that have boen clearcut within the last 5 years?	
R 2.4. is > 10% of the area within 150 ft. of the wedland in land uses that generate pollutants? Yes π 1 No \pm 0	
R 25. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4 Other sources	
Total for R 2 Add the points in the boxes above	
Rating of Landscope Potential If score is: 3-6 = H _ 1 or 2 = M _ 0 = L Record the rating on the J	first page
R 3.0. Is the water quality improvement provided by the site valuable to society?	
R 3.1. Is the workland alone a stream or river that is on the 303id) list or on a tributary that drains to one within 1 mi?	

Wetland Rating System for Western WA: 2014 Updato Rating Form – Effective January 1, 2015

Wetland name or number

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS Hydrologic Functions - Indicators that site functions to reduce flooding and stream erosion
R 4.0. Does the site have the potential to reduce flooding and erosion?
R 4.1. Characteristics of the overbank storage the wetland provides:
Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream arriver channel (distance between banks). Calculate the ratio: (average width of wediana)/(everage width
width of stream between banks).
If the ratio is more than 20 points = 9
If the ratio is 10-20
If the ratio is 5-<10 points # 4
If the ratio is 15 points #2
If the ratio is <1 points #1
R 4.2. Characterizics of plants that slow down water velocities during floods: Treat Idiga woody debris as forest or
shub. Choose the points appropriate for the best description (polygous need to have >90% cover at purson
Indept. Interes dre <u>UNE CONSTRA</u> IL dessersy. Economic referils for soll - total On emanement elements s ² 1, stress
Forest of an end of the state o
Plants do not meet above afteria
Total for R.4 Add the points in the boxes above
Rating of Site Potential If score is: 12-16 = H
R 5.0. Does the landscape have the potential to support the hydrologic functions of the site?
R.S.1. is the stream or river adjacent to the yetland downcur?
85.2. Does the up-gradient watershed Actude a UGA or incorporated area? Yes #1 No # 0
R.S.3. is the up-gradient stream or then controlled by dams? Yes = 0 No = 1
Total far R 5 Add the points in the boxes above
Rating of Landscape Portential If score is3=H1 or 2=M0=L Record the rating on the first page
R 6.0. Are the hydrologic functions provided by the site valuable to society?
R 6.1. Distance to the nearest alevanctream that have flooding problems? Choose the describtion that best firs the site.
The sub-basin immediatoly down-gradient of the wetland has flooding problems that result in damage to
human or natural resources (e.g., houses or salmon redds)
V SUTTACE TIGOODING TO THE ATO IN A SUD-STATIN TALENEY DOWN STATION NO TO SUD-STATING A DOWN STATION POINTS = A
R.G.Z. Has the site been identified as important for flood storage or flood conveyance in a replonal flood control plan? Ves = 2 No= 0
Tatal for R 6 Add the points in the boxes above
Record is: 2-4=H 1=M 0=L Record is: 2-4=H 1=M 0=L

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i of all HGM classes. e important habitat		atta within to Porstate class. Check the sined for each class to meet the threahold to number of structures checked. 4 structures or more: points = 4 3 structures: points = 1 3 structures: points = 1 3 structures: points = 1 1 structure: points = 1 ubs., herbaceous, mess/ground-cover)	retiand. The water regime has to cover an of hydroperiods). 4 or more types present: points = 3 3 types present: points = 1 1 type present: points = 1 dotted = 2 2 points = 2	0.42. e thresheld and you do not have to name le loosestrife, Canadian thiste points = 2 points = 0 points = 0	din plants classes (described in H.1.1), or 3) is high, moderate, jow, or none. <i>If you</i> sting is olways high. Moderate = 2 points
rese questions apply to wetlands ators that site functions to provid:	tential to provide habitat?	r: Indicators are Council also send are weakind. Up to 20 patches may be comb be unit if it is smaller than 2.5 or. Add th es thuus have > 30% cover) ees thave > 30% cover) dans, Anek ij; at dans, Anek ij; at dans, Anek ij; at de forestod polygon	mes (hydroperieds) present within the w d or % act to count (see text for descriptio hundrited indiated nundated and or fiver in, or adjacent to, the wetlan an in, or adjacent to, the wetland	celes in the wettand that cover at least 1. species can be combined to meet the size surasian miljoli, reed canarygrass, purpl	whether Interspersion among Coward reas (an Include open water or muditates s or three classes and open water, the ra Low = 1 point Low = 1 point
Th HABITAT FUNCTIONS - Indice	H 1.0. Does the site have the pot	H 1.1. Structure or phart community Cowardin plant classes in the of X ac or more them 10% of th Aguide bod Serub-shrub (areas when Forested (areas when the Forested (areas when that each cover 20% with	H 1.2. Hydropordes Teck the Spee of water ragin more than 1.0% of the wethan Remainently flooded or in Seasonally flooded or in Carsfondly flooded or in Permanently flowing streen Seasonally flowing streen Freethwater deal wetland	H .1.3. Richness of plant species Count the number of plant spec Officers patches of the same the species . Do not include E f you counted: > 13 species 5 - 13 apredes 5 species	H 4.4. httersporsion of habitats Decide from the diagrams beat the classes and unwegetated at howe four or more plant classes howe of points Nome of points All three diagrams in this row are HIGH = 3points

Record the rating on the first page

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Add the points in the baxes above

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points = 3 points = 2

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> ¹/₂ (33.3%) of 1 km Polygon 20-33% of 1 km Polygon

10-19% of 1 km Polygon < 10% of 1 km Polygon

If total accessible habitat is:

Calculate:

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

Rating of Site Potential If score is: 15-18 = H 7-14 = M 1/0-6 = L

strata)

Total for H 1

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

points "1

 (\mathcal{M})

Undercut banks are present for at least 6.6 ft (2 m) and/or evenhanging 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 (20 m)

Clock the habitat features that are present in the worland. The number of checks is the number of points.

Wetland name or number_

H 1.5. Special habitat features:

 \mathcal{M} degree, downed, woody debris within the wetland (> 4 in diamoter and 6 ft long). Standing snags (dbh > 4 in) within the wetland

——Stable storep banks of fine material that might be used by baser or muskrat for doming (> 30 degree slope) OR signs of recent baser activity are present (cut shrubs or trees that have not yet wrathered where wood is exposed)

—At post % ac of thin-stemmed persistent plants or woody branches are present in areas that are portmanently or seasonally inundated (structures for egg-laying by amphibians) [L_invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of

H 3.1. Desc the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that opplies to the wordand being rated. Site mosts ANY of the following critedia: Rating of Landscape Potential If score is: 4-6 = H 2-3 = M L/<1 = L H 3.0. Is the habitat provided by the site valuable to society?

Record the rating an the first page

points = 2

Add the points in the boxes above points (a (-2))

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H 2.3. Land use intensity in 1 km Polygon: if > 50% of 1 km Polygon Is high intensity land use \$ 50% of 1 km Polygon Is high intensity.

Total for H 2

Undisturbed habitat 10-50% and > 3 patches Indisturbed habitat < 10% of 1 km Polygon

points # 2 points # 0

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

 It has 3 or more priority habitats within 100 m (see next page)
 It provides habitat for Threatened or Endangered spodes (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 Construction Value as determined by the Department of Natural Resources poin¢s ≖ 1 — 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 op next page) within 100 m

Polats Rating of Value If score is: 2 # H 📈 1 # M _ D # L hous Site does not meet any of the crit

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Record the rating on the first page

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WDFW Priority Habitats

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

Count how many of the following priority habitans are within 330 (f. (100 m) of the wetland unit: NOTE: This guestion 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 spocies of native fish and witallie (juit accorptions in WDFW PHS report).
- Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock
- Old-growth/Mature forests: <u>Old-growth, west of Gharnde crest</u>. Stands of at least 2 tree species, forming a multilayered canopy with occarsional small openings; with at least 8 trees/isa (20 trees/in) > 32 in (81 and bdh or > 200 years of app. <u>Mintic correct</u>. - Stands with wortexped clameters exceeding 21 in (53 errs) dbh, revown cover may be less than 100%, secary, decadrons, numbers of stangs, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Casacade crest.
- Oregon White Oals: Woodland stands of pure cak or oak/conflor associations where canopy coverage of the oak
 component is important (full descriptions in WDFW PHS reports, 153 see web link above).
- Riparian: The area adjacent to aquark systems with flowing water that contains elements of both aquatic and terrestrial eccoystems which mutually influence each other.
- Westslde 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 abovc*).
- Instream: The combination of physical, blological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- Nearshore: Rolatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and
 Paget Sound Nearshore. (Juil 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 (t (7.6 m) high and occurring below 5000 (t clevation.
- Todus: Homogenous areas of rock rubble ranging in average size 0.5 6.5 ft (0.15 2.0 m), composed of busult, andesito, field of rock, including riprop slides and mine tailings. May be associated with cliffs.
- \sim Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to ensuble early exervation/tise 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.

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CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	
verland Type	Category
heck off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
C 1.0. Estuarine wettlands Does the wettland meet the following criteria for Estuarine wettands?	
 The dominant water regime is tidal, Veentrifted, and 	
- With a salinity greater than 0.5 ppt Yes -Go to SC 1.1 / Now Not an estuarine wetland	
2.1.1. Is the wetland within a National Wildlife Refuge, National Park, National Extury Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes a Category I No - Go to SC 1.2.	Cat. I
2.1.2. Is the wethind unit at loast 1 ac in size and meets at loast two of the following three conditions? — The wethind is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has loss than 10% cover of non-nuive plant species. (If non-nuive species are desiring, see page 25)	Gat
	Cat
C.2.0. Wetlands of High Conservation Value (WHCV) 2.1. Has the WA Department of Natural Resources updated their website to include the list of Worldyds of High Conservation Value? (No – So to SC 2.2 (No – So to SC 2.2 (No – So to SC 2.2)	Ğ.
: 2.2. Is the wethand listed on the WDNR database as a Wethand of High Conservation Value? No is Not a WHCV 2.3. Is the wethand in a Settlon/Township/Range that contains a Natural Hentiago wothand?	
http://www.dfr.ww.gev/htm/rcidias/dstreasted/wrbioscientions.coll $\gamma e_{S} - Contact WWHP/WONR and go to SC2.4 (Mg) = Not a WHO 2.2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Wangs and listed it ontheir wobsite? No = Not a WHO.$	
3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below, if you answer YES you will still need to rate the wetland based on its functions. 3.1. Does an area within the vehicular law to avoid soil horizons, either posts or muck, 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 So – Go to SC 3.2 Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in doop	
over bedrock, or an impormeable hardpan such as day or volcanic ash, or that are fleating on top of a lake or Ves – Go to SC 3.3 No = Is not a bog	
c.3.3. Does an area with pasts or muck have more than 70% cover of mostes at ground lovel, hold at leasts a 30% cover of plant species listed in Table 42 Ves Lis a Category Loop No – Go to SC 3.4 NOTE if you are uncorrelin about the extern of mostes in the understory, you may substitute that offerion by.	
measuring the pH of the warter 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.	ī
C.3.4. Is an area with peats or mucks foreated (> 30% cover) with Sitka spruce, subalpine fit, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or wostern white pine. AND any of the species for combination of species (in Table 4 provide more than 30% of the cover upder the canop?	
Yes = Is a Category I bog / No will not a bog	

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Wetland name or number

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0.25 0.5 km

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Figure 1a: 2014 Ecology Wetland Rating Form - 1 KM Habitat Map 4193 Northwest Drive Property Miller Environmental Services, LLC. Areas shown approximate. Aerial photo 2019

2014 Ecology Rating Form Habitat Calculations - Sections H2.0

Accessible Habitat, Question H2.1							
Undisturbed Habitat				Moderate/Low Intensity Habitat			
			Percentage of				Percentage of 1 km
Polygon #	Square Feet	Acres	1 km Polygon	Polygon #	Square Feet	Acres	Polygon Divided by 2
		0	0.00%	Area 15	235,747	5	0.33%
		0	0.00%			0	0.00%
		0	0.00%			0	0.00%
		0	0.00%			0	0.00%
		0	0.00%			0	0.00%
		Total=	0.00%			Total=	0.33%

4193 Northwest Wetland A

Total Accessible Undisturbed + loderate/Low Intensity Habitat (H2.1) =

0.33%

Non-Accessible Habitat, Question H2.2							
Undisturbed Habitat				Moderate/Low Intensity Habitat			
			Percentage of				Percentage of 1 km
Polygon #	Square Feet	Acres	1 km Polygon	Polygon #	Square Feet	Acres	Polygon Divided by 2
Area 1	668,997	15	1.90%	Area 10	310,639	7	0.44%
Area 2	2,331,258	54	6.61%	Area 13	1,476,316	34	2.09%
Area 3	717,882	16	2.04%	Area 14	281,891	6	0.40%
Area 4	595,091	14	1.69%			0	0.00%
Area 5	631,367	14	1.79%			0	0.00%
Area 6	203,163	5	0.58%			0	0.00%
Area7	196,852	5	0.56%			0	0.00%
Area 8	1,052,244	24	2.98%			0	0.00%
Area 9	203,005	5	0.58%			0	0.00%
Area 11	223,006	5	0.63%				
Area 12	106,445	2	0.30%				
		0	0.00%			0	0.00%
		Total=	19.65%			Total=	2.93%

Total Undisturbed Habita	19.65%	
Total Moderate/Low Intensity Habitat	3.27%	_
Total Undisturbed + Moderate	22.92%	-
High Intensity Area (percent):	73.8	
Area of Wetland (acres):	0.0	
Area Within 1 km of Wetland: (excluding wetland)	809.4334022 (Acres)	35258919.00 sf

Note: All areas are approximate, based on 2016 aerial imagery or more current where available, as calculated in QGIS software. See Figure 1 for polygon locations.



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Subject Property Approximate Wetlands 150 foot Wetland Offset Forested Wetland Scrub Shrub Wetland

Figure 2: 2014 Ecology Wetland Rating Form - 150 ft offset and Cowarding class 4193 Northwest Drive Property Miller Environmental Services, LLC. Areas shown approximate. Aerial photo 2019

6-0-60



Figure 3: 2014 Ecology Wetland Rating Form - Hydroperiod, outlet, contibuting basin 4193 Northwest Drive Property Miller Environmental Services, LLC. Areas shown approximate. Aerial photo 2019





Figure 4: 303d listed water and WQ Improvement Projects



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Esri, NASA, NGA, USGS, FEMA Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

DEPARTMENT OF ECOLOGY State of Washington