

Critical Areas Report For

1966 Bishop Road Chehalis, Washington

Prepared for:
Thomas McCormick
31400 SE Linde Ln
Estacada, OR 97023

Project # 401.01

Prepared by:
Loowit Consulting Group, LLC
312 Gray Road
Castle Rock, WA 98611
360.431.5118



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SIGNATURE PAGE

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned:



Timothy J. Haderly, Principal Scientist/Owner
Loowit Consulting Group, LLC

INTRODUCTION

Purpose and Need

Loowit Consulting Group, LLC (LCG) was retained by Thomas McCormick (Owner) to complete a critical areas investigation and report at 1966 Bishop Road (Subject Site) located southeast of the City of Chehalis, Washington (Figures 1 & 2, Photograph 1).

Mapped critical areas within the subject site prompted the City of Chehalis to request an evaluation of critical areas according to Chehalis Municipal Code (CMC) Title 17 – Division III.

Site Description

The subject site consists of a single tax parcel totaling approximately 25 acres. Site specifics include:

Site Address: See Table 1

Current Owner: Thomas McCormick

Tax Parcel Number: See Table 1

Legal Description: Section 14, Township 13 North, Range 2 West, W.M.

Property Size: Approximately 25 acres

Jurisdiction: City of Chehalis

Table 1: Summary of Subject Site

Parcel	TPN #	Address	Owner	Size (acres)
1	017867005000	1966 Bishop Road	Thomas McCormick	25

The majority of the subject site consists of pasture currently utilized by several horses included a well as a single family residence in the northern portion as well as two barn/equipment buildings located south of the residence (Figure 3).



Photograph 1: Subject site looking south from Bishop Road.



Photograph 2: Looking north from the southern portion of the Subject Site.

Land uses adjacent to the subject site include:

- To the North – Rural residential and agriculture
- To the South – Open space and urban residential
- To the East – Forestry and agriculture
- To the West – Rural residential and agriculture

METHODS

Desktop Review

Prior to visiting the subject site, LCG conducted a desktop review of readily available mapping resources and other pertinent information including:

- Lewis County Web Map (<http://ims.lewiscountywa.gov/webmaps/composite2/viewer.htm>). This source provided parcel information, aerial photographs, physical attributes, and other information from the Lewis County Assessor.
- US Fish and Wildlife Service National Wetlands Inventory Wetlands Mapper (<https://www.fws.gov/wetlands/data/mapper.html>). This mapping source depicts wetlands and streams throughout the United States.
- US Department of Agriculture Natural Resources Conservation Service Web Soil Survey (<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>). This source depicts mapped soils including hydric soils throughout the United States.
- Washington Department of Natural Resources Forest Practices Application Mapping Tool (<https://fpamt.dnr.wa.gov/default.aspx>). This mapping source depicts streams and wetlands in Washington State.
- Washington Department of Fish and Wildlife Salmonscape (<http://apps.wdfw.wa.gov/salmonscape/map.html>). This mapping source depicts streams and fish distribution in Washington State.
- Washington Department of Fish and Wildlife Priority Habitat and Species (<http://apps.wdfw.wa.gov/phsontheweb/>). This mapping source depicts priority habitats and species throughout Washington State.

State Regulations

Wetlands are regulated by Washington Department of Ecology (Ecology) under the Water Pollution Control Act and the Shoreline Management Act. The State Environmental Policy Act (SEPA) process is also used to identify potential wetland-related concerns early in the permitting process. All proposed direct and identified indirect impacts to wetlands are reviewed and approved/denied by Ecology using the regulations previously listed.

Streams are regulated by Washington Department of Fish and Wildlife under the State Hydraulic Code, Chapter 77.55 Revised Code of Washington. Projects involving activities within,

over, or beneath jurisdictional streams are subject to the Hydraulic Project Approval (HPA) permitting process administered by WDFW.

Federal Regulations

Wetlands and streams are regulated as “waters of the United States” under Section 404 of the Clean Water Act. Section 404 regulations are administered by the US Army Corps of Engineers (USACE).

Local Regulations

Wetlands, streams, and other critical areas are regulated by Chehalis Municipal Code (CMC) Title 17 – Division III.

Field Investigations

On July 30, 2025, LCG visited the subject site to collect information in the Subject Site. Conditions at the site were considered normal because vegetation was intact, no recent soil grading was observed, and no recent ditching was observed. Weather conditions at the time of the site investigation consisted of clear skies with a high of 89°F and 0.0 inches of rain the previous 24 hours. Recorded climatological history from the Chehalis Airport two weeks prior to visiting the site was characterized with high temperatures ranging from 66.3 to 93.8°F and low temperatures ranging from 44.1 to 56.2°F. Total recorded precipitation two weeks prior to the site visit (July 16 – 29) was recorded at 0.0 inches (Table 2, Appendix C).

Table 2: Weather Data at Chehalis Airport, Washington.

Date	Minimum Temp (Deg F)	Maximum Temp (Deg F)	Total Precipitation (in)
7/16/2025	52.9	93.8	0
7/17/2025	49.9	85.4	0
7/18/2025	51.8	71.7	0
7/19/2025	49.8	72.3	0
7/20/2025	48.2	66.3	0
7/21/2025	49	74.3	0
7/22/2025	56.2	76.7	0
7/23/2025	51.8	83.9	0
7/24/2025	50.9	76.2	0
7/25/2025	49.7	71.7	0
7/26/2025	45.6	69.9	0
7/27/2025	44.1	75.7	0
7/28/2025	44.7	82.1	0
7/29/2025	46.8	87.7	0
		Total:	0
7/30/2025	50.5	85.9	0

Data from Agweathernet

Site investigation work tasks included:

- Documentation of current site conditions
- Documentation of adjacent land uses
- Delineation of critical areas

Wetlands were investigated according to methods outlined in the U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*. Data documenting vegetation, soils, and hydrology were collected and used to determine wetland and uplands at the site (Appendix A).

Vegetation

Vegetation at the site is primarily pasture grasses and forbs with a few scattered Douglas fir and Oregon ash trees. Table 3 summarizes vegetation observed at the subject site.

Table 3: Vegetation Observed

Scientific Name	Common Name	Wetland Indicator Code
<i>Agrostis gigantea</i>	Redtop	FAC
<i>Alopecurus pratensis</i>	Meadow Foxtail	FAC
<i>Anthoxanthum odoratum</i>	Sweet Vernal Grass	FACU
<i>Carex athrostachya</i>	Slender Beak Sedge	FACW
<i>Carex obnupta</i>	Slough Sedge	OBL
<i>Cornus sericea</i>	Red Osier Dogwood	FACW
<i>Crataegus monogyna</i>	Common Hawthorn	FAC
<i>Dactylis glomerata</i>	Orchard Grass	FACU
<i>Eleocharis obtusa</i>	Spikerush	OBL
<i>Frangula purshiana</i>	Cascara	FAC
<i>Fraxinus latifolia</i>	Oregon Ash	FACW
<i>Juncus effusus</i>	Softrush	FACW
<i>Holcus lanatus</i>	Velvet Grass	FAC
<i>Leontodon saxatilis</i>	Hairy Hawkbit	FACU
<i>Leucanthemum vulgare</i>	Oxeye Daisy	FACU
<i>Lolium arundinaceum</i>	Tall Fescue	FAC
<i>Lotus corniculatus</i>	Birdsfoot Trefoil	FAC
<i>Malus fusca</i>	Western Crabapple	FACW
<i>Phalaris arundinacea</i>	Reed Canary Grass	FACW
<i>Poa pratensis</i>	Kentucky Bluegrass	FAC
<i>Populus balsamifera</i>	Black Cottonwood	FAC
<i>Ranunculus repens</i>	Western Buttercup	FAC
<i>Rubus armeniacus</i>	Himalayan Blackberry	FAC
<i>Rubus ursinus</i>	Trailing Blackberry	FACU
<i>Rumex acetosella</i>	Sorrel	FACU

<i>Schedonorus arundinaceus</i>	Tall Fescue	FAC
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Wetland Indicator Code

OBL = Obligate (Almost always occur in wetlands)

FACW = Facultative Wetland (Usually occur in wetlands, but may occur in non-wetlands)

FAC = Facultative (Occur in wetlands and non-wetlands)

FACU = Facultative Upland (Usually occur in non-wetlands, but may occur in wetlands)

UPL = Obligate Upland (Almost never occur in wetlands)

Soils

According to the US Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey for Lewis County, soils within the Subject Site are Lacamas silt loam, Prather silty clay loam, and Scamman silty clay loam. These soils are common in the local area. On-site soil is summarized in Table 4 and Figure 4.

Table 4: Subject Site Soil Summary.

Soil #	Soil Name	Slope %
118	Lacamas silt loam	0-3
167	Prather silty clay loam	0-5
193	Scamman silty clay loam	0-5

Historic land disturbance activities including fill placement, agricultural activities, and general grading may have altered natural soil conditions at the Subject Site resulting in soils that may be somewhat different than those mapped by NRCS.

Hydrology

The Subject site is located on a nearly level floodplain of the Newaukum River, a Type S (Shorelines) water body, which meanders the valley floor to the south and west of the subject site. A mapped stream immediately south of the Subject Site is conveys water from the east to the west eventually discharging to the Newaukum River.

Wetlands

The US Fish and Wildlife Service National Wetlands Inventory (NWI) Map (Figure 5) depicts mapped emergent wetlands in the south and to the west and east of the Subject Site. LCG's site investigation found conditions to be different than depicted on the NWI map.

Streams

The Washington Department of Natural Resources Forest Practices Application Mapping Tool (FPAMT) depicts an unnamed Type F stream immediately north of the Subject Site. LCG's site investigation found conditions to be somewhat different than depicted on the stream map.



Photograph 3: Non-jurisdictional agricultural ditch within the central portion of the subject site.

Mapping

Wetland, roads, property boundaries, topography, and other site features were derived from public mapping sources, with additional points mapped with handheld portable GPS equipment with an implied horizontal accuracy of ± 1 foot.

RESULTS and DISCUSSION

Wetlands

Three jurisdictional wetlands were located within and/or adjacent to the Subject Site (Figures 3A & 3B).

Wetland “A” is rated a Category IV wetland (15 points) with a moderate water quality score of 6 points, a low hydrologic score of 5 points, and a low habitat score of 4 points. This depressional wetland is located within an actively farmed pasture area that is routinely plowed, seeded, and grazed.

Wetland “B” is rated a Category IV wetland (15 points) with a moderate water quality score of 6 points, a low hydrologic score of 5 points, and a low habitat score of 4 points. This depressional wetland is located within an actively farmed pasture area that is routinely plowed, seeded, and grazed.

Wetland “C” is rated a Category III wetland (17 points) with a moderate water quality score of 7 points, a low hydrologic score of 5 points, and a low habitat score of 5 points. This depressional wetland is located within an active pasture area with a grove of Oregon ash trees and a few scattered native shrubs.

Wetlands were rated according to the *Washington State Wetland Rating System for Western Washington, 2014 Update* (Table 4 & Appendix B).



Photograph 4: Wetland C with the Type F stream to the far left.

Wetland Buffers

According to City of Chehalis Municipal Code (CMC) Chapter 17.23 – Wetlands, City of Chehalis requires buffers on jurisdictional wetlands depending on category and habitat score. A Category III wetland with a low habitat score of 5 points requires an 80-foot wide buffer. Category IV wetlands with a habitat low score of 4 points require a 50 foot wide buffer. Table 4 summarizes wetland buffer requirements for the three wetlands at the subject site based on *CMC 17.23.030, Table C – Buffer Dimensions*.

Table 4: Wetland Summary.

Wetland ID	HGM ^A	Wetland Rating System ^B				Category ^B	Standard Buffer ^C (ft)
		Improving Water Quality	Hydrologic	Habitat	Total		
Wetland A	Depressional	6	5	4	15	IV	50
Wetland B	Depressional	6	5	4	15	IV	50

Wetland C	Depressional	7	5	5	17	III	80
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^A Hydrogeomorphic Classification

^B Washington State Wetland Rating System for Western Washington: 2014 Update

^C CMC 17.23.030, Table C – Buffer Dimensions

Streams

LCG identified a single Type F stream along the southern property boundary (Figures 3A & 3B). CMC 17.25.030 considers this stream a Type F-A stream and requires a 150 foot wide buffer. An excavated and maintained agricultural drainage bisects the central portion of the subject site (Figure 3A & 3B). LCG determined that this conveyance is not a jurisdictional stream and would not be subjected to buffers.

CONCLUSIONS

Three jurisdictional wetlands (Wetlands “A”, “B”, & “C”) were located within and/or adjacent to the Subject Site (Figures 3A & 3B). The City of Chehalis requires a minimum 50 foot wide buffer on Wetlands “A” & “B” and an 80 foot buffer on Wetland “C”. The Type F stream, located along the southern parcel boundary, requires a 150 foot wide buffer.

LIMITATIONS

The findings and conclusions contained in this document were based on information and data available at the time this document was prepared and evaluated using standard Best Professional Judgment. LCG assumes no responsibility for the accuracy of information and data generated by others. Local, State, and Federal regulatory agencies may or may not agree with the findings and conclusions contained in this document.

REFERENCES

Anderson, P., Meyer, S., Olson, P., Stockdale, E. 2016. Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State. Shorelands and Environmental Assistance Program Washington State Department of Ecology Olympia, Washington. Publication no. 16-06-029. October 2016 Final Review.

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

Hruby, T. 2014. Washington State Wetland Rating System for Western Washington: 2014 Update. (Publication #14-06-029). Olympia, WA: Washington Department of Ecology.

Lewis County Web Map (<http://ims.lewiscountywa.gov/webmaps/composite2/viewer.htm>).

U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

US Department of Agriculture Natural Resources Conservation Service Web Soil Survey (<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>).

US Fish and Wildlife Service National Wetlands Inventory Wetlands Mapper (<https://www.fws.gov/wetlands/data/mapper.html>).

Washington Department of Natural Resources Forest Practices Application Mapping Tool (<https://fpamt.dnr.wa.gov/default.aspx>).

Washington Department of Fish and Wildlife Salmonscape (<http://apps.wdfw.wa.gov/salmonscape/map.html>).

Washington Department of Fish and Wildlife Priority Habitat and Species (<http://apps.wdfw.wa.gov/phsontheweb/>).

FIGURES

Figure 1 – Site Location Map

Figure 2 – Parcel Map

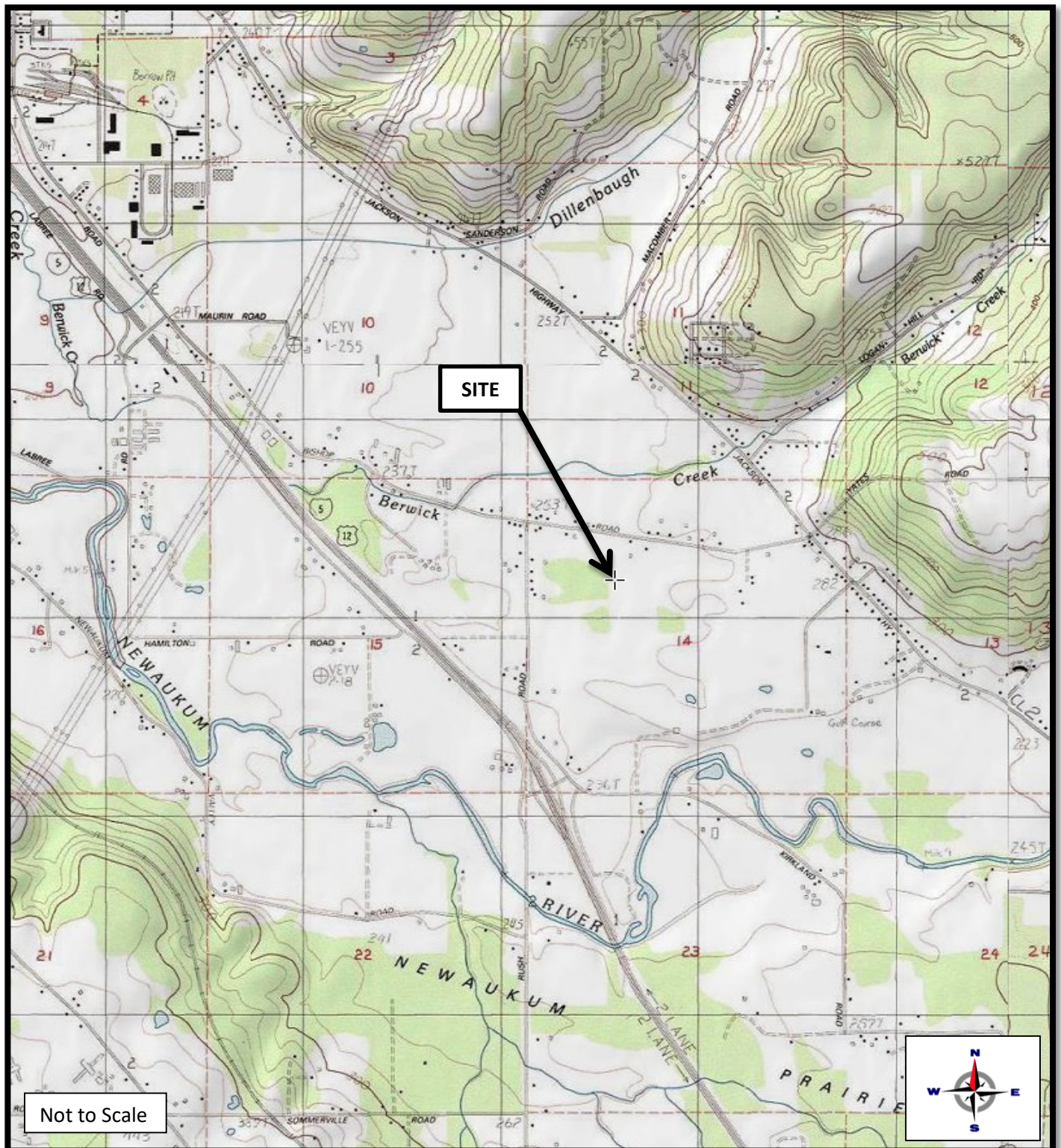
Figure 3A – Subject Parcel Overview

Figure 3B – Subject Parcel Overview

Figure 4 – Soils Map

Figure 5 – Stream Map

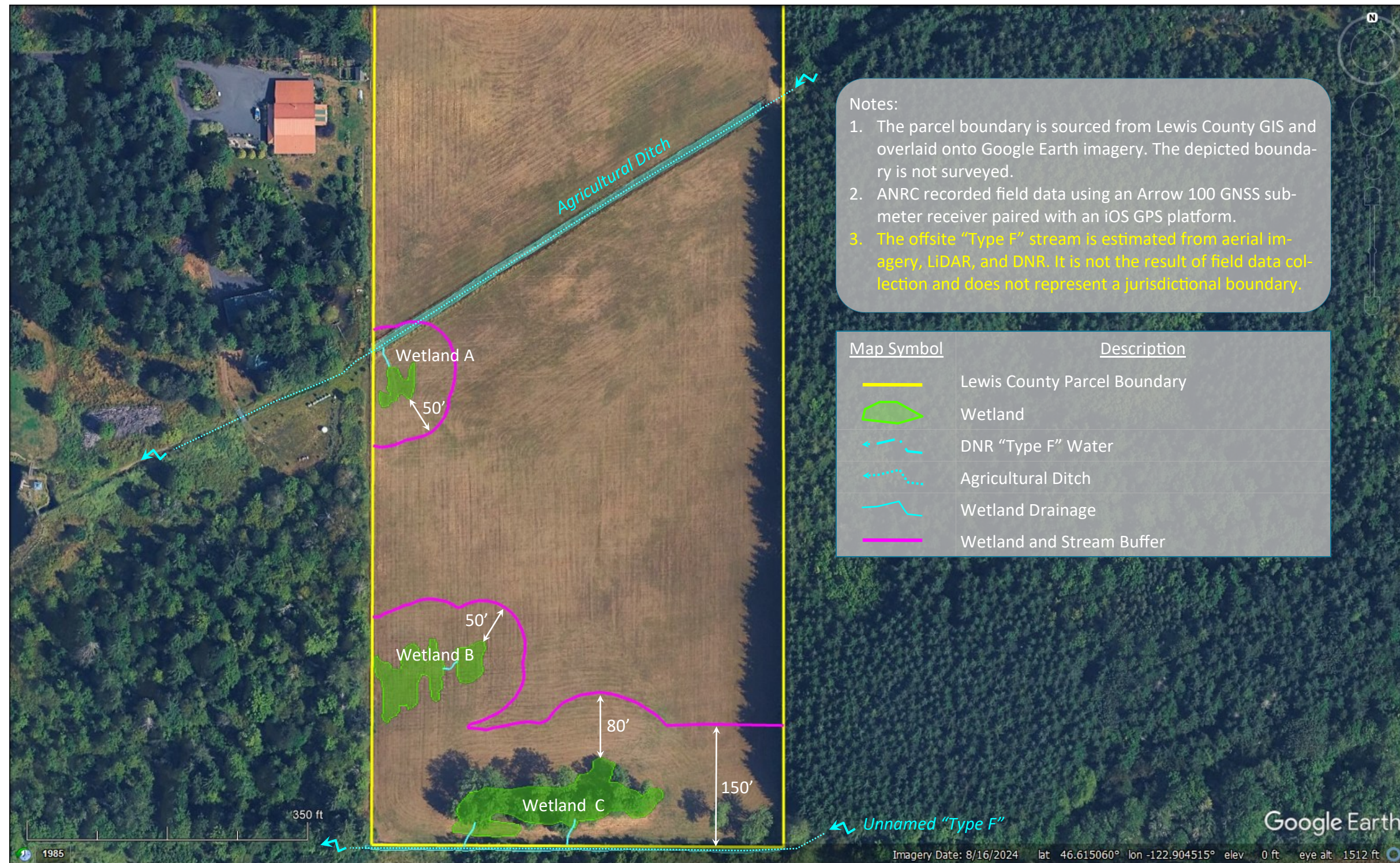
Figure 6 - National Wetlands inventory Map

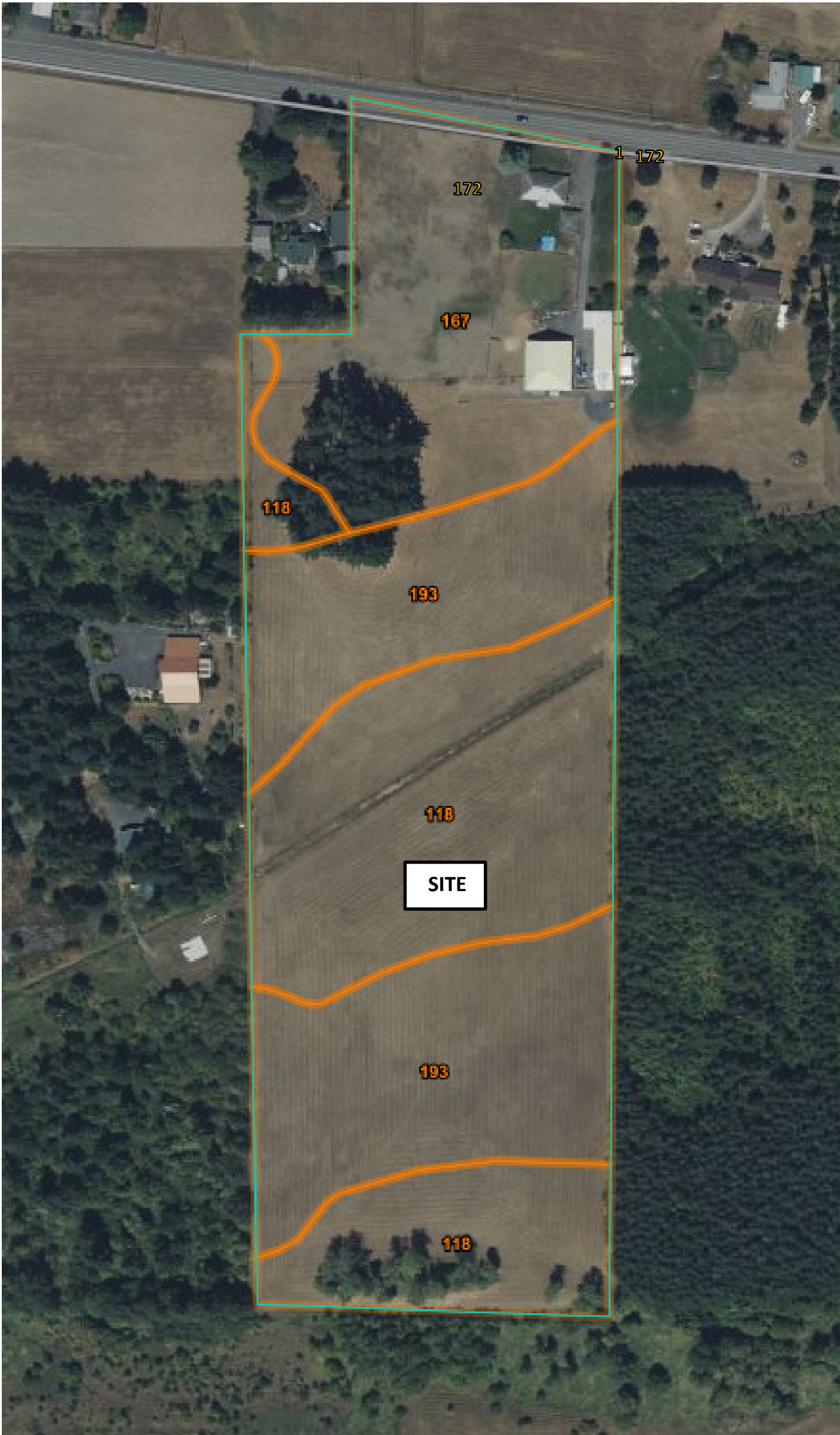


Loowit Consulting Group, LLC
Natural Resources & Project Management
360.431.5118

Figure 1
Site Location Map
1966 Bishop Road



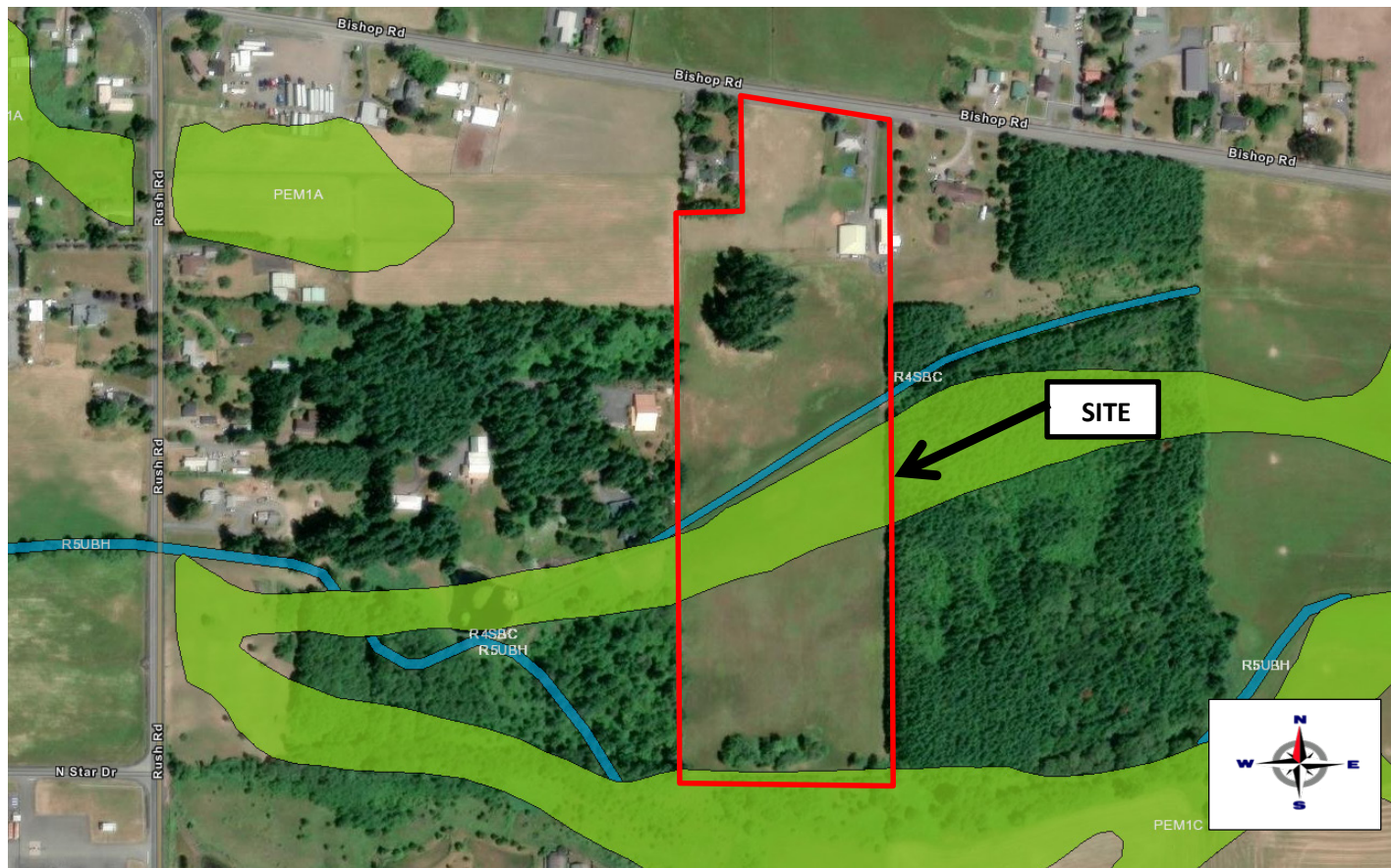




Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
118	Lacamas silt loam, 0 to 3 percent slopes	7.2	38.4%
167	Prather silty clay loam, 0 to 5 percent slopes	5.0	26.9%
193	Scamman silty clay loam, 0 to 5 percent slopes	6.5	34.8%
Totals for Area of Interest		18.8	100.0%

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Figure 4
Soils Map
1966 Bishop Road

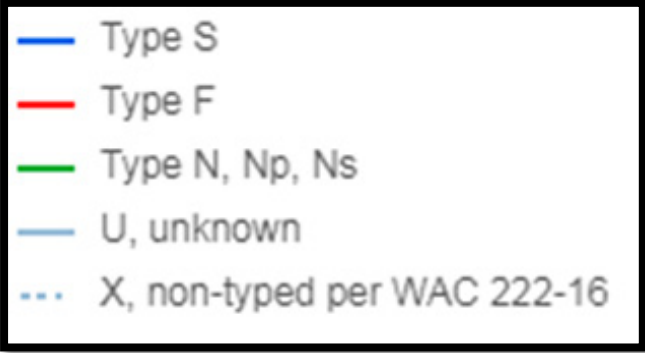
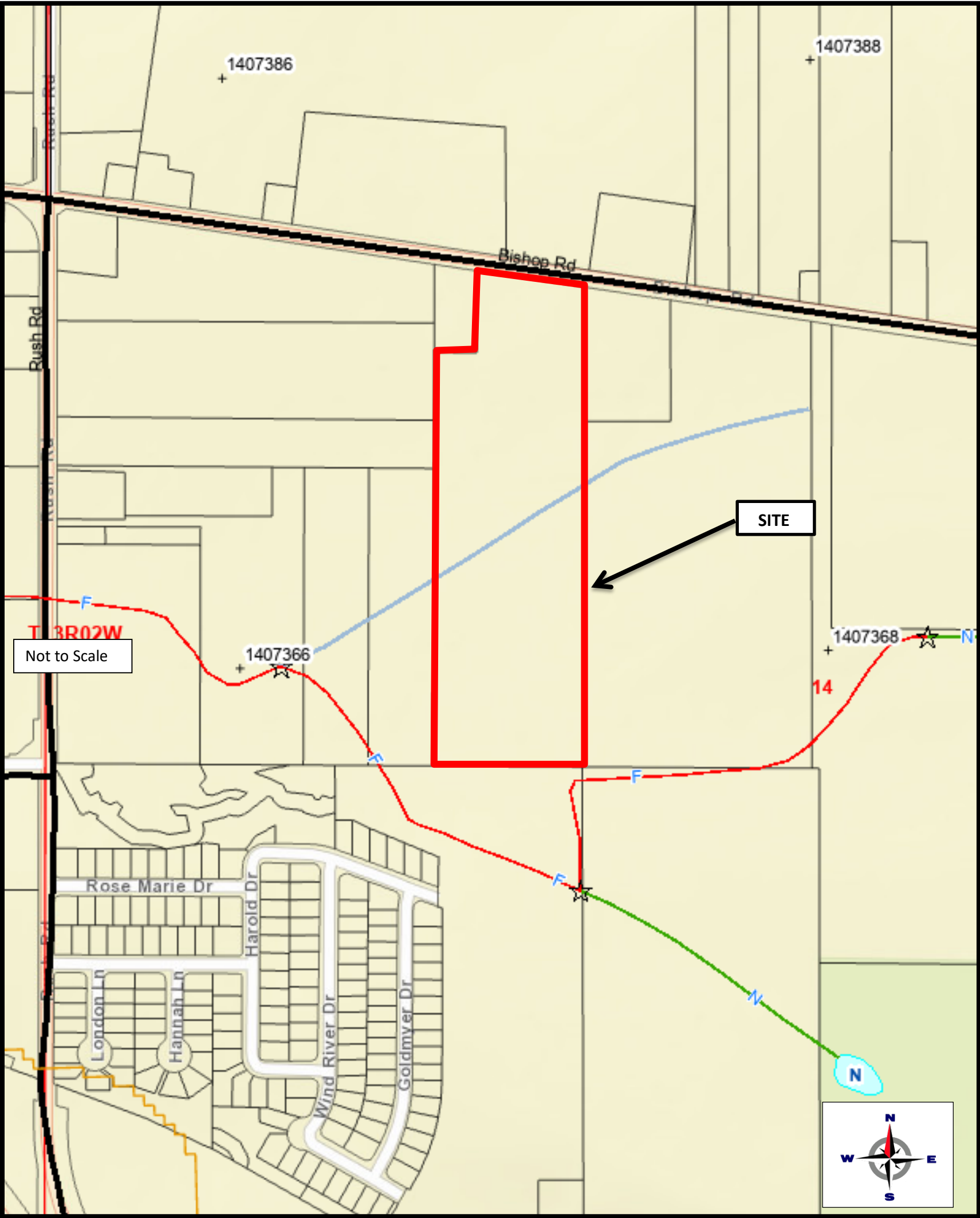


Wetlands

	Estuarine and Marine Deepwater		Freshwater Emergent Wetland		Lake
	Estuarine and Marine Wetland		Freshwater Forested/Shrub Wetland		Other
			Freshwater Pond		Riverine

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Figure 5
National Wetlands Inventory Map
1966 Bishop Road



APPENDIX A – DATA FORMS

<div>U.S. Army Corps of Engineers</div> <div>WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region</div> <div>See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R</div>		<div>OMB Control #: 0710-0024, Exp: 11/30/2024</div> <div>Requirement Control Symbol EXEMPT:</div> <div>(Authority: AR 335-15, paragraph 5-2a)</div>				
Project/Site: Lewis County Parcel 017867005000		City/County: Lewis	Sampling Date: 7/30/2025			
Applicant/Owner: Thomas McCormick		State: WA	Sampling Point: TP-1			
Investigator(s): Andrew Allison		Section, Township, Range: S14 T13N R2W				
Landform (hillside, terrace, etc.): terrace		Local relief (concave, convex, none): none	Slope (%): 0-3			
Subregion (LRR): LRR A, MLRA 4A		Lat: 46.61263286	Long: -122.901441			
		Datum: NAD83				
Soil Map Unit Name: 118—Lacamas silt loam, 0 to 3 percent slopes		NWI classification: non-wetland				
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No						
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes No X		Is the Sampled Area within a Wetland? Yes No X				
Hydric Soil Present? Yes X No						
Wetland Hydrology Present? Yes No X						
Remarks:						
VEGETATION – Use scientific names of plants.						
Tree Stratum (Plot size: 30)		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1.					Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)	
2.					Total Number of Dominant Species Across All Strata: 3 (B)	
3.					Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)	
4.						
		=Total Cover				
Sapling/Shrub Stratum (Plot size: 15)					Prevalence Index worksheet:	
1.					Total % Cover of: Multiply by:	
2.					OBL species 0 x 1 = 0	
3.					FACW species 10 x 2 = 20	
4.					FAC species 30 x 3 = 90	
5.					FACU species 60 x 4 = 240	
		=Total Cover			UPL species 0 x 5 = 0	
Herb Stratum (Plot size: 10)					Column Totals: 100 (A) 350 (B)	
1. Holcus lanatus		10	No	FAC	Prevalence Index = B/A = 3.50	
2. Anthoxanthum odoratum		40	Yes	FACU		
3. Leontodon saxatilis		20	Yes	FACU		
4. Phalaris arundinacea		10	No	FACW		
5. Agrostis gigantea		20	Yes	FAC		
6.						
7.						
8.						
9.						
10.						
11.						
		100 =Total Cover			Hydrophytic Vegetation Indicators:	
Woody Vine Stratum (Plot size: 10)					1 - Rapid Test for Hydrophytic Vegetation	
1.					2 - Dominance Test is >50%	
2.					3 - Prevalence Index is ≤3.0¹	
		=Total Cover			4 - Morphological Adaptations¹(Provide supporting data in Remarks or on a separate sheet)	
% Bare Ground in Herb Stratum					5 - Wetland Non-Vascular Plants¹	
Remarks:					Problematic Hydrophytic Vegetation¹ (Explain)	
					¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
					Hydrophytic Vegetation Present? Yes No X	

SOIL

Sampling Point: TP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 3/2	100					Loamy/Clayey	
7-9	10YR 3/1	99	10YR 6/6	1	C	M	Loamy/Clayey	Prominent redox concentrations
9-16	10YR 4/1	90	7.5YR 5/8	10	C	M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	<input type="checkbox"/> Redox Depressions (F8)	

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

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

HYDROLOGY

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

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

ENG FORM 6116-9, JUL 2018 Western Mountains, Valleys, and Coast – Version 2.0

SOIL

Sampling Point: TP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/1	100						
6-9	10YR 4/1	93	10YR 6/8	7	C	M	Loamy/Clayey	Prominent redox concentrations
9-16	10YR 5/1	85	10YR 4/6	15	C	M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	<input type="checkbox"/> Redox Depressions (F8)	

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

HYDROLOGY

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

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

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Lewis County Parcel 017867005000 City/County: Lewis Sampling Date: 7/30/2025
Applicant/Owner: Thomas McCormick State: WA Sampling Point: TP-3
Investigator(s): Andrew Allison Section, Township, Range: S14 T13N R2W
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-3
Subregion (LRR): LRR A, MLRA 4A Lat: 46.61271155 Long: -122.9023064 Datum: NAD83
Soil Map Unit Name: 118—Lacamas silt loam, 0 to 3 percent slopes NWI classification: non-wetland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> <u> </u> =Total Cover	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)
Sapling/Shrub Stratum (Plot size: <u>15</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> <u> </u> =Total Cover	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>45</u> x 3 = <u>135</u> FACU species <u>55</u> x 4 = <u>220</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>355</u> (B) Prevalence Index = B/A = <u>3.55</u>
Herb Stratum (Plot size: <u>10</u>) 1. <u>Anthoxanthum odoratum</u> <u>25</u> Yes <u>FACU</u> 2. <u>Leontodon saxatilis</u> <u>10</u> No <u>FACU</u> 3. <u>Agrostis gigantea</u> <u>25</u> Yes <u>FAC</u> 4. <u>Dactylis glomerata</u> <u>20</u> Yes <u>FACU</u> 5. <u>Holcus lanatus</u> <u>20</u> Yes <u>FAC</u> 6. <u> </u> 7. <u> </u> 8. <u> </u> 9. <u> </u> 10. <u> </u> 11. <u> </u> <u>100</u> =Total Cover	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u>10</u>) 1. <u> </u> 2. <u> </u> <u> </u> =Total Cover % Bare Ground in Herb Stratum <u> </u>	Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
Remarks:	

SOIL

Sampling Point: TP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 4/2	100					Loamy/Clayey	
8-16	10YR 4/1	97	7.5YR 5/8	3	C	M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	<input type="checkbox"/> Redox Depressions (F8)	

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

HYDROLOGY

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

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

SOIL

Sampling Point: TP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 4/2	99	7.5YR 6/8	1	C	M	Loamy/Clayey	Prominent redox concentrations
2-16	10YR 4/1	93	7.5YR 6/8	7	C	M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	<input type="checkbox"/> Redox Depressions (F8)	

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

HYDROLOGY

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

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

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: <u>Lewis County Parcel 017867005000</u>	City/County: <u>Lewis</u>	Sampling Date: <u>7/30/2025</u>
Applicant/Owner: <u>Thomas McCormick</u>	State: <u>WA</u>	Sampling Point: <u>TP-5</u>
Investigator(s): <u>Andrew Allison</u>	Section, Township, Range: <u>S14 T13N R2W</u>	
Landform (hillside, terrace, etc.): <u>terrace</u>	Local relief (concave, convex, none): <u>none</u>	Slope (%): <u>0-3</u>
Subregion (LRR): <u>LRR A, MLRA 4A</u>	Lat: <u>46.61260348</u>	Long: <u>-122.9028093</u>
Datum: <u>NAD83</u>		
Soil Map Unit Name: <u>118—Lacamas silt loam, 0 to 3 percent slopes</u>		NWI classification: <u>non-wetland</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u> </u> (If no, explain in Remarks.)		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u> </u>		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
2. _____																					
3. _____																					
4. _____																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>45</u></td> <td>x 3 = <u>135</u></td> </tr> <tr> <td>FACU species <u>70</u></td> <td>x 4 = <u>280</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>115</u> (A)</td> <td><u>415</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.61</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>45</u>	x 3 = <u>135</u>	FACU species <u>70</u>	x 4 = <u>280</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>115</u> (A)	<u>415</u> (B)	Prevalence Index = B/A = <u>3.61</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>0</u>	x 2 = <u>0</u>																				
FAC species <u>45</u>	x 3 = <u>135</u>																				
FACU species <u>70</u>	x 4 = <u>280</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>115</u> (A)	<u>415</u> (B)																				
Prevalence Index = B/A = <u>3.61</u>																					
1. _____																					
2. _____																					
3. _____																					
4. _____																					
5. _____																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>10</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Lotus corniculatus</u>		<u>5</u>	<u>No</u>	<u>FAC</u>																	
2. <u>Leontodon saxatilis</u>		<u>15</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Anthoxanthum odoratum</u>		<u>40</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u>Agrostis gigantea</u>		<u>40</u>	<u>Yes</u>	<u>FAC</u>																	
5. _____																					
6. _____																					
7. _____																					
8. _____																					
9. _____																					
10. _____																					
11. _____																					
		<u>100</u>	=Total Cover																		
Woody Vine Stratum	(Plot size: <u>10</u>)																				
1. <u>Rubus ursinus</u>		<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____																					
		<u>15</u>	=Total Cover																		
% Bare Ground in Herb Stratum <u> </u>																					
Remarks:																					

SOIL

Sampling Point: TP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 4/2	100					Loamy/Clayey	
5-10	10YR 4/2	99	7.5YR 5/8	1	C	M	Loamy/Clayey	Prominent redox concentrations
10-16	10YR 4/1	85	10YR 6/8	15	C	M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	<input type="checkbox"/> Redox Depressions (F8)	

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

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

HYDROLOGY

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

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

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: <u>Lewis County Parcel 017867005000</u>	City/County: <u>Lewis</u>	Sampling Date: <u>7/30/2025</u>
Applicant/Owner: <u>Thomas McCormick</u>	State: <u>WA</u>	Sampling Point: <u>TP-6</u>
Investigator(s): <u>Andrew Allison</u>	Section, Township, Range: <u>S14 T13N R2W</u>	
Landform (hillside, terrace, etc.): <u>terrace</u>	Local relief (concave, convex, none): <u>concave</u>	Slope (%): <u>0-5</u>
Subregion (LRR): <u>LRR A, MLRA 4A</u>	Lat: <u>46.61312476</u>	Long: <u>-122.9027418</u>
Datum: <u>NAD83</u>		
Soil Map Unit Name: <u>193—Scamman silty clay loam, 0 to 5 percent slopes</u>		NWI classification: <u>non-wetland</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u> </u> (If no, explain in Remarks.)		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u> </u>		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	<table style="width:100%;"> <tr> <td style="width:60%;">Is the Sampled Area within a Wetland?</td> <td style="width:40%;">Yes <u>X</u> No <u> </u></td> </tr> </table>	Is the Sampled Area within a Wetland?	Yes <u>X</u> No <u> </u>
Is the Sampled Area within a Wetland?	Yes <u>X</u> No <u> </u>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. _____																					
3. _____																					
4. _____																					
=Total Cover																					
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				Prevalence Index worksheet: <table style="width:100%; font-size: small;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>65</u></td> <td>x 3 = <u>195</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>70</u> (A)</td> <td><u>200</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.86</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>65</u>	x 3 = <u>195</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>70</u> (A)	<u>200</u> (B)	Prevalence Index = B/A = <u>2.86</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>5</u>	x 1 = <u>5</u>																				
FACW species <u>0</u>	x 2 = <u>0</u>																				
FAC species <u>65</u>	x 3 = <u>195</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>70</u> (A)	<u>200</u> (B)																				
Prevalence Index = B/A = <u>2.86</u>																					
1. _____																					
2. _____																					
3. _____																					
4. _____																					
5. _____																					
=Total Cover																					
Herb Stratum	(Plot size: <u>10</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> <u> </u> 2 - Dominance Test is >50% <u>X</u> <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Carex obnupta</u>		<u>5</u>	<u>No</u>	<u>OBL</u>																	
2. <u>Ranunculus repens</u>		<u>5</u>	<u>No</u>	<u>FAC</u>																	
3. <u>Agrostis gigantea</u>		<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
4. <u>Lolium arundinaceum</u>		<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
5. <u>Poa pratensis</u>		<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
6. _____																					
7. _____																					
8. _____																					
9. _____																					
10. _____																					
11. _____																					
<u>70</u> =Total Cover																					
Woody Vine Stratum	(Plot size: <u>10</u>)																				
1. _____																					
2. _____																					
=Total Cover																					
% Bare Ground in Herb Stratum <u>30</u>																					
Remarks:																					

SOIL

Sampling Point: TP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 4/1	99	7.5YR 6/8	1	C	M	Loamy/Clayey	Prominent redox concentrations
2-10	10YR 4/1	95	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Stopped at 10" by a hardpan layer.

HYDROLOGY

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

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

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	<small>OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)</small>
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Project/Site: <u>Lewis County Parcel 017867005000</u>	City/County: <u>Lewis</u>	Sampling Date: <u>7/30/2025</u>
Applicant/Owner: <u>Thomas McCormick</u>	State: <u>WA</u>	Sampling Point: <u>TP-7</u>
Investigator(s): <u>Andrew Allison</u>	Section, Township, Range: <u>S14 T13N R2W</u>	
Landform (hillside, terrace, etc.): <u>terrace</u>	Local relief (concave, convex, none): <u>none</u>	Slope (%): <u>0-5</u>
Subregion (LRR): <u>LRR A, MLRA 4A</u>	Lat: <u>46.61317181</u>	Long: <u>-122.9025332</u> Datum: <u>NAD83</u>
Soil Map Unit Name: <u>193—Scamman silty clay loam, 0 to 5 percent slopes</u>		NWI classification: <u>non-wetland</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u> </u> (If no, explain in Remarks.)		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u> </u>		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25.0%</u> (A/B)																
2.																					
3.																					
4.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>65</u></td> <td>x 4 = <u>260</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>105</u> (A)</td> <td><u>380</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.62</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>65</u>	x 4 = <u>260</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>105</u> (A)	<u>380</u> (B)	Prevalence Index = B/A = <u>3.62</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>0</u>	x 2 = <u>0</u>																				
FAC species <u>40</u>	x 3 = <u>120</u>																				
FACU species <u>65</u>	x 4 = <u>260</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>105</u> (A)	<u>380</u> (B)																				
Prevalence Index = B/A = <u>3.62</u>																					
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>10</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1.	<u>Anthoxanthum odoratum</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
2.	<u>Leontodon saxatilis</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
3.	<u>Holcus lanatus</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
4.	<u>Rumex acetosella</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
5.	<u>Lolium arundinaceum</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>																	
6.																					
7.																					
8.																					
9.																					
10.																					
11.																					
		<u>100</u>	=Total Cover																		
Woody Vine Stratum	(Plot size: <u>10</u>)																				
1.	<u>Rubus ursinus</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
2.																					
		<u>5</u>	=Total Cover																		
% Bare Ground in Herb Stratum <u> </u>																					
Remarks:																					

SOIL

Sampling Point: TP-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 4/2	100					Loamy/Clayey	
5-12	10YR 4/1	99	10YR 6/8	1	C	PL	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:
Stopped at 12" by a hardpan layer.

HYDROLOGY

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

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

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	<small>OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)</small>
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Project/Site: <u>Lewis County Parcel 017867005000</u>	City/County: <u>Lewis</u>	Sampling Date: <u>7/30/2025</u>
Applicant/Owner: <u>Thomas McCormick</u>	State: <u>WA</u>	Sampling Point: <u>TP-8</u>
Investigator(s): <u>Andrew Allison</u>	Section, Township, Range: <u>S14 T13N R2W</u>	
Landform (hillside, terrace, etc.): <u>terrace</u>	Local relief (concave, convex, none): <u>concave</u>	Slope (%): <u>0-5</u>
Subregion (LRR): <u>LRR A, MLRA 4A</u>	Lat: <u>46.61310096</u>	Long: <u>-122.9024436</u>
Datum: <u>NAD83</u>		
Soil Map Unit Name: <u>193—Scamman silty clay loam, 0 to 5 percent slopes</u>		NWI classification: <u>non-wetland</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u> </u> (If no, explain in Remarks.)		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u> </u>		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2.																					
3.																					
4.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>65</u></td> <td>x 2 = <u>130</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>85</u> (A)</td> <td><u>190</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.24</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>65</u>	x 2 = <u>130</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>85</u> (A)	<u>190</u> (B)	Prevalence Index = B/A = <u>2.24</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>65</u>	x 2 = <u>130</u>																				
FAC species <u>20</u>	x 3 = <u>60</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>85</u> (A)	<u>190</u> (B)																				
Prevalence Index = B/A = <u>2.24</u>																					
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>10</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Lolium arundinaceum</u>		<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Phalaris arundinacea</u>		<u>65</u>	<u>Yes</u>	<u>FACW</u>																	
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
11.																					
		<u>85</u> =Total Cover																			
Woody Vine Stratum	(Plot size: <u>10</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
1.																					
2.																					
		=Total Cover																			
% Bare Ground in Herb Stratum <u>85</u>																					
Remarks:																					

SOIL

Sampling Point: TP-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/2	100					Loamy/Clayey	
4-8	10YR 4/1	99	10YR 6/6	1	C	M	Loamy/Clayey	Prominent redox concentrations
8-16	10YR 4/1	97	7.5YR 5/8	3	C	M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	<input type="checkbox"/> Redox Depressions (F8)	

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

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

HYDROLOGY

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

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

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Lewis County Parcel 017867005000 City/County: Lewis Sampling Date: 7/30/2025
Applicant/Owner: Thomas McCormick State: WA Sampling Point: TP-9
Investigator(s): Andrew Allison Section, Township, Range: S14 T13N R2W
Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-5
Subregion (LRR): LRR A, MLRA 4A Lat: 46.61306382 Long: -122.9023015 Datum: NAD83
Soil Map Unit Name: 193—Scamman silty clay loam, 0 to 5 percent slopes NWI classification: non-wetland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> <u> </u> =Total Cover	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)
Sapling/Shrub Stratum (Plot size: <u>15</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> <u> </u> =Total Cover	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>35</u> x 3 = <u>105</u> FACU species <u>65</u> x 4 = <u>260</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>365</u> (B) Prevalence Index = B/A = <u>3.65</u>
Herb Stratum (Plot size: <u>10</u>) 1. <u>Leontodon saxatilis</u> <u>10</u> No FACU 2. <u>Rumex acetosella</u> <u>15</u> No FACU 3. <u>Anthoxanthum odoratum</u> <u>40</u> Yes FACU 4. <u>Lolium arundinaceum</u> <u>35</u> Yes FAC 5. <u> </u> 6. <u> </u> 7. <u> </u> 8. <u> </u> 9. <u> </u> 10. <u> </u> 11. <u> </u> <u>100</u> =Total Cover	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u>10</u>) 1. <u> </u> 2. <u> </u> <u> </u> =Total Cover % Bare Ground in Herb Stratum <u> </u>	Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
Remarks:	

SOIL

Sampling Point: TP-9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 4/2	100					Loamy/Clayey	
7-16	10YR 4/1	99	10YR 6/8	1	C	M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	<input type="checkbox"/> Redox Depressions (F8)	

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
Remarks:	

HYDROLOGY

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

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

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R		OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)																
Project/Site: <u>Lewis County Parcel 017867005000</u>		City/County: <u>Lewis</u>																
Applicant/Owner: <u>Thomas McCormick</u>		State: <u>WA</u>																
Investigator(s): <u>Andrew Allison</u>		Sampling Date: <u>7/30/2025</u>																
Section, Township, Range: <u>S14 T13N R2W</u>		Sampling Point: <u>TP-10</u>																
Landform (hillside, terrace, etc.): <u>terrace</u>	Local relief (concave, convex, none): <u>concave</u>	Slope (%): <u>0-3</u>																
Subregion (LRR): <u>LRR A, MLRA 4A</u>	Lat: <u>46.61402122</u>	Long: <u>-122.9027906</u>																
Datum: <u>NAD83</u>																		
Soil Map Unit Name: <u>118—Lacamas silt loam, 0 to 3 percent slopes</u>		NWI classification: <u>PEM1C</u>																
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u> </u> (If no, explain in Remarks.)																		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u> </u>																		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> naturally problematic? (If needed, explain any answers in Remarks.)																		
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.																		
Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>		Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>																
Remarks:																		
VEGETATION – Use scientific names of plants.																		
Tree Stratum (Plot size: <u>30</u>) 1. _____ 2. _____ 3. _____ 4. _____ <div style="text-align: right;">=Total Cover</div>		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)																
Sapling/Shrub Stratum (Plot size: <u>15</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ <div style="text-align: right;">=Total Cover</div>																		
Herb Stratum (Plot size: <u>10</u>) 1. <u>Lolium arundinaceum</u> 25 Yes FAC 2. <u>Agrostis gigantea</u> 25 Yes FAC 3. <u>Anthoxanthum odoratum</u> 20 Yes FACU 4. <u>Carex athrostachya</u> 15 No FACW 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ <div style="text-align: right;">85 =Total Cover</div>																		
Woody Vine Stratum (Plot size: <u>10</u>) 1. _____ 2. _____ <div style="text-align: right;">=Total Cover</div>																		
% Bare Ground in Herb Stratum <u>15</u>																		
Remarks:		Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>15</u></td> <td>x 2 = <u>30</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>85</u> (A)</td> <td><u>260</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.06</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>15</u>	x 2 = <u>30</u>	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>85</u> (A)	<u>260</u> (B)	Prevalence Index = B/A = <u>3.06</u>	
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Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																		

SOIL

Sampling Point: TP-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 4/2	100					Loamy/Clayey	
2-7	10YR 3/1	98	5YR 5/6	2	C	PL	Loamy/Clayey	Prominent redox concentrations
7-16	10YR 4/1	99	10YR 6/8	1	C	M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) (LRR A, E)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D, G)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G)	<input type="checkbox"/> Redox Depressions (F8)	

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

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

HYDROLOGY

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

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

Remarks: _____

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: <u>Lewis County Parcel 017867005000</u>	City/County: <u>Lewis</u>	Sampling Date: <u>7/30/2025</u>
Applicant/Owner: <u>Thomas McCormick</u>	State: <u>WA</u>	Sampling Point: <u>TP-11</u>
Investigator(s): <u>Andrew Allison</u>	Section, Township, Range: <u>S14 T13N R2W</u>	
Landform (hillside, terrace, etc.): <u>terrace</u>	Local relief (concave, convex, none): <u>none</u>	Slope (%): <u>0-3</u>
Subregion (LRR): <u>LRR A, MLRA 4A</u>	Lat: <u>46.61397537</u>	Long: <u>-122.9026696</u>
Datum: <u>NAD83</u>		
Soil Map Unit Name: <u>118—Lacamas silt loam, 0 to 3 percent slopes</u>		NWI classification: <u>PEM1C</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u> </u> (If no, explain in Remarks.)		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u> </u>		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	<table style="width:100%;"> <tr> <td style="width:60%;">Is the Sampled Area within a Wetland?</td> <td style="width:40%;">Yes <u> </u> No <u>X</u></td> </tr> </table>	Is the Sampled Area within a Wetland?	Yes <u> </u> No <u>X</u>
Is the Sampled Area within a Wetland?	Yes <u> </u> No <u>X</u>		
Remarks:			

VEGETATION – Use scientific names of plants.

<table style="width:100%;"> <tr> <th style="text-align: left;">Tree Stratum</th> <th style="text-align: center;">(Plot size: <u>30</u>)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="5" style="text-align: right;">=Total Cover</td></tr> </table> <table style="width:100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum</th> <th style="text-align: center;">(Plot size: <u>15</u>)</th> <th></th> <th></th> <th></th> </tr> <tr><td>1. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="5" style="text-align: right;">=Total Cover</td></tr> </table> <table style="width:100%;"> <tr> <th style="text-align: left;">Herb Stratum</th> <th style="text-align: center;">(Plot size: <u>10</u>)</th> <th></th> <th></th> <th></th> </tr> <tr><td>1. <u>Anthoxanthum odoratum</u></td><td></td><td style="text-align: center;">40</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACU</td></tr> <tr><td>2. <u>Lolium arundinaceum</u></td><td></td><td style="text-align: center;">40</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>3. <u>Leontodon saxatilis</u></td><td></td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACU</td></tr> <tr><td>4. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>6. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>8. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>9. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>10. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>11. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="5" style="text-align: right;">100 =Total Cover</td></tr> </table> <table style="width:100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum</th> <th style="text-align: center;">(Plot size: <u>10</u>)</th> <th></th> <th></th> <th></th> </tr> <tr><td>1. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="5" style="text-align: right;">=Total Cover</td></tr> </table> <p>% Bare Ground in Herb Stratum <u> </u></p>	Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	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0-12	10YR 4/2	100					Loamy/Clayey	
12-16	10YR 4/1	100					Loamy/Clayey	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> 1 cm Muck (A9) (LRR D, G) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) (LRR A, E) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (F22) <input type="checkbox"/> Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>				<u>Secondary Indicators (2 or more required)</u>			
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)					
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)				Wetland Hydrology Present? Yes _____ No <u>X</u>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: <u>Lewis County Parcel 017867005000</u>	City/County: <u>Lewis</u>	Sampling Date: <u>7/30/2025</u>
Applicant/Owner: <u>Thomas McCormick</u>	State: <u>WA</u>	Sampling Point: <u>TP-12</u>
Investigator(s): <u>Andrew Allison</u>	Section, Township, Range: <u>S14 T13N R2W</u>	
Landform (hillside, terrace, etc.): <u>terrace</u>	Local relief (concave, convex, none): <u>none</u>	Slope (%): <u>0-3</u>
Subregion (LRR): <u>LRR A, MLRA 4A</u>	Lat: <u>46.61424748</u>	Long: <u>-122.9017541</u> Datum: <u>NAD83</u>
Soil Map Unit Name: <u>118—Lacamas silt loam, 0 to 3 percent slopes</u>		NWI classification: <u>PEM1C</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u> </u> (If no, explain in Remarks.)		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u> </u>		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2.																					
3.																					
4.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>65</u></td> <td>x 4 = <u>260</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>365</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.65</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>65</u>	x 4 = <u>260</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>365</u> (B)	Prevalence Index = B/A = <u>3.65</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>0</u>	x 2 = <u>0</u>																				
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Column Totals: <u>100</u> (A)	<u>365</u> (B)																				
Prevalence Index = B/A = <u>3.65</u>																					
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>10</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Anthoxanthum odoratum</u>		<u>40</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Rumex acetosella</u>		<u>5</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Leucanthemum vulgare</u>		<u>15</u>	<u>No</u>	<u>FACU</u>																	
4. <u>Leontodon saxatilis</u>		<u>5</u>	<u>No</u>	<u>FACU</u>																	
5. <u>Lolium arundinaceum</u>		<u>35</u>	<u>Yes</u>	<u>FAC</u>																	
6.																					
7.																					
8.																					
9.																					
10.																					
11.																					
		<u>100</u>	=Total Cover																		
Woody Vine Stratum	(Plot size: <u>10</u>)																				
1.																					
2.																					
		=Total Cover																			
% Bare Ground in Herb Stratum <u> </u>																					
Remarks:																					

SOIL

Sampling Point: TP-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 4/3	100					Loamy/Clayey	
5-16	10YR 4/2	100					Loamy/Clayey	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> 1 cm Muck (A9) (LRR D, G) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) (LRR A, E) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (F22) <input type="checkbox"/> Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>				<u>Secondary Indicators (2 or more required)</u>			
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)					
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)				Wetland Hydrology Present? Yes _____ No <u>X</u>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R		OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)																
Project/Site: <u>Lewis County Parcel 017867005000</u>		City/County: <u>Lewis</u>																
Applicant/Owner: <u>Thomas McCormick</u>		State: <u>WA</u>																
Investigator(s): <u>Andrew Allison</u>		Sampling Date: <u>7/30/2025</u>																
Section, Township, Range: <u>S14 T13N R2W</u>		Sampling Point: <u>TP-13</u>																
Landform (hillside, terrace, etc.): <u>terrace</u>	Local relief (concave, convex, none): <u>none</u>	Slope (%): <u>0-3</u>																
Subregion (LRR): <u>LRR A, MLRA 4A</u>	Lat: <u>46.61474897</u>	Long: <u>-122.9021545</u>																
Datum: <u>NAD83</u>																		
Soil Map Unit Name: <u>118—Lacamas silt loam, 0 to 3 percent slopes</u>		NWI classification: <u>non-wetland</u>																
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u> </u> (If no, explain in Remarks.)																		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u> </u>																		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> naturally problematic? (If needed, explain any answers in Remarks.)																		
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.																		
Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>		Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>																
Remarks:																		
VEGETATION – Use scientific names of plants.																		
Tree Stratum (Plot size: <u>30</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> =Total Cover		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
Sapling/Shrub Stratum (Plot size: <u>15</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> =Total Cover																		
Herb Stratum (Plot size: <u>10</u>) 1. <u>Anthoxanthum odoratum</u> 40 Yes FACU 2. <u>Lolium arundinaceum</u> 40 Yes FAC 3. <u>Rumex acetosella</u> 10 No FACU 4. <u>Leontodon saxatilis</u> 10 No FACU 5. <u> </u> 6. <u> </u> 7. <u> </u> 8. <u> </u> 9. <u> </u> 10. <u> </u> 11. <u> </u> 100 =Total Cover																		
Woody Vine Stratum (Plot size: <u>10</u>) 1. <u> </u> 2. <u> </u> =Total Cover																		
% Bare Ground in Herb Stratum <u> </u>		Prevalence Index worksheet: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>60</u></td> <td>x 4 = <u>240</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>360</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.60</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>360</u> (B)	Prevalence Index = B/A = <u>3.60</u>	
Total % Cover of:	Multiply by:																	
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Column Totals: <u>100</u> (A)	<u>360</u> (B)																	
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Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																		
Remarks:																		

SOIL

Sampling Point: TP-13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/3	100					Loamy/Clayey	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> 1 cm Muck (A9) (LRR D, G) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) (LRR A, E) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR D) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (F22) <input type="checkbox"/> Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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Restrictive Layer (if observed): Type: <u>Gravel</u> Depth (inches): <u>12</u>	Hydric Soil Present? Yes <u> </u> No <u>X</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>				<u>Secondary Indicators (2 or more required)</u>			
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)					
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)				Wetland Hydrology Present? Yes <u> </u> No <u>X</u>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: <u>Lewis County Parcel 017867005000</u>	City/County: <u>Lewis</u>	Sampling Date: <u>7/30/2025</u>
Applicant/Owner: <u>Thomas McCormick</u>	State: <u>WA</u>	Sampling Point: <u>TP-14</u>
Investigator(s): <u>Andrew Allison</u>	Section, Township, Range: <u>S14 T13N R2W</u>	
Landform (hillside, terrace, etc.): <u>terrace</u>	Local relief (concave, convex, none): <u>none</u>	Slope (%): <u>0-3</u>
Subregion (LRR): <u>LRR A, MLRA 4A</u>	Lat: <u>46.61553357</u>	Long: <u>-122.9028244</u> Datum: <u>NAD83</u>
Soil Map Unit Name: <u>118—Lacamas silt loam, 0 to 3 percent slopes</u>		NWI classification: <u>non-wetland</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u> </u> (If no, explain in Remarks.)		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u> </u>		
Are Vegetation <u> </u> , Soil <u> </u> , or Hydrology <u> </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2.																					
3.																					
4.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15</u>)				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 = <u>200</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>350</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.50</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>50</u>	x 4 = <u>200</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>350</u> (B)	Prevalence Index = B/A = <u>3.50</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>0</u>	x 2 = <u>0</u>																				
FAC species <u>50</u>	x 3 = <u>150</u>																				
FACU species <u>50</u>	x 4 = <u>200</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>100</u> (A)	<u>350</u> (B)																				
Prevalence Index = B/A = <u>3.50</u>																					
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: <u>10</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Anthoxanthum odoratum</u>		<u>50</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Lolium arundinaceum</u>		<u>50</u>	<u>Yes</u>	<u>FAC</u>																	
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
11.																					
		<u>100</u> =Total Cover																			
Woody Vine Stratum	(Plot size: <u>10</u>)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
1.																					
2.																					
		=Total Cover																			
% Bare Ground in Herb Stratum <u> </u>																					
Remarks:																					

SOIL

Sampling Point: TP-14

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe)			
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

APPENDIX B – WETLAND RATING

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 7/30/2025

Rated by Andrew Allison Trained by Ecology? ☒ Yes ☐ No Date of training 4/2015

HGM Class used for rating Depressional Wetland has multiple HGM classes? ☐ Y ☒ N

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

Source of base aerial photo/map Google Earth Pro

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

1. Category of wetland based on FUNCTIONS

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

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

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

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
Site Potential	H M L	H M L	H M L	
Landscape Potential	H M L	H M L	H M L	
Value	H M L	H M L	H M L	TOTAL
Score Based on Ratings	6	5	4	15

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

9 = H, H, H

8 = H, H, M

7 = H, H, L

7 = H, M, M

6 = H, M, L

6 = M, M, M

5 = H, L, L

5 = M, M, L

4 = M, L, L

3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number A

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	3
Hydroperiods	D 1.4, H 1.2	3
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	3
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	4
Map of the contributing basin	D 4.3, D 5.3	5
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total habitat	H 2.1, H 2.2, H 2.3	6
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	7
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	8

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetlands in Western Washington

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

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

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

☒ **NO** – go to 2

YES – the wetland class is **Tidal Fringe** – go to 1.1

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

NO – Saltwater Tidal Fringe (Estuarine)

YES – Freshwater Tidal Fringe

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

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

☒ **NO** – go to 3

YES – The wetland class is **Flats**

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

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

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

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

☒ **NO** – go to 4

YES – The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

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

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

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

☒ **NO** – go to 5

YES – The wetland class is **Slope**

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

Wetland name or number A

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

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

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

NO – go to 6

YES – The wetland class is **Riverine**

NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland name or number A

DEPRESSIONAL AND FLATS WETLANDS

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

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

D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	2
D 1.2. The soil 2 in. below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed plants > 95% of area points = 5 Wetland has persistent, ungrazed plants > ½ of area points = 3 Wetland has persistent, ungrazed plants ≥ 1/10 of area points = 1 Wetland has persistent, ungrazed plants < 1/10 of area points = 0	0
D 1.4. Characteristics of seasonal ponding or inundation: <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is ≥ ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	2
Total for D 1	4

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

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

D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	1
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source _____	Yes = 1 No = 0	0
Total for D 2	Add the points in the boxes above	2

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

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

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

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

Wetland name or number A

DEPRESSIONAL AND FLATS WETLANDS

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

D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (question 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	2	
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	0	
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	0	
Total for D 4 Add the points in the boxes above		2

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

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?		
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0	
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1	
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	1	
Total for D 5 Add the points in the boxes above		2

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

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. Is the unit in a landscape that has flooding problems? Choose the description that best matches conditions around the wetland unit being rated. Do not add points. <u>Choose the highest score if more than one condition is met.</u> The wetland captures surface water that would otherwise flow downgradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): <ul style="list-style-type: none"> • Flooding occurs in a sub-basin that is immediately downgradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther downgradient. points = 1 • Flooding from groundwater is an issue in the sub-basin. points = 1 • The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. <i>Explain why</i> _____ points = 0 • There are no problems with flooding downstream of the wetland. points = 0 	1	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0	
Total for D 6 Add the points in the boxes above		1

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

Wetland name or number A

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

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

H 1.2. Hydroperiods

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

- | | | |
|--|-------------------------------------|---|
| <input type="checkbox"/> Permanently flooded or inundated | 4 or more types present: points = 3 | 0 |
| <input type="checkbox"/> Seasonally flooded or inundated | 3 types present: points = 2 | |
| <input type="checkbox"/> Occasionally flooded or inundated | 2 types present: points = 1 | |
| <input checked="" type="checkbox"/> Saturated only | 1 type present: points = 0 | |
| <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland | | |
| <input type="checkbox"/> Intermittently or seasonally flowing stream in, or adjacent to, the wetland | | |
| <input type="checkbox"/> Lake Fringe wetland | 2 points | |
| <input type="checkbox"/> Freshwater tidal wetland | 2 points | |

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft².

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

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

H 1.4. Interspersion of habitats

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



None = 0 points



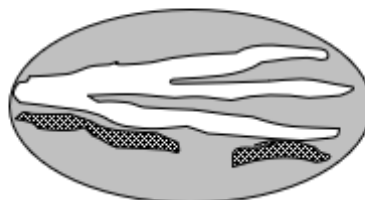
Low = 1 point



Moderate = 2 points



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



0

Wetland name or number A

H 1.5. Special habitat features:

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

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

1

Total for H 1

Add the points in the boxes above

1

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

Record the rating on the first page

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

H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland.

Calculate: % relatively undisturbed habitat 0 + [(% moderate and low intensity land uses)/2] 3.5 = 3.5 %

Total accessible habitat is:

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

points = 3

20-33% of 1 km Polygon

points = 2

10-19% of 1 km Polygon

points = 1

< 10% of 1 km Polygon

points = 0

0

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

Calculate: % relatively undisturbed habitat 0 + [(% moderate and low intensity land uses)/2] 7 = 7 %

Total habitat > 50% of Polygon

points = 3

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

points = 2

Total habitat 10-50% and > 3 patches

points = 1

Total habitat < 10% of 1 km Polygon

points = 0

0

H 2.3. Land use intensity in 1 km Polygon:

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

points = (- 2)

≤ 50% of 1 km Polygon is high intensity

points = 0

-2

Total for H 2

Add the points in the boxes above

-2

Rating of Landscape Potential If score is: 4-6 = H 1-3 = M X < 1 = L

Record the rating on the first page

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

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

Site meets ANY of the following criteria:

points = 2

— It has 3 or more Priority Habitats within 100 m (see next page)

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

— It is mapped as a location for an individual WDFW Priority Species

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

— It has been categorized as an important habitat site in a local or regional comprehensive plan, in a

Shoreline Master Plan, or in a watershed plan

Site has 1 or 2 Priority Habitats (listed on next page) within 100 m

points = 1

Site does not meet any of the criteria above

points = 0

1

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

Record the rating on the first page

WDFW Priority Habitats

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

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

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

- **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).
- **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. Do not select if Fresh Deepwater habitat is also present.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.
- **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in. (81 cm) diameter at breast height (dbh) or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in. (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

¹³³ <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf>
Wetland Rating System for Western WA: 2014 Update
Rating Form – Version 2, July 2023

Wetland name or number A

- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, [WDFW's Management Recommendations for Oregon White Oak](#)¹³⁴ provides more detail for determining if they are Priority Habitats
- **Riparian:** The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- X **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in. (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in. (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.
- **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

¹³⁴ <https://wdfw.wa.gov/publications/00030/wdfw00030.pdf>
Wetland Rating System for Western WA: 2014 Update
Rating Form – Version 2, July 2023

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

¹³⁵ <https://www.dnr.wa.gov/NHPdata>¹³⁶ https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

Wetland name or number A

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? <i>If you answer YES, you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> — Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in. (81 cm) or more. — Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in. (53 cm). <p style="text-align: right;">Yes = Category I No = Not a forested wetland for this section</p>	<p style="text-align: center;">Cat. I</p>
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) — The lagoon retains some of its surface water at low tide during spring tides <p>Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species in H 1.5 in the manual). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) <p>Yes = Category I No = Category II</p>	<p style="text-align: center;">Cat. I</p> <p style="text-align: center;">Cat. II</p>
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer YES, you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. <p style="text-align: right;">Yes – Go to SC 6.1 No = Not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV</p>	<p style="text-align: center;">Cat I</p> <p style="text-align: center;">Cat. II</p> <p style="text-align: center;">Cat. III</p> <p style="text-align: center;">Cat. IV</p>
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p style="text-align: center;">n/a</p>

Wetland name or number B

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B Date of site visit: 7/30/2025

Rated by Andrew Allison Trained by Ecology? ☒ Yes ☐ No Date of training 4/2015

HGM Class used for rating Depressional Wetland has multiple HGM classes? ☐ Y ☒ N

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

Source of base aerial photo/map Google Earth Pro

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

1. Category of wetland based on FUNCTIONS

 Category I – Total score = 23 - 27

 Category II – Total score = 20 - 22

 Category III – Total score = 16 - 19

X Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality			Hydrologic			Habitat			
Circle the appropriate ratings										
Site Potential	H	M	L	H	M	L	H	M	L	
Landscape Potential	H	M	L	H	M	L	H	M	L	
Value	H	M	L	H	M	L	H	M	L	
Score Based on Ratings	6			5			4			TOTAL
										15

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

9 = H, H, H

8 = H, H, M

7 = H, H, L

7 = H, M, M

6 = H, M, L

6 = M, M, M

5 = H, L, L

5 = M, M, L

4 = M, L, L

3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number B

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	3
Hydroperiods	D 1.4, H 1.2	3
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	3
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	4
Map of the contributing basin	D 4.3, D 5.3	5
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total habitat	H 2.1, H 2.2, H 2.3	6
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	7
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	8

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetlands in Western Washington

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

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

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

☒ **NO** – go to 2

YES – the wetland class is **Tidal Fringe** – go to 1.1

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

NO – Saltwater Tidal Fringe (Estuarine)

YES – Freshwater Tidal Fringe

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

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

☒ **NO** – go to 3

YES – The wetland class is **Flats**

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

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

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

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

☒ **NO** – go to 4

YES – The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

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

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

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

☒ **NO** – go to 5

YES – The wetland class is **Slope**

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

Wetland name or number B

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

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

NO – go to 6

YES – The wetland class is **Riverine**

NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland name or number B

DEPRESSIONAL AND FLATS WETLANDS

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

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

D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	3
D 1.2. The soil 2 in. below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed plants > 95% of area points = 5 Wetland has persistent, ungrazed plants > ½ of area points = 3 Wetland has persistent, ungrazed plants ≥ 1/10 of area points = 1 Wetland has persistent, ungrazed plants < 1/10 of area points = 0	0
D 1.4. Characteristics of seasonal ponding or inundation: <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is ≥ ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	2
Total for D 1 Add the points in the boxes above	5

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

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

D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source _____ Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	1

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

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

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

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

Wetland name or number B

DEPRESSIONAL AND FLATS WETLANDS

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

D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (question 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0		4
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0		0
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5		0
Total for D 4		4

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

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?		
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0		0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0		1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0		1
Total for D 5		2

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

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. Is the unit in a landscape that has flooding problems? Choose the description that best matches conditions around the wetland unit being rated. Do not add points. <u>Choose the highest score if more than one condition is met.</u> The wetland captures surface water that would otherwise flow downgradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): <ul style="list-style-type: none"> Flooding occurs in a sub-basin that is immediately downgradient of unit. points = 2 Surface flooding problems are in a sub-basin farther downgradient. points = 1 Flooding from groundwater is an issue in the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. <i>Explain why</i> _____ points = 0 There are no problems with flooding downstream of the wetland. points = 0 		1
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0		0
Total for D 6		1

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

Wetland name or number B

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

- | | | |
|--|----------------------------------|---|
| <input type="checkbox"/> Aquatic bed | 4 structures or more: points = 4 | 0 |
| <input checked="" type="checkbox"/> Emergent | 3 structures: points = 2 | |
| <input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) | 2 structures: points = 1 | |
| <input type="checkbox"/> Forested (areas where trees have > 30% cover) | 1 structure: points = 0 | |
| <i>If the unit has a Forested class, check if:</i> | | |

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

H 1.2. Hydroperiods

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

- | | | |
|--|-------------------------------------|---|
| <input type="checkbox"/> Permanently flooded or inundated | 4 or more types present: points = 3 | 0 |
| <input type="checkbox"/> Seasonally flooded or inundated | 3 types present: points = 2 | |
| <input type="checkbox"/> Occasionally flooded or inundated | 2 types present: points = 1 | |
| <input checked="" type="checkbox"/> Saturated only | 1 type present: points = 0 | |
| | | |

☐ Permanently flowing stream or river in, or adjacent to, the wetland

☐ Intermittently or seasonally flowing stream in, or adjacent to, the wetland

☐ **Lake Fringe wetland**

2 points

☐ **Freshwater tidal wetland**

2 points

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft².

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

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

H 1.4. Interspersion of habitats

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



None = 0 points



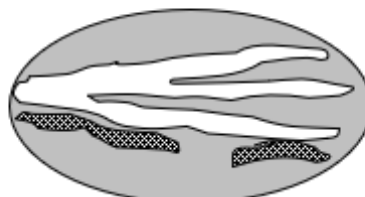
Low = 1 point



Moderate = 2 points



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



0

Wetland name or number B

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. The number of checks is the number of points. <input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long). <input type="checkbox"/> Standing snags (dbh > 4 in.) within the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extend at least 3.3 ft (1 m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed) <input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)		0
Total for H 1	Add the points in the boxes above	1

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

H 2.0. Does the landscape have the potential to support the habitat functions of the site?		
H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland. <i>Calculate:</i> % relatively undisturbed habitat <u> 0 </u> + [(% moderate and low intensity land uses)/2] <u> 3.5 </u> = <u> 3.5 </u> % Total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0		0
H 2.2. Total habitat in 1 km Polygon around the wetland. <i>Calculate:</i> % relatively undisturbed habitat <u> 0 </u> + [(% moderate and low intensity land uses)/2] <u> 7 </u> = <u> 7 </u> % Total habitat > 50% of Polygon points = 3 Total habitat 10-50% and in 1-3 patches points = 2 Total habitat 10-50% and > 3 patches points = 1 Total habitat < 10% of 1 km Polygon points = 0		0
H 2.3. Land use intensity in 1 km Polygon: > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0		-2
Total for H 2	Add the points in the boxes above	-2

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

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

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

WDFW Priority Habitats

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

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

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

- **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).
- **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. Do not select if Fresh Deepwater habitat is also present.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.
- **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in. (81 cm) diameter at breast height (dbh) or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in. (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

¹³³ <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf>
Wetland Rating System for Western WA: 2014 Update
Rating Form – Version 2, July 2023

Wetland name or number B

- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, [WDFW's Management Recommendations for Oregon White Oak](#)¹³⁴ provides more detail for determining if they are Priority Habitats
- **Riparian:** The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- X **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in. (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in. (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.
- **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

¹³⁴ <https://wdfw.wa.gov/publications/00030/wdfw00030.pdf>
Wetland Rating System for Western WA: 2014 Update
Rating Form – Version 2, July 2023

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

¹³⁵ <https://www.dnr.wa.gov/NHPdata>¹³⁶ https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

Wetland name or number B

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? <i>If you answer YES, you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> — Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in. (81 cm) or more. — Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in. (53 cm). <p style="text-align: right;">Yes = Category I No = Not a forested wetland for this section</p>	<p style="text-align: center;">Cat. I</p>
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) — The lagoon retains some of its surface water at low tide during spring tides <p style="text-align: right;">Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species in H 1.5 in the manual). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) <p style="text-align: right;">Yes = Category I No = Category II</p>	<p style="text-align: center;">Cat. I</p> <p style="text-align: center;">Cat. II</p>
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer YES, you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. <p style="text-align: right;">Yes – Go to SC 6.1 No = Not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</p> <p style="text-align: right;">Yes = Category I No – Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?</p> <p style="text-align: right;">Yes = Category II No – Go to SC 6.3</p> <p>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?</p> <p style="text-align: right;">Yes = Category III No = Category IV</p>	<p style="text-align: center;">Cat I</p> <p style="text-align: center;">Cat. II</p> <p style="text-align: center;">Cat. III</p> <p style="text-align: center;">Cat. IV</p>
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p style="text-align: center;">n/a</p>

Wetland name or number C

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland C Date of site visit: 7/30/2025

Rated by Andrew Allison Trained by Ecology? ☒ Yes ☐ No Date of training 4/2015

HGM Class used for rating Depressional Wetland has multiple HGM classes? ☐ Y ☒ N

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

Source of base aerial photo/map Google Earth Pro

OVERALL WETLAND CATEGORY III (based on functions ☒ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

 Category I – Total score = 23 - 27

 Category II – Total score = 20 - 22

 X Category III – Total score = 16 - 19

 Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
Site Potential	H <input checked="" type="radio"/> M L	H <input type="radio"/> M <input checked="" type="radio"/> L	H <input type="radio"/> M <input checked="" type="radio"/> L	
Landscape Potential	H <input checked="" type="radio"/> M L	H <input checked="" type="radio"/> M L	H <input type="radio"/> M <input checked="" type="radio"/> L	
Value	<input checked="" type="radio"/> H M L	H <input checked="" type="radio"/> M L	<input checked="" type="radio"/> H M L	TOTAL
Score Based on Ratings	7	5	5	17

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

9 = H, H, H

8 = H, H, M

7 = H, H, L

7 = H, M, M

6 = H, M, L

6 = M, M, M

5 = H, L, L

5 = M, M, L

4 = M, L, L

3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number C

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	3
Hydroperiods	D 1.4, H 1.2	3
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	3
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	4
Map of the contributing basin	D 4.3, D 5.3	5
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total habitat	H 2.1, H 2.2, H 2.3	6
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	7
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	8

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetlands in Western Washington

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

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

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

☒ **NO** – go to 2

YES – the wetland class is **Tidal Fringe** – go to 1.1

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

NO – Saltwater Tidal Fringe (Estuarine)

YES – Freshwater Tidal Fringe

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

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

☒ **NO** – go to 3

YES – The wetland class is **Flats**

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

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

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

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

☒ **NO** – go to 4

YES – The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

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

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

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

☒ **NO** – go to 5

YES – The wetland class is **Slope**

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

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

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

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

NO – go to 6

YES – The wetland class is **Riverine**

NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

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DEPRESSIONAL AND FLATS WETLANDS

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

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

D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	2
D 1.2. The soil 2 in. below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed plants > 95% of area points = 5 Wetland has persistent, ungrazed plants > ½ of area points = 3 Wetland has persistent, ungrazed plants ≥ 1/10 of area points = 1 Wetland has persistent, ungrazed plants < 1/10 of area points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation: <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is ≥ ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	4
Total for D 1	11

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

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

D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source _____	Yes = 1 No = 0	0
Total for D 2	Add the points in the boxes above	1

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

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

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

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

Wetland name or number C

DEPRESSIONAL AND FLATS WETLANDS

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

D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (question 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	2	
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 <u>Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet</u> points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	3	
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	0	
Total for D 4 Add the points in the boxes above		5

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

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?		
D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0	1
Total for D 5 Add the points in the boxes above		2

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

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. Is the unit in a landscape that has flooding problems? Choose the description that best matches conditions around the wetland unit being rated. Do not add points. <u>Choose the highest score if more than one condition is met.</u> The wetland captures surface water that would otherwise flow downgradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): <ul style="list-style-type: none"> • Flooding occurs in a sub-basin that is immediately downgradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther downgradient. points = 1 • Flooding from groundwater is an issue in the sub-basin. points = 1 • The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. <i>Explain why</i> _____ points = 0 • There are no problems with flooding downstream of the wetland. points = 0 	1	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0	
Total for D 6 Add the points in the boxes above		1

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

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These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

- | | | |
|---|----------------------------------|---|
| <input type="checkbox"/> Aquatic bed | 4 structures or more: points = 4 | 1 |
| <input checked="" type="checkbox"/> Emergent | 3 structures: points = 2 | |
| <input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) | 2 structures: points = 1 | |
| <input checked="" type="checkbox"/> Forested (areas where trees have > 30% cover) | 1 structure: points = 0 | |

If the unit has a Forested class, check if:

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

H 1.2. Hydroperiods

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

- | | | |
|---|-------------------------------------|---|
| <input type="checkbox"/> Permanently flooded or inundated | 4 or more types present: points = 3 | 1 |
| <input checked="" type="checkbox"/> Seasonally flooded or inundated | 3 types present: points = 2 | |
| <input type="checkbox"/> Occasionally flooded or inundated | 2 types present: points = 1 | |
| <input checked="" type="checkbox"/> Saturated only | 1 type present: points = 0 | |

- ☐ Permanently flowing stream or river in, or adjacent to, the wetland

- ☐ Intermittently or seasonally flowing stream in, or adjacent to, the wetland

- ☐ **Lake Fringe wetland**

2 points

- ☐ **Freshwater tidal wetland**

2 points

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft².

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

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

H 1.4. Interspersion of habitats

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



None = 0 points



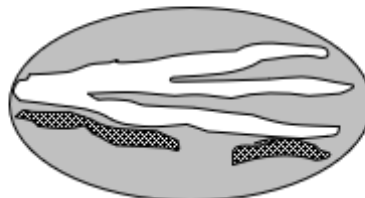
Low = 1 point



Moderate = 2 points



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



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

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

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
<p>H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland).</p> <p>Calculate: % relatively undisturbed habitat <u>0</u> + [(% moderate and low intensity land uses)/2] <u>3.5</u> = <u>3.5</u> %</p> <p>Total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p>	0
<p>H 2.2. Total habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % relatively undisturbed habitat <u>0</u> + [(% moderate and low intensity land uses)/2] <u>7</u> = <u>7</u> %</p> <p>Total habitat > 50% of Polygon points = 3</p> <p>Total habitat 10-50% and in 1-3 patches points = 2</p> <p>Total habitat 10-50% and > 3 patches points = 1</p> <p>Total habitat < 10% of 1 km Polygon points = 0</p>	0
<p>H 2.3. Land use intensity in 1 km Polygon:</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>	-2
<p>Total for H 2</p>	<p>Add the points in the boxes above</p> <p>-2</p>

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

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

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

WDFW Priority Habitats

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

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

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

- **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).
- **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- ☒ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. Do not select if Fresh Deepwater habitat is also present.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.
- **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in. (81 cm) diameter at breast height (dbh) or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in. (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

¹³³ <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf>
Wetland Rating System for Western WA: 2014 Update
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- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, [WDFW's Management Recommendations for Oregon White Oak](#)¹³⁴ provides more detail for determining if they are Priority Habitats
- X **Riparian:** The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- X **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in. (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in. (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.
- **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

¹³⁴ <https://wdfw.wa.gov/publications/00030/wdfw00030.pdf>
Wetland Rating System for Western WA: 2014 Update
Rating Form – Version 2, July 2023

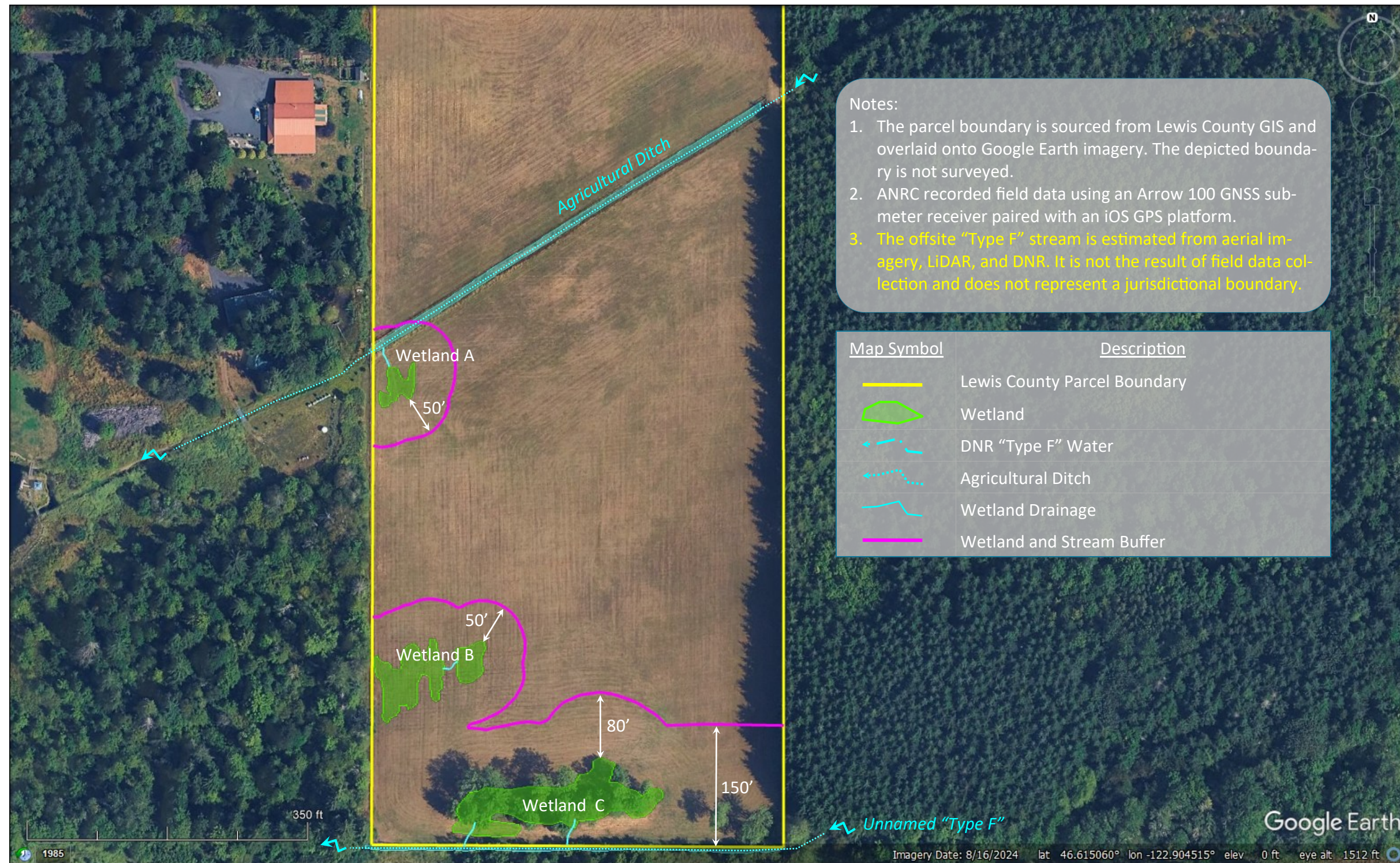
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

¹³⁵ <https://www.dnr.wa.gov/NHPdata>¹³⁶ https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? <i>If you answer YES, you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> — Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in. (81 cm) or more. — Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in. (53 cm). <p style="text-align: right;">Yes = Category I No = Not a forested wetland for this section</p>	Cat. I
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) — The lagoon retains some of its surface water at low tide during spring tides <p>Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species in H 1.5 in the manual). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) <p>Yes = Category I No = Category II</p>	Cat. I Cat. II
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer YES, you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. <p style="text-align: right;">Yes – Go to SC 6.1 No = Not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV</p>	Cat I Cat. II Cat. III Cat. IV
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	n/a



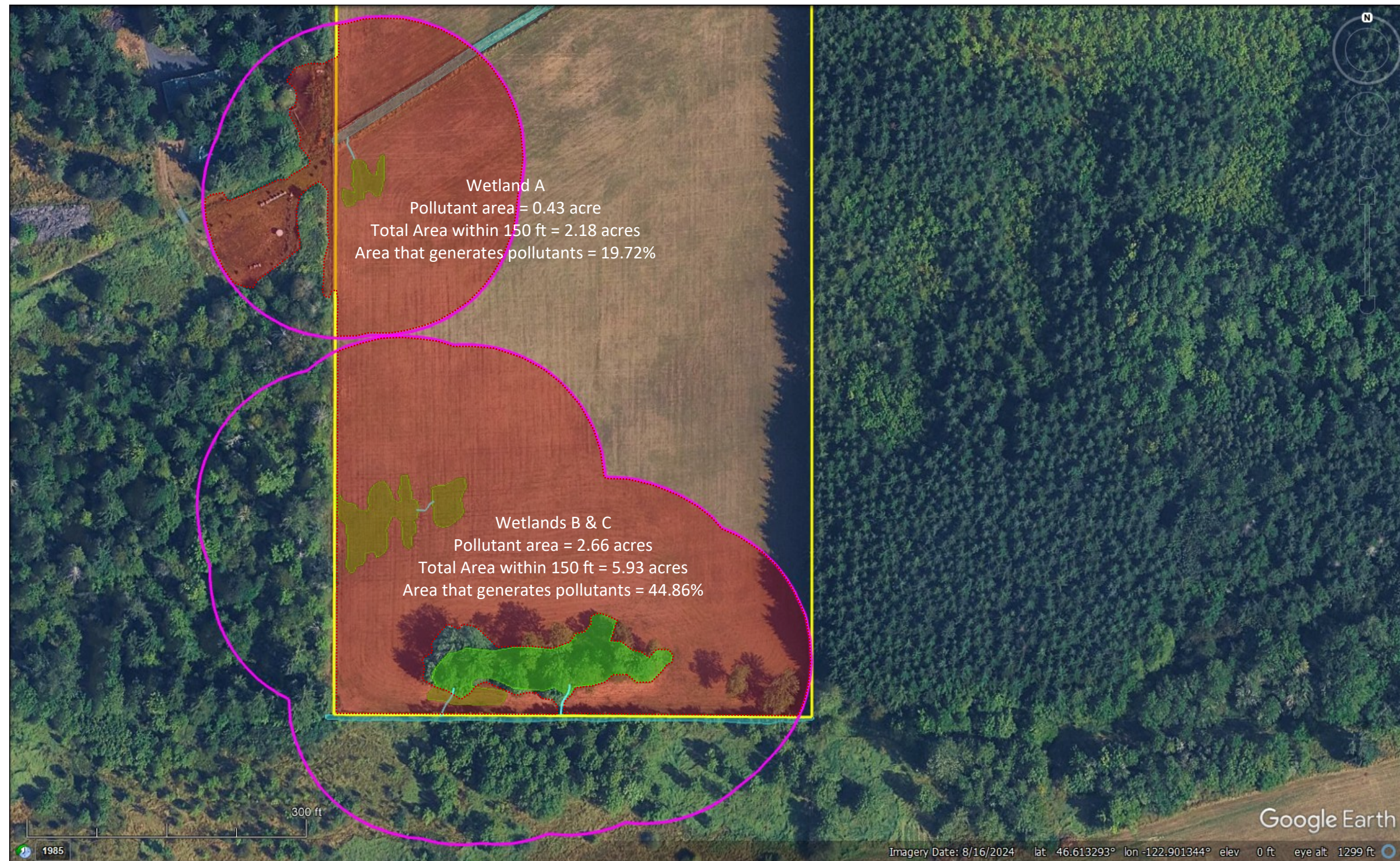




(360) 751-9298
Castle Rock, Wash.
andrew@allisonresource.com

Date: September 2025
Client: Loowit Consulting Group, LLC
Project: Lewis County Parcel 017867005000

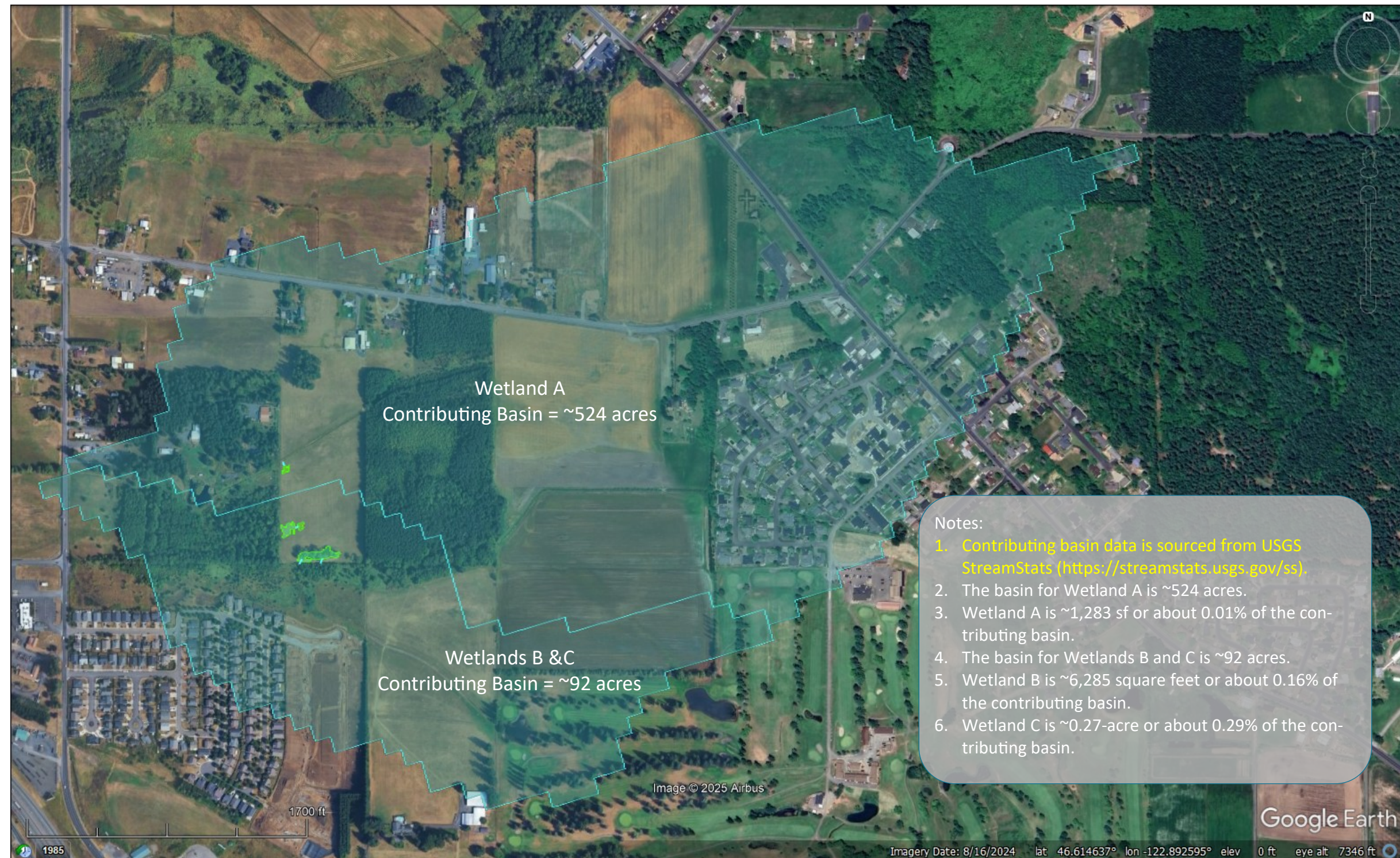
Figure 3
Wetland Rating Figure
Estimated Cowardin Plant Classes,
Hydroperiods, & Outlets



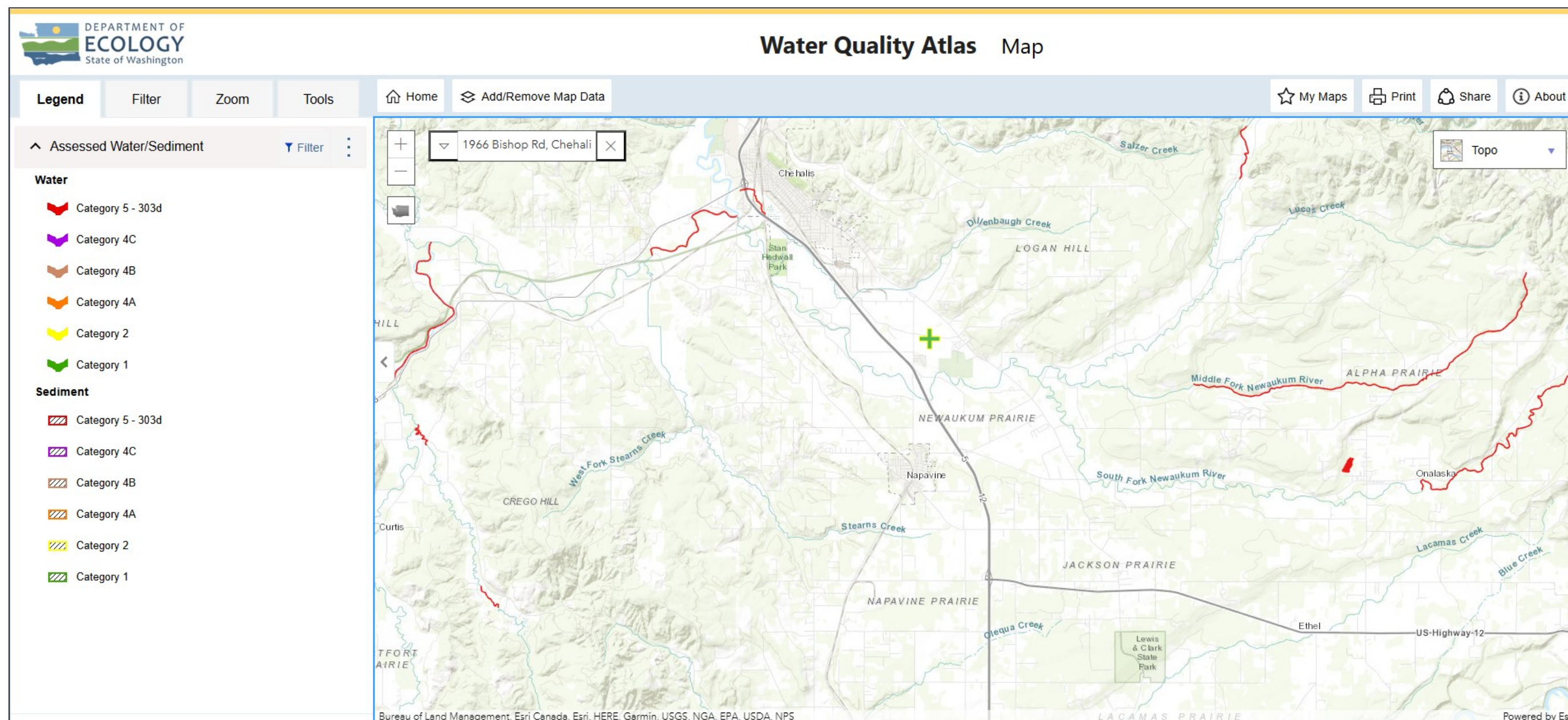
(360) 751-9298
 Castle Rock, Wash.
andrew@allisonresource.com

Date: September 2025
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Figure 4
Wetland Rating Figure
 Pollutant Sources within 150 ft







(360) 751-9298
Castle Rock, Wash.
andrew@allisonresource.com

Date: September 2025
Client: Loowit Consulting Group, LLC
Project: Lewis County Parcel 017867005000

Figure 7
Wetland Rating Figure
Estimated distance to 303(d) waters
in HUC 17080005 - Lower Cowlitz

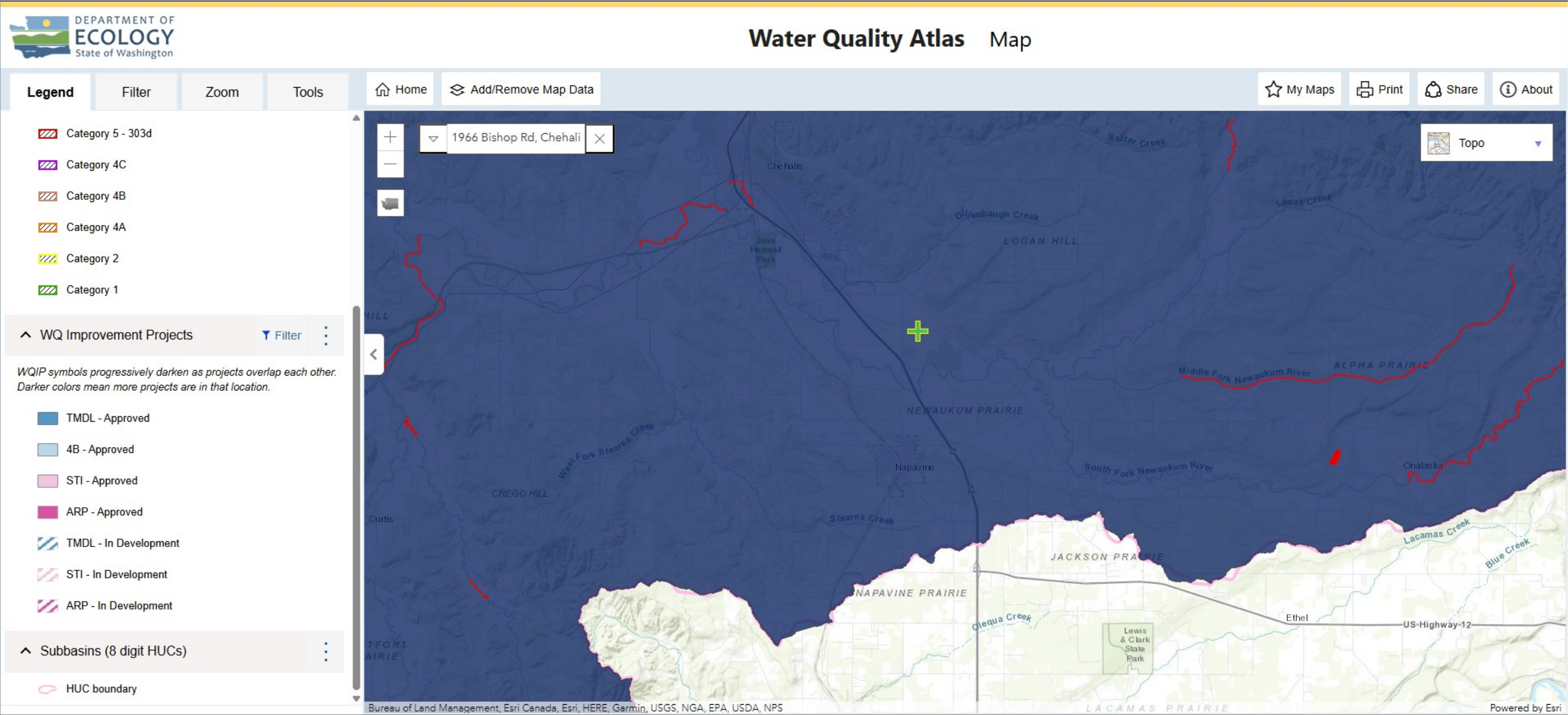
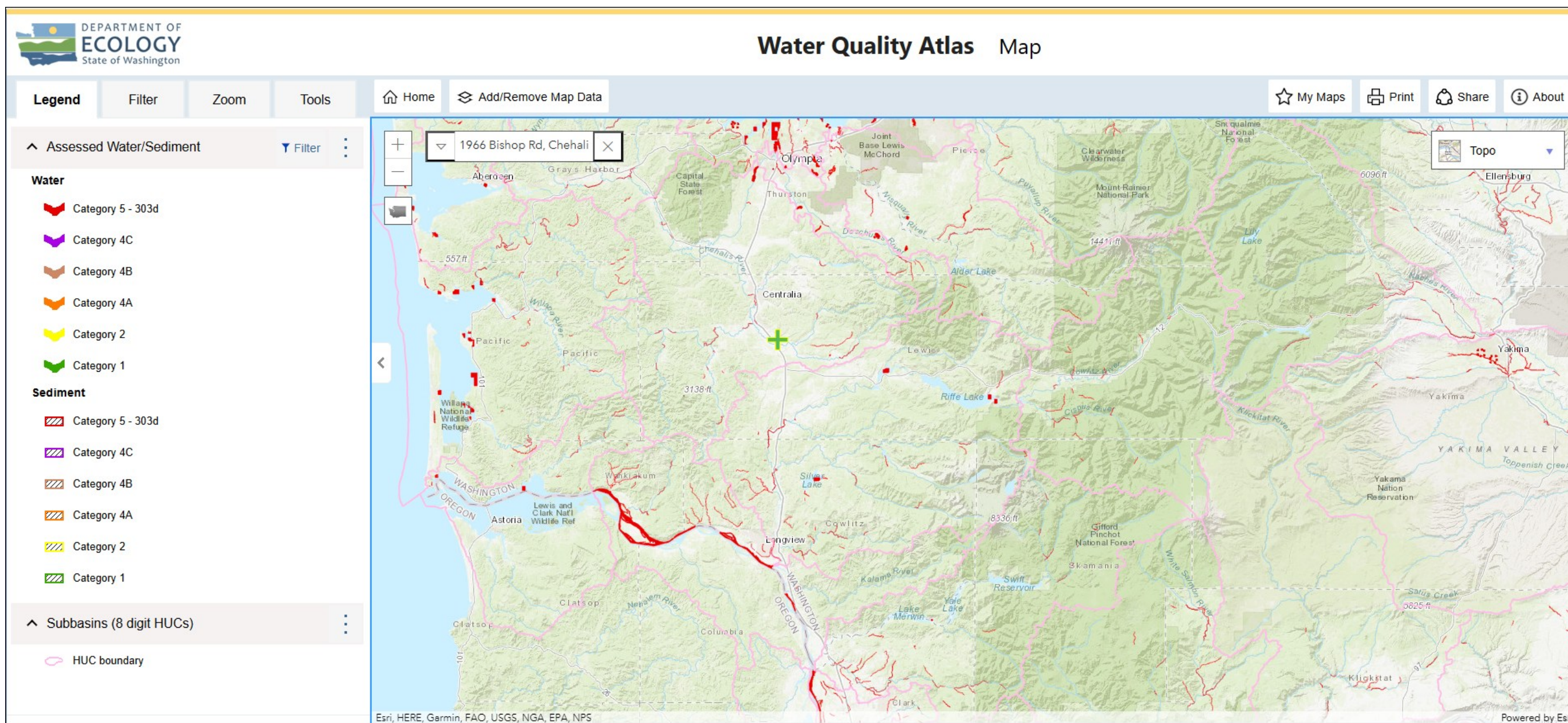


Figure 8
Wetland Rating Figure
Water Quality Improvement Projects
in HUC 17100103 - Upper Chehalis



(360) 751-9298
Castle Rock, Wash.
andrew@allisonresource.com

Date: September 2025
Client: Loowit Consulting Group, LLC
Project: Lewis County Parcel 017867005000



APPENDIX C - CLIMATOLOGICAL SUMMARY

Chehalis, Chehalis, Lewis, WA

2025-07-16 through 2025-07-30

Date	1.5 m Min	1.5 m Avg	1.5 m Max	9 m Min Ai	9 m Avg Ai	9 m Max Ai	1.5 m Avg I	1.5 m Min I	1.5 m Rel. I	1.5 m Rel. I	Solar Radia	Precipitation
7/16/2025	52.9	73.2	93.8	55.9	74.2	92.3	53.4	25.6	57.2	98	28.22	0
7/17/2025	49.9	66.4	85.4	54.1	66.6	83.8	53.5	34.1	67.5	96.4	25.61	0
7/18/2025	51.8	61.4	71.7	54.7	61.4	69.9	53.4	54.2	76.7	96	23.65	0
7/19/2025	49.8	60.1	72.3	53	60.1	70.7	49.9	48.5	70.7	90.4	22.14	0
7/20/2025	48.2	58.9	66.3	50.9	58.8	65	50.5	60.8	74.3	94.3	12.41	0
7/21/2025	49	60.6	74.3	51.4	60.7	72.8	52.9	51.9	77.6	98.6	20.5	0
7/22/2025	56.2	64.4	76.7	56.5	64.1	75.2	55.2	51.6	73.5	93.4	24.78	0
7/23/2025	51.8	66.2	83.9	54.9	66.3	82	55.8	42.9	73	98.9	25.48	0
7/24/2025	50.9	62.3	76.2	54.3	62.2	74.8	53.9	47.7	76.2	98.6	26.49	0
7/25/2025	49.7	60.8	71.7	53.8	60.8	69.8	52.2	53.7	74.7	95.1	21.52	0
7/26/2025	45.6	57.8	69.9	47.7	58.4	68.4	49.1	48	75	98.5	17.13	0
7/27/2025	44.1	60.1	75.7	47.2	60.7	74	49.2	43	70.7	98.2	25.86	0
7/28/2025	44.7	63.6	82.1	47.9	64.2	80.5	49.7	33.6	65.6	98.8	27.14	0
7/29/2025	46.8	66.9	87.7	50.2	67.8	86.5	51.1	27.2	62.8	97.9	26.97	0
7/30/2025	50.4	64.6	85.9	52.9	65.5	84.5	53.9	36.8	71.6	96	13.75	0

2 m Avg W	2 m Max W	10 m Avg V	10 m Max V	10 m Avg V 2 in	Avg So 2 in	Avg So 4 in	Avg So 4 in	Avg So 8 in	Avg So 8 in	Avg So 20 in	Avg S	20 in Avg S
2.8	19.5	3.6	10 W	78.3	NA	NA	NA	74.4	-191.3	NA	NA	
3.1	13.5	3.9	8.1 W	78.7	NA	NA	NA	74.8	-200.7	NA	NA	
5	15.9	6.4	9.7 SW	79.3	NA	NA	NA	74.9	-212.8	NA	NA	
3.8	14.1	4.7	10.8 W	77.8	NA	NA	NA	74.2	-226.4	NA	NA	
2.5	9.9	3.2	5.7 W	74.4	NA	NA	NA	73	-239.7	NA	NA	
2.9	12.9	3.7	8.7 W	75.2	-35464.7	NA	NA	71.8	-251.9	NA	NA	
3.9	14.1	4.8	9.9 W	77.4	-46865.3	NA	NA	72.8	-259.9	NA	NA	
2.7	14.1	3.5	9.9 NW	77.7	-46184.3	NA	NA	73.8	-268.5	NA	NA	
4.4	16.5	5.6	10.8 W	78	-47469.5	NA	NA	74.5	-279	NA	NA	
4.4	14.7	5.6	11.4 W	77.9	-54856.9	NA	NA	74.2	-294	NA	NA	
2.5	13.5	3.3	8.3 SW	74.7	-67591.1	NA	NA	72.8	-311.3	NA	NA	
2.4	16.5	3.3	7.8 W	76.1	-63528	NA	NA	72	-326.5	NA	NA	
2.7	12.9	3.4	8.4 NW	75.8	-61372	NA	NA	72.5	-336.8	NA	NA	
2.8	14.1	3.8	9.4 NW	76.3	-59485.8	NA	NA	73.1	-348.1	NA	NA	
3	13.5	3.8	7.5 NW	76.8	-63791.8	NA	NA	74.1	-352.8	NA	NA	

ETo	ETr
0.24	0.29
0.2	0.24
0.16	0.19
0.16	0.19
0.09	0.1
0.14	0.17
0.18	0.21
0.19	0.22
0.18	0.22
0.15	0.18
0.12	0.14
0.16	0.19
0.19	0.23
0.21	0.25
0.14	0.18