

Appendix C

Wetland Determination Data Forms

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ /Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W1-SP1 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): ≤1
 Subregion (LRR): A Lat: 46.2825856668989 Long: -124.05938831190 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located ~10' west of flag W1-A8. Sample point meets all three wetland criteria; sample point is wetland.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Alnus rubra</i></u>	<u>65</u>	<u>yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
50% = <u>65</u> , 20% = <u>65</u>	<u>65</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u><i>Rubus armeniacus</i></u>	<u>25</u>	<u>yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
3. _____	_____	_____	_____	OBL species _____ x1 = _____
4. _____	_____	_____	_____	FACW species _____ x2 = _____
5. _____	_____	_____	_____	FAC species _____ x3 = _____
50% = <u>25</u> , 20% = <u>25</u>	<u>25</u>	= Total Cover		FACU species _____ x4 = _____
Herb Stratum (Plot size: 5' diam)				UPL species _____ x5 = _____
1. <u><i>Carex obnupta</i></u>	<u>80</u>	<u>yes</u>	<u>OBL</u>	Column Totals: _____ (A) _____ (B)
2. _____	_____	_____	_____	Prevalence Index = B/A = _____
3. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>80</u> , 20% = <u>80</u>	<u>80</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				
1. <u> </u>	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>20</u>				

Remarks: Test plot location passes dominance test; hydrophytic vegetation is present at the sample location.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/2	100	=	=	=	=	Sa Lo	Water at 2"
4-16	10YR 2/2	82	10YR 4/6	18	C	M	Sa Lo	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: -

Depth (inches): -

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Hydric soil indicator F6 is present at sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input checked="" 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 ☒ Depth (inches): -Water Table Present? Yes ☒ No ☐ Depth (inches): 2Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Wetland hydrology indicators are present at sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: / Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W1-SP2 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): >10
 Subregion (LRR): A Lat: 46.2825692677647 Long: -124.05932044948 Datum: WGS84
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point located upslope of flag W1-A8 at edge of fill pad; on rip rap slope. Sample point does not all three wetland criteria; sample point is upland.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. <u> </u>	<u> </u>			Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2. <u> </u>	<u> </u>			Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. <u> </u>	<u> </u>			Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50</u> (A/B)
4. <u> </u>	<u> </u>				
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:	
1. <u>Rubus armeniacus</u>	<u>40</u>	<u>yes</u>	<u>FAC</u>	Total % Cover of:	Multiply by:
2. <u> </u>	<u> </u>			OBL species <u> </u>	x1 = <u> </u>
3. <u> </u>	<u> </u>			FACW species <u> </u>	x2 = <u> </u>
4. <u> </u>	<u> </u>			FAC species <u>50</u>	x3 = <u>150</u>
5. <u> </u>	<u> </u>			FACU species <u>63</u>	x4 = <u>252</u>
50% = <u> </u> , 20% = <u> </u>	<u>40</u>	= Total Cover		UPL species <u> </u>	x5 = <u> </u>
Herb Stratum (Plot size: 5' diam)				Column Totals:	<u>113</u> (A) <u>402</u> (B)
1. <u>Polystichum munitum</u>	<u>50</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = <u>3.55</u>	
2. <u>Heracleum maximum</u>	<u>10</u>	<u>no</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
3. <u>Tellima grandiflora</u>	<u>10</u>	<u>no</u>	<u>FACU</u>	<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation	
4. <u>Dactylis glomerata</u>	<u>3</u>	<u>no</u>	<u>FACU</u>	<input type="checkbox"/> 2 - Dominance Test is >50%	
5. <u> </u>	<u> </u>			<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹	
6. <u> </u>	<u> </u>			<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
7. <u> </u>	<u> </u>			<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹	
8. <u> </u>	<u> </u>			<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
9. <u> </u>	<u> </u>			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
10. <u> </u>	<u> </u>				
11. <u> </u>	<u> </u>				
50% = <u>36.5</u> , 20% = <u>14.6</u>	<u>73</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Woody Vine Stratum (Plot size: 15' diam)					
1. <u> </u>	<u> </u>				
2. <u> </u>	<u> </u>				
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover			
% Bare Ground in Herb Stratum <u>27</u>					

Remarks: Hydrophytic vegetation is not present at the sample location.

Project Site: Cape Disappointment State Park Visitor Center

SOIL

Sampling Point: W1-SP2 (Upl)

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	0	0	0	0	0	0	0	riprap
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
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48								
49								
50								

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: Rip rap

Depth (inches): 0

Hydric Soils Present?

Yes

☐

No

☒

Remarks: No hydric soil indicators are present at the sample location. the plot is located on a rip rap slope abutting the parking lot and the wetland.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0

Water Table Present? Yes ☐ No ☒ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): 0

Wetland Hydrology Present?

Yes

☐

No

☒

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

Remarks: No wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ /Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W1-SP3 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): ≤1
 Subregion (LRR): A Lat: 46.2831009369947 Long: -124.05871696212 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located ~10' west of flag W1-A15 at toe of slope. Sample point meets all three wetland criteria; sample point is wetland.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30' diam</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Salix hookeriana</u>	<u>85</u>	<u>yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
50% = <u>85</u> , 20% = <u>85</u>	<u>85</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15' diam</u>)				Prevalence Index worksheet:
1. <u>Picea sitchensis</u>	<u>5</u>	<u>yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	OBL species _____ x1 = _____
3. _____	_____	_____	_____	FACW species _____ x2 = _____
4. _____	_____	_____	_____	FAC species _____ x3 = _____
5. _____	_____	_____	_____	FACU species _____ x4 = _____
50% = <u>5</u> , 20% = <u>5</u>	<u>5</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: <u>5' diam</u>)				Column Totals: _____ (A) _____ (B)
1. <u>Carex obnupta</u>	<u>40</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = _____
2. <u>Lysichiton americanus</u>	<u>20</u>	<u>yes</u>	<u>OBL</u>	
3. <u>Oenanthe sarmentosa</u>	<u>10</u>	<u>no</u>	<u>OBL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>35</u> , 20% = <u>14</u>	<u>70</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>15' diam</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u>-</u>	_____	_____	_____	
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>30</u>				

Remarks: **Test plot location passes dominance test; hydrophytic vegetation is present at the sample location. Mud and water alongside and within plot.**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/2	100	=	=	=	=	Sa Lo	
4-6	10YR 2/2	90	10YR 4/6	10	C	M	Sa Lo	
6-14	10YR 4/2	80	10YR 4/6	20	C	M	Sa Lo	
14+								Too saturated to color

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input 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"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**Type: Water TableDepth (inches): 14**Hydric Soils Present?**

Yes

☒

No

☐

Remarks: Hydric soil indicator F3 is present at sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input checked="" 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	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Depth (inches): <u>2" adjacent to plot</u>
Water Table Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Depth (inches): <u>2</u>
Saturation Present? (includes capillary fringe)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Depth (inches): <u>0</u>

Wetland Hydrology Present?

Yes

☒

No

☐

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

Remarks: Wetland hydrology indicators are present at sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ /Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W1-SP4 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): <1
 Subregion (LRR): A Lat: 46.2830886877435 Long: -124.05864595449 Datum: NAD83
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point located east of flag W1-A15 by approximately 25 feet. Sample point does not all three wetland criteria; sample point is upland.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. _____	_____			Number of Dominant Species That Are OBL, FACW, or FAC:	2 (A)
2. _____	_____			Total Number of Dominant Species Across All Strata:	2 (B)
3. _____	_____			Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)
4. _____	_____				
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:	
1. _____	_____			Total % Cover of:	Multiply by:
2. _____	_____			OBL species _____	x1 = _____
3. _____	_____			FACW species _____	x2 = _____
4. _____	_____			FAC species _____	x3 = _____
5. _____	_____			FACU species _____	x4 = _____
50% = _____, 20% = _____	_____	= Total Cover		UPL species _____	x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A)	_____ (B)
1. <u>Poa annua</u>	50	yes	FAC	Prevalence Index = B/A = _____	
2. <u>Trifolium sp.</u>	40	yes	FAC		
3. <u>Hypochaeris radicata</u>	5	no	FACU		
4. <u>Bellis perennis</u>	5	no	NL (UPL)		
5. _____	_____				
6. _____	_____				
7. _____	_____				
8. _____	_____				
9. _____	_____				
10. _____	_____				
11. _____	_____				
50% = 50, 20% = 20	100	= Total Cover			
Woody Vine Stratum (Plot size: 15' diam)					
1. _____	_____				
2. _____	_____				
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum 0					

Remarks: Hydrophytic vegetation is present at the sample location. Trifolium species listed in the herbaceous stratum is assumed to be FAC or drier.

SOILSampling Point: W1-SP4 (Upl)**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/2	100	=	=	=	=	Sa Lo	
3-16	10YR 3/2	100	=	=	=	=	Sand	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: No hydric soil indicators are present at the sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 ☒ Depth (inches): Water Table Present? Yes ☐ No ☒ Depth (inches): Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): **Wetland Hydrology Present?**

Yes

☐

No

☒

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

Remarks: No wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ /Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W2-SP1 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): <1
 Subregion (LRR): A Lat: 46.2830698975033 Long: -124.05840563781 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located ~8' east of flag W2-A2. Sample point meets all three wetland criteria; sample point is wetland.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30' diam</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Alnus rubra</i></u>	<u>65</u>	<u>yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
50% = <u>65</u> , 20% = <u>65</u>	<u>65</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15' diam</u>)				Prevalence Index worksheet:
1. <u><i>Rubus armeniacus</i></u>	<u>35</u>	<u>yes</u>	<u>FAC</u>	
2. <u><i>Salix hookeriana</i></u>	<u>10</u>	<u>yes</u>	<u>FACW</u>	OBL species _____ x1 = _____
3. <u><i>Rubus spectabilis</i></u>	<u>5</u>	<u>no</u>	<u>FAC</u>	FACW species _____ x2 = _____
4. _____	_____	_____	_____	FAC species _____ x3 = _____
5. _____	_____	_____	_____	FACU species _____ x4 = _____
50% = <u>25</u> , 20% = <u>10</u>	<u>50</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: <u>5' diam</u>)				Column Totals: _____ (A) _____ (B)
1. <u><i>Carex obnupta</i></u>	<u>100</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>100</u> , 20% = <u>100</u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>15' diam</u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	_____	_____	_____	
2. _____	_____	_____	_____	<input checked="" type="checkbox"/> 2 – Dominance Test is >50%
50% = _____, 20% = _____	_____	= Total Cover		<input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹
% Bare Ground in Herb Stratum <u>0</u>				<input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				<input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: **Test plot location passes dominance test; hydrophytic vegetation is present at the sample location.**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/2	100	=	=	=	=	Sa Lo	
4-20	10YR 2/2	92	10YR 4/6	8	C	M	Sa Lo	Entirely saturated at 8"
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: -

Depth (inches): -

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Hydric soil indicator F6 is present at sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input checked="" 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 ☒ Depth (inches): -Water Table Present? Yes ☒ No ☐ Depth (inches): 1Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Wetland hydrology indicators are present at sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ / Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W2-SP2 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): <1
 Subregion (LRR): A Lat: 46.2831229666595 Long: -124.05847550768 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located north of flag W2-A2 by ~20'. Sample point does not all three wetland criteria; sample point is upland.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Alnus rubra</i></u>	<u>65</u>	<u>yes</u>	<u>FAC</u>	
2. <u><i>Salix hookeriana</i></u>	<u>15</u>	<u>no</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____	_____			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)
4. _____	_____			
50% = <u>40</u> , 20% = <u>16</u>	<u>80</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u><i>Rubus armeniacus</i></u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	
2. <u><i>Sambucus racemosa</i></u>	<u>8</u>	<u>yes</u>	<u>FACU</u>	OBL species _____ x1 = _____
3. _____	_____			FACW species _____ x2 = _____
4. _____	_____			FAC species _____ x3 = _____
5. _____	_____			FACU species _____ x4 = _____
50% = <u>12.5</u> , 20% = <u>4.6</u>	<u>23</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A) _____ (B)
1. <u><i>Carex obnupta</i></u>	<u>100</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = _____
2. _____	_____			Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____	_____			
4. _____	_____			
5. _____	_____			
6. _____	_____			
7. _____	_____			
8. _____	_____			
9. _____	_____			
10. _____	_____			
11. _____	_____			
50% = <u>-</u> , 20% = <u>-</u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u><i>Rubus ursinus</i></u>	<u>7</u>	<u>yes</u>	<u>FACU</u>	
2. _____	_____			
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: <u>Hydrophytic vegetation is present at the sample location.</u>				

SOILSampling Point: W2-SP2 (Upl)**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		
0-18	10YR 2/2	100	=	=	=	=	Sa Lo	

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"/> 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"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: No hydric soil indicators are present at the sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input checked="" 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 ☒ Depth (inches): 0Water Table Present? Yes ☒ No ☐ Depth (inches): 16Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 14**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Secondary wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ /Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W3-SP1 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR): A Lat: 46.2831258173641 Long: -124.05804104855 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located ~10' NE of flag W3-A13.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u>Lonicera involucrata</u>	<u>40</u>	<u>yes</u>	<u>FAC</u>	
2. <u>Sambucus racemosa</u>	<u>8</u>	<u>no</u>	<u>FACU</u>	OBL species _____ x1 = _____
3. <u>Rubus spectabilis</u>	<u>7</u>	<u>no</u>	<u>FAC</u>	FACW species _____ x2 = _____
4. <u>Rubus armeniacus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	FAC species _____ x3 = _____
5. _____	_____	_____	_____	FACU species _____ x4 = _____
50% = <u>30</u> , 20% = <u>12</u>	<u>60</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A) _____ (B)
1. <u>Carex obnupta</u>	<u>100</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = _____
2. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>100</u> , 20% = <u>100</u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u>Rubus ursinus</u>	<u><5</u>	<u>no</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>				

Remarks: Test plot location passes dominance test; hydrophytic vegetation is present at the sample location. ALRU located outside plot. Three snags observed within wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/2	100	=	=	=	=	Sa Lo	
3-16	10YR 2/2	92	10YR 4/6	8	C	M/PL	Sa Lo	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Hydric soil indicator F6 is present at sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 checked="" 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 ☒ Depth (inches): 0Water Table Present? Yes ☒ No ☐ Depth (inches): 1Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Wetland hydrology indicators are present at sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ / Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W3-SP2 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 4
 Subregion (LRR): A Lat: 46.283101267601 Long: -124.05807984075 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point located ~10' west of flag W3-A13. On riprap.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. <u><i>Alnus rubra</i></u>	<u>45</u>	<u>yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>66</u> (A/B)
4. _____	_____	_____	_____		
50% = <u>45</u> , 20% = <u>45</u>	<u>45</u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:	
1. <u><i>Rubus armeniacus</i></u>	<u>5</u>	<u>yes</u>	<u>FAC</u>	Total % Cover of: _____ Multiply by: _____	
2. _____	_____	_____	_____	OBL species	x1 = _____
3. _____	_____	_____	_____	FACW species	x2 = _____
4. _____	_____	_____	_____	FAC species	x3 = _____
5. _____	_____	_____	_____	FACU species	x4 = _____
50% = <u>5</u> , 20% = <u>5</u>	<u>5</u>	= Total Cover		UPL species	x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals:	_____ (A) _____ (B)
1. <u><i>Dactylis glomerata</i></u>	<u>75</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____	
2. <u><i>Heracleum maximum</i></u>	<u>4</u>	<u>no</u>	<u>FAC</u>		
3. <u><i>Tiarella trifoliata</i></u>	<u>3</u>	<u>no</u>	<u>FAC</u>		
4. <u><i>Equisetum telmateia</i></u>	<u>3</u>	<u>no</u>	<u>FACW</u>		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
50% = <u>42.5</u> , 20% = <u>17</u>	<u>85</u>	= Total Cover			
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Indicators:	
1. <u> </u>	_____	_____	_____	<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation	
2. _____	_____	_____	_____	<input checked="" type="checkbox"/> 2 – Dominance Test is >50%	
50% = _____, 20% = _____	_____	= Total Cover		<input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹	
% Bare Ground in Herb Stratum <u>15</u>				<input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
Remarks: Vegetation community passes dominance test.				<input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

SOIL**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 3/2	100	==	==	==	==	Loam	
12-16	10YR 4/3	100	==	==	==	==	Loam	

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

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

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: No hydric soil indicators are present at the sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 ☒ Depth (inches): -Water Table Present? Yes ☐ No ☒ Depth (inches): -Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): -**Wetland Hydrology Present?**

Yes

☐

No

☒

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

Remarks: No wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____/Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W4-SP1 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: 46.2835107225115 Long: -124.05721882583 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located ~5' southeast of flag W4-A21. Sample point meets all three wetland criteria; sample point is wetland.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. _____	_____			Number of Dominant Species That Are OBL, FACW, or FAC:	<u>3</u> (A)
2. _____	_____			Total Number of Dominant Species Across All Strata:	<u>5</u> (B)
3. _____	_____			Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>60</u> (A/B)
4. _____	_____				
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:	
1. <u>Spiraea douglasii</u>	<u>30</u>	<u>yes</u>	<u>FACW</u>	Total % Cover of:	Multiply by:
2. <u>Crataegus monogyna</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	OBL species _____	x1 = _____
3. <u>Lonicera involucrata</u>	<u>10</u>	<u>no</u>	<u>FAC</u>	FACW species _____	x2 = _____
4. _____	_____			FAC species _____	x3 = _____
5. _____	_____			FACU species _____	x4 = _____
50% = <u>27.5</u> , 20% = <u>11</u>	<u>55</u>	= Total Cover		UPL species _____	x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A)	_____ (B)
1. <u>Vinca sp.</u>	<u>12</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____	
2. <u>Juncus effusus</u>	<u>10</u>	<u>yes</u>	<u>FACW</u>		
3. _____	_____				
4. _____	_____				
5. _____	_____				
6. _____	_____				
7. _____	_____				
8. _____	_____				
9. _____	_____				
10. _____	_____				
11. _____	_____				
50% = <u>11</u> , 20% = <u>4.4</u>	<u>22</u>	= Total Cover			
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Indicators:	
1. <u>Rubus ursinus</u>	<u>7</u>	<u>yes</u>	<u>FACU</u>	<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. _____	_____				
50% = <u>7</u> , 20% = <u>7</u>	<u>7</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks: Test plot location passes dominance test; hydrophytic vegetation is present at the sample location. The unknown *Vinca sp.* is assumed to be FACU or drier as it is not listed in the NWPL WMVC 2020 update.

SOILSampling Point: W4-SP1 (Wet)**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 3/2	85	7.5YR 4/6	15	C	M/PL	Sa Lo	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Hydric soil indicator F6 is present at sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 ☐ Depth (inches): 1" depth adjacent to plotWater Table Present? Yes ☒ No ☐ Depth (inches): 1Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Wetland hydrology indicators are present at sample location. Plot is located along the edge of a ponded area.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____/Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W4-SP2 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Terrace of ponded depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: 46.2835337896023 Long: -124.05720818303 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point located ~6' north of flag W4-A21 along the road embankment. Sample point does not all three wetland criteria; sample point is upland.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. _____	_____			
2. _____	_____			Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____			
50% = _____, 20% = _____	_____	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u>Spiraea douglasii</u>	<u>13</u>	<u>yes</u>	<u>FACW</u>	
2. _____	_____			OBL species _____ x1 = _____
3. _____	_____			FACW species _____ x2 = _____
4. _____	_____			FAC species _____ x3 = _____
5. _____	_____			FACU species _____ x4 = _____
50% = _____, 20% = _____	<u>13</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A) _____ (B)
1. <u>Poa annua</u>	<u>60</u>	<u>yes</u>	<u>FAC</u>	Prevalence Index = B/A = _____
2. <u>Holcus lanatus</u>	<u>15</u>	<u>no</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. <u>Polystichum munitum</u>	<u>10</u>	<u>no</u>	<u>FACU</u>	
4. <u>Cardamine oglosperma</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
5. <u>Hypochaeris radicata</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	
6. <u>Equisetum telmateia</u>	<u>3</u>	<u>no</u>	<u>FACW</u>	
7. <u>Heracleum maximum</u>	<u>2</u>	<u>no</u>	<u>FAC</u>	
8. _____	_____			
9. _____	_____			
10. _____	_____			
11. _____	_____			
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u>Rubus ursinus</u>	<u>8</u>	<u>yes</u>	<u>FACU</u>	
2. _____	_____			
50% = _____, 20% = _____	<u>8</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>				

Remarks: Hydrophytic vegetation is present at the sample location.

SOIL

Sampling Point: W4-SP2 (Upl)

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

[illegible]

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: No hydric soil indicators are present at the sample location.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes ☐ No ☒ Depth (inches): 0

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

Wetland Hydrology Present?

Yes

☐

No

☐

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

Remarks: No wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ / Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W4-SP3 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): ≤1
 Subregion (LRR): A Lat: 46.2831204141397 Long: -124.05755653887 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located ~8' east of flag W4-A31. Sample point meets all three wetland criteria; sample point is wetland.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. <u><i>Alnus rubra</i></u>	<u>35</u>	<u>yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>4</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
4. _____	_____	_____	_____		
50% = <u>35</u> , 20% = <u>35</u>	<u>35</u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:	
1. <u><i>Spiraea douglasii</i></u>	<u>40</u>	<u>yes</u>	<u>FACW</u>	Total % Cover of:	Multiply by:
2. <u><i>Salix hookeriana</i></u>	<u>5</u>	<u>no</u>	<u>FACW</u>	OBL species _____	x1 = _____
3. _____	_____	_____	_____	FACW species _____	x2 = _____
4. _____	_____	_____	_____	FAC species _____	x3 = _____
5. _____	_____	_____	_____	FACU species _____	x4 = _____
50% = <u>22.5</u> , 20% = <u>9</u>	<u>45</u>	= Total Cover		UPL species _____	x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A)	_____ (B)
1. <u><i>Carex obnupta</i></u>	<u>65</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = _____	
2. <u><i>Polystichum munitum</i></u>	<u>35</u>	<u>yes</u>	<u>FACU</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover			
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Indicators:	
1. <u> </u>	_____	_____	_____	<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation	
2. _____	_____	_____	_____	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
50% = _____, 20% = _____	_____	= Total Cover		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹	
% Bare Ground in Herb Stratum <u>0</u>				<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
				<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks: Test plot location passes dominance test; hydrophytic vegetation is present at the sample location. *Salix hookeriana* is browsed.

SOILSampling Point: W4-SP3 (Wet)**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/2	100					Sa Lo	
2-16	10YR 2/2	94	10YR 4/6	6	C	M/PL	Sa Lo	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☒ No ☐

Remarks: Hydric soil indicator F6 is present at sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 checked="" 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 ☒ Depth (inches): 0Water Table Present? Yes ☒ No ☐ Depth (inches): 6Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?** Yes ☒ No ☐

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

Remarks: Wetland hydrology indicators are present at sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ / Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W4-SP4 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 2
 Subregion (LRR): A Lat: 46.2831201287422 Long: -124.05764638906 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point located ~6' west of flag W4-A31. Sample point does not all three wetland criteria; sample point is upland.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66</u> (A/B)
4. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u>Spiraea douglasii</u>	<u>50</u>	<u>yes</u>	<u>FACW</u>	
2. <u>Rosa nutkana</u>	<u>3</u>	<u>no</u>	<u>FAC</u>	OBL species _____ x1 = _____
3. <u>Crataegus monogyna</u>	<u>3</u>	<u>no</u>	<u>FAC</u>	FACW species _____ x2 = _____
4. _____	_____	_____	_____	FAC species _____ x3 = _____
5. _____	_____	_____	_____	FACU species _____ x4 = _____
50% = <u>23.3</u> , 20% = <u>11.2</u>	<u>56</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A) _____ (B)
1. <u>Polystichum munitum</u>	<u>70</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____
2. <u>Carex obnupta</u>	<u>30</u>	<u>yes</u>	<u>OBL</u>	
3. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u>Rubus ursinus</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
50% = <u>-</u> , 20% = <u>-</u>	<u>15</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>				

Remarks: **Hydrophytic vegetation is present at the sample location.**

SOIL**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		
0-20	10YR 2/2	100					Sa Lo	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

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

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: No hydric soil indicators are present at the sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): -Water Table Present? Yes ☒ No ☐ Depth (inches): 18Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 17**Wetland Hydrology Present?**

Yes

☐

No

☒

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

Remarks: No wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: / Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W5-SP1 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: 46.2826783902594 Long: -124.05687042411 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Plot is located between flag W5-A4 and A-5, downslope of red elderberry. Standing water in trough of plot. Plot meets all three wetland criteria. Plot is wetland.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Alnus rubra</i></u>	<u>25</u>	<u>yes</u>	<u>FAC</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>12.5</u> , 20% = <u>5</u>	<u>25</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u><i>Sambucus racemosa</i></u>	<u>20</u>	<u>yes</u>	<u>FACU</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u>100</u> x1 = <u>100</u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u>25</u> x3 = <u>75</u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u>27</u> x4 = <u>108</u>
50% = <u>10</u> , 20% = <u>4</u>	<u>20</u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: 5' diam)				Column Totals: <u>152</u> (A) <u>283</u> (B)
1. <u><i>Carex obnupta</i></u>	<u>100</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = <u>1.86</u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
11. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u><i>Rubus ursinus</i></u>	<u>7</u>	<u>yes</u>	<u>FACU</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>7</u> , 20% = <u>7</u>	<u>7</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>				

Remarks: **Test plot location meets the prevalence index. Hydrophytic vegetation is present.**

SOILSampling Point: W5-SP1**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
<u>0-7</u>	<u>7.5YR 3/2</u>	<u>100</u>					<u>Cl Lo</u>	
<u>7-15</u>	<u>7.5YR 3/2</u>	<u>92</u>	<u>10YR 4/1</u>	<u>3</u>			<u>Cl Lo</u>	
			<u>10YR 4/6</u>	<u>5</u>	<u>C</u>	<u>M</u>		

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**Type: Clay panDepth (inches): 15**Hydric Soils Present?**

Yes

☒

No

☐

Remarks: Hydric soil indicator F6 is present at sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input checked="" 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	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Depth (inches): <u>2 (adjacent)</u>
Water Table Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Depth (inches): <u>0</u>
Saturation Present? (includes capillary fringe)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Depth (inches): <u>0</u>

Wetland Hydrology Present?

Yes

☒

No

☐

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

Remarks: Wetland hydrology indicators are present at sample location. Ponding is immediately adjacent to the plot.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: / Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W5-SP2 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: 46.2827312565248 Long: -124.05686424858 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point located upland NE of W5-SP1. Sample plot does not meet all three wetland indicators; sample plot is upland.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Alnus rubra</i></u>	<u>50</u>	<u>yes</u>	<u>FAC</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>25</u> , 20% = <u>10</u>	<u>50</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u><i>Sambucus racemosa</i></u>	<u>30</u>	<u>yes</u>	<u>FACU</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u>80</u> x1 = <u>80</u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u>50</u> x3 = <u>150</u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u>63</u> x4 = <u>252</u>
50% = <u>15</u> , 20% = <u>6</u>	<u>30</u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: 5' diam)				Column Totals: <u>193</u> (A) <u>482</u> (B)
1. <u><i>Carex obnupta</i></u>	<u>80</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = <u>2.50</u>
2. <u><i>Polystichum munitum</i></u>	<u>20</u>	<u>yes</u>	<u>FACU</u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
11. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				
1. <u><i>Rubus ursinus</i></u>	<u>13</u>	<u>yes</u>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>-</u> , 20% = <u>-</u>	<u>13</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>				

Remarks: Vegetation community meets the prevalence index. Hydrophytic vegetation is present at the sample location.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/3	100					Cl Lo	
3-14	10YR 4/3	100					Cl Lo	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**Type: HarplanDepth (inches): 14**Hydric Soils Present?**

Yes

☐

No

☒

Remarks: No hydric soil indicators are present at the sample location. Dry soil profile.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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	<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? (includes capillary fringe)	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Depth (inches):	:

Wetland Hydrology Present?

Yes

☐

No

☒

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

Remarks: No wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ /Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W5-SP3 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): A Lat: 46.2827884451809 Long: -124.05636952083 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located ~2' west of flag W5-A12 at edge of fill pad.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. <u> </u>	<u> </u>			Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)
2. <u> </u>	<u> </u>			Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. <u> </u>	<u> </u>			Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>66</u> (A/B)
4. <u> </u>	<u> </u>				
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:	
1. <u> </u>	<u> </u>			Total % Cover of:	Multiply by:
2. <u> </u>	<u> </u>			OBL species <u> </u>	x1 = <u> </u>
3. <u> </u>	<u> </u>			FACW species <u> </u>	x2 = <u> </u>
4. <u> </u>	<u> </u>			FAC species <u> </u>	x3 = <u> </u>
5. <u> </u>	<u> </u>			FACU species <u> </u>	x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u>	x5 = <u> </u>
Herb Stratum (Plot size: 5' diam)				Column Totals:	<u> </u> (A) <u> </u> (B)
1. <u>Carex obnupta</u>	<u>80</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = <u> </u>	
2. <u>Phalaris arundinacea</u>	<u>20</u>	<u>yes</u>	<u>FACW</u>		
3. <u> </u>	<u> </u>			Hydrophytic Vegetation Indicators:	
4. <u> </u>	<u> </u>			<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation	
5. <u> </u>	<u> </u>			<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
6. <u> </u>	<u> </u>			<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹	
7. <u> </u>	<u> </u>			<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
8. <u> </u>	<u> </u>			<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹	
9. <u> </u>	<u> </u>			<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
10. <u> </u>	<u> </u>			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
11. <u> </u>	<u> </u>				
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Woody Vine Stratum (Plot size: 15' diam)					
1. <u>Rubus ursinus</u>	<u>12</u>	<u>yes</u>	<u>FACU</u>		
2. <u> </u>	<u> </u>				
50% = <u> </u> , 20% = <u> </u>	<u>12</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks: Test plot location passes dominance test; hydrophytic vegetation is present at the sample location.

Project Site: Cape Disappointment State Park Visitor Center

SOIL

Sampling Point: W5-SP3 (Wet)

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

[illegible]

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes ☒ No ☐

Remarks: Sample plot located on the edge of the pond, mud too saturated to identify redox, located at edge of fill pad.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 6 (Adjacent)

Water Table Present? Yes ☒ No ☐ Depth (inches): 0

Saturation Present? Yes ☒ No ☐ Depth (inches): 0

Wetland Hydrology Present?

Yes ☒ No ☐

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

Remarks: Wetland hydrology indicators are present at sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ /Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W5-SP4 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Berm Local relief (concave, convex, none): convex Slope (%): ≤1
 Subregion (LRR): A Lat: 46.2828007717907 Long: -124.05634035697 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point located ~3' east of flag W5-A12, along 3' wide grass strip adjacent to parking lot and ponding.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. <u> </u>	_____			Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)
2. <u> </u>	_____			Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. <u> </u>	_____			Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
4. <u> </u>	_____				
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:	
1. <u> </u>	_____			Total % Cover of:	Multiply by:
2. <u> </u>	_____			OBL species _____	x1 = _____
3. <u> </u>	_____			FACW species _____	x2 = _____
4. <u> </u>	_____			FAC species _____	x3 = _____
5. <u> </u>	_____			FACU species _____	x4 = _____
50% = _____, 20% = _____	_____	= Total Cover		UPL species _____	x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals:	_____ (A) _____ (B)
1. <u>Phalaris arundinacea</u>	<u>70</u>	<u>yes</u>	<u>FACW</u>	Prevalence Index = B/A = _____	
2. <u>Poa annua</u>	<u>24</u>	<u>yes</u>	<u>FAC</u>		
3. <u>Hypochaeris radicata</u>	<u>3</u>	<u>no</u>	<u>FACU</u>		
4. <u>Rumex crispus</u>	<u>3</u>	<u>no</u>	<u>FAC</u>		
5. <u> </u>	_____				
6. <u> </u>	_____				
7. <u> </u>	_____				
8. <u> </u>	_____				
9. <u> </u>	_____				
10. <u> </u>	_____				
11. <u> </u>	_____				
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover			
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Indicators:	
1. <u> </u>	_____			<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation	
2. <u> </u>	_____			<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
50% = _____, 20% = _____	_____	= Total Cover		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹	
% Bare Ground in Herb Stratum <u>0</u>				<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
Remarks: <u>Vegetation community passes the dominance test.</u>				<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ / Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W5-SP5 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: 46.2828317605067 Long: -124.05567705472 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located ~1.5' east of flag W5-A20. There is 8" of ponded water at the plot.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>-</u>	<u>_____</u>			
2. <u>_____</u>	<u>_____</u>			Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. <u>_____</u>	<u>_____</u>			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u>_____</u>	<u>_____</u>			
50% = <u>_____</u> , 20% = <u>_____</u>	<u>_____</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u>Lonicera involucrata</u>	<u>7</u>	<u>yes</u>	<u>FAC</u>	
2. <u>_____</u>	<u>_____</u>			Total % Cover of: <u>_____</u> Multiply by: <u>_____</u>
3. <u>_____</u>	<u>_____</u>			OBL species <u>_____</u> x1 = <u>_____</u>
4. <u>_____</u>	<u>_____</u>			FACW species <u>_____</u> x2 = <u>_____</u>
5. <u>_____</u>	<u>_____</u>			FAC species <u>_____</u> x3 = <u>_____</u>
50% = <u>7</u> , 20% = <u>7</u>	<u>7</u>	= Total Cover		FACU species <u>_____</u> x4 = <u>_____</u>
Herb Stratum (Plot size: 5' diam)				UPL species <u>_____</u> x5 = <u>_____</u>
1. <u>Carex obnupta</u>	<u>40</u>	<u>yes</u>	<u>OBL</u>	Column Totals: <u>_____</u> (A) <u>_____</u> (B)
2. <u>Phalaris arundinacea</u>	<u>40</u>	<u>yes</u>	<u>FACW</u>	Prevalence Index = B/A = <u>_____</u>
3. <u>Oenanthe sarmentosa</u>	<u>2</u>	<u>no</u>	<u>OBL</u>	
4. <u>_____</u>	<u>_____</u>			Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>_____</u>	<u>_____</u>			
6. <u>_____</u>	<u>_____</u>			
7. <u>_____</u>	<u>_____</u>			
8. <u>_____</u>	<u>_____</u>			
9. <u>_____</u>	<u>_____</u>			
10. <u>_____</u>	<u>_____</u>			
11. <u>_____</u>	<u>_____</u>			
50% = <u>41</u> , 20% = <u>16.4</u>	<u>82</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				
1. <u>-</u>	<u>_____</u>			
2. <u>_____</u>	<u>_____</u>			
50% = <u>_____</u> , 20% = <u>_____</u>	<u>_____</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>18</u>				

Remarks: **Test plot location passes dominance test; hydrophytic vegetation is present at the sample location.**

Sampling Point: W5-SP5 (Wet)

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

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)
☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

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

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

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

Hydric Soils Present? Yes ☒ No ☐

Remarks: 8" of ponding is present. Soil profile too saturated to be sampled.

HYDROLOGY

Wetland Hydrology Indicators:									
Primary Indicators (minimum of one required; check all that apply)					Secondary Indicators (2 or more required)				
<input checked="" type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water-Stained Leaves (B9)	<input type="checkbox"/>	Water-Stained Leaves (B9)	<input type="checkbox"/>	Water-Stained Leaves (B9)	<input type="checkbox"/>	Water-Stained Leaves (B9)
<input checked="" type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	(except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/>	(MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/>	(MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/>	(MLRA 1, 2, 4A, and 4B)
<input checked="" type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	Salt Crust (B11)	<input type="checkbox"/>	Salt Crust (B11)	<input type="checkbox"/>	Salt Crust (B11)	<input type="checkbox"/>	Salt Crust (B11)
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Aquatic Invertebrates (B13)	<input type="checkbox"/>	Aquatic Invertebrates (B13)	<input type="checkbox"/>	Aquatic Invertebrates (B13)	<input type="checkbox"/>	Aquatic Invertebrates (B13)
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/>	Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/>	Geomorphic Position (D2)	<input type="checkbox"/>	Geomorphic Position (D2)
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Shallow Aquitard (D3)	<input checked="" type="checkbox"/>	FAC-Neutral Test (D5)
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/>	Raised Ant Mounds (D6) (LRR A)	<input type="checkbox"/>	Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/>	Surface Soil Cracks (B6)	<input type="checkbox"/>	Stunted or Stresses Plants (D1) (LRR A)	<input type="checkbox"/>	Stunted or Stresses Plants (D1) (LRR A)	<input type="checkbox"/>	Frost-Heave Hummocks (D7)	<input type="checkbox"/>	Frost-Heave Hummocks (D7)
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Other (Explain in Remarks)	<input type="checkbox"/>	Other (Explain in Remarks)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>					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: Wetland hydrology indicators are present at sample location.									

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

Project Site: Cape Disappointment State Park Visitor Center City/County: Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W5-SP6 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 3
 Subregion (LRR): A Lat: 46.2828344561145 Long: -124.05570000241 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point located ~4' west of flag W5-A20. Gravel soil mixed into soil profile.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>			
2. <u> </u>	<u> </u>			Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>			
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>			
2. <u> </u>	<u> </u>			OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>			FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>			FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>			FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: 5' diam)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Carex obnupta</u>	<u>45</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = <u> </u>
2. <u>Phalaris arundinacea</u>	<u>45</u>	<u>yes</u>	<u>FACW</u>	
3. <u> </u>	<u> </u>			Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0' <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. <u> </u>	<u> </u>			
5. <u> </u>	<u> </u>			
6. <u> </u>	<u> </u>			
7. <u> </u>	<u> </u>			
8. <u> </u>	<u> </u>			
9. <u> </u>	<u> </u>			
10. <u> </u>	<u> </u>			
11. <u> </u>	<u> </u>			
50% = <u>45</u> , 20% = <u>18</u>	<u>90</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u> </u>	<u> </u>			
2. <u> </u>	<u> </u>			
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
% Bare Ground in Herb Stratum <u>10</u>				
Remarks: Vegetation community passes dominance test.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 2/2	100					Si Lo	w/ gravels
14-18+	10YR 3/2	100					Sa Lo	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☐ No☒

Remarks: No hydric soil indicators are present at the sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Depth (inches):	0
Water Table Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Depth (inches):	14
Saturation Present? (includes capillary fringe)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Depth (inches):	14

Wetland Hydrology Present?

Yes

☐ No☒

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

Remarks: No wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: /Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W5-SP7 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): ≤1
 Subregion (LRR): A Lat: 46.2834208725687 Long: -124.05525993456 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located ~10' south of flag W5-A27. Plot meets all three wetland criteria.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>			
2. <u> </u>	<u> </u>			Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. <u> </u>	<u> </u>			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>			
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>			
2. <u> </u>	<u> </u>			OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>			FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>			FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>			FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: 5' diam)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Festuca sp.</u>	<u>90</u>	<u>yes</u>	<u>FAC</u>	Prevalence Index = B/A = <u> </u>
2. <u>Ranunculus repens</u>	<u>7</u>	<u>no</u>	<u>FAC</u>	
3. <u>Rumex crispus</u>	<u>3</u>	<u>no</u>	<u>FAC</u>	
4. <u> </u>	<u> </u>			
5. <u> </u>	<u> </u>			
6. <u> </u>	<u> </u>			
7. <u> </u>	<u> </u>			
8. <u> </u>	<u> </u>			
9. <u> </u>	<u> </u>			
10. <u> </u>	<u> </u>			
11. <u> </u>	<u> </u>			
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>			
2. <u> </u>	<u> </u>			<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
% Bare Ground in Herb Stratum <u>0</u>				<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: Test plot location passes dominance test; hydrophytic vegetation is present at the sample location. Festuca species is assumed FAC.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	100					Si Sa Lo	
4-8	10YR 2/1	94	7.5Y 5/6	6	C	M	Si Sa Lo	
8-16	10YR 2/1	-					Sa Lo	No redox identifiable

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Hydric soil indicator F6 is present at sample location. Redox is assumed to be present lower in the profile under less saturated soil conditions.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 checked="" 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 ☒ Depth (inches): -Water Table Present? Yes ☒ No ☐ Depth (inches): 4Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Wetland hydrology indicators are present at sample location. Surface water is ponded near the plot but not within the plot.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ / Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W5-SP8 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): concave Slope (%): ≤1
 Subregion (LRR): A Lat: 46.2834536504462 Long: -124.05528976397 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point located ~6' north of flag W5-A27. Water was observed near the plot earlier in the day but is now gone suggesting the soils drain quickly.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>			
2. <u> </u>	<u> </u>			Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. <u> </u>	<u> </u>			
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>			
2. <u> </u>	<u> </u>			OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>			FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>			FAC species <u>60</u> x3 = <u>180</u>
5. <u> </u>	<u> </u>			FACU species <u>22</u> x4 = <u>88</u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: 5' diam)				Column Totals: <u>82</u> (A) <u>268</u> (B)
1. <u>Festuca sp.</u>	<u>58</u>	<u>yes</u>	<u>FAC</u>	Prevalence Index = B/A = <u>3.26</u>
2. <u>Hypochaeris radicata</u>	<u>22</u>	<u>yes</u>	<u>FACU</u>	
3. <u>Rumex crispus</u>	<u>2</u>	<u>no</u>	<u>FAC</u>	
4. <u> </u>	<u> </u>			
5. <u> </u>	<u> </u>			
6. <u> </u>	<u> </u>			
7. <u> </u>	<u> </u>			
8. <u> </u>	<u> </u>			
9. <u> </u>	<u> </u>			
10. <u> </u>	<u> </u>			
11. <u> </u>	<u> </u>			
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>			
2. <u> </u>	<u> </u>			<input type="checkbox"/> 2 – Dominance Test is >50%
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		<input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹
% Bare Ground in Herb Stratum <u>18</u>				<input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Remarks: Vegetation community does not meet any hydrophytic vegetation indicators; hydrophytic vegetation is not present at the sample location.				<input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

SOIL**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		
0-16	10YR 2/2	100					Sa Lo	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

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

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: No hydric soil indicators are present at the sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): -Water Table Present? Yes ☐ No ☒ Depth (inches): -Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): -**Wetland Hydrology Present?**

Yes

☐

No

☒

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

Remarks: No wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____/Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W6-SP1 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): toe of slope Local relief (concave, convex, none): concave Slope (%): ≤1
 Subregion (LRR): A Lat: 46.2845750108538 Long: -124.05435269161 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located ~5' northwest of flag W6-B11. Plot meets all three wetland criteria.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. <u>Salix hookeriana</u>	<u>90</u>	<u>yes</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>3</u> (A)
2. _____	_____			Total Number of Dominant Species Across All Strata:	<u>4</u> (B)
3. _____	_____			Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>75</u> (A/B)
4. _____	_____				
50% = <u>45</u> , 20% = <u>18</u>	<u>90</u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:	
1. <u>Salix hookeriana</u>	<u>25</u>	<u>yes</u>	<u>FACW</u>	Total % Cover of:	Multiply by:
2. _____	_____			OBL species _____	x1 = _____
3. _____	_____			FACW species _____	x2 = _____
4. _____	_____			FAC species _____	x3 = _____
5. _____	_____			FACU species _____	x4 = _____
50% = <u>12.5</u> , 20% = <u>5</u>	<u>25</u>	= Total Cover		UPL species _____	x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A)	_____ (B)
1. <u>Carex obnupta</u>	<u>100</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = _____	
2. _____	_____			Hydrophytic Vegetation Indicators:	
3. _____	_____			<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation	
4. _____	_____			<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
5. _____	_____			<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹	
6. _____	_____			<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
7. _____	_____			<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹	
8. _____	_____			<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
9. _____	_____			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
10. _____	_____				
11. _____	_____				
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover			
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Present?	
1. <u>Rubus ursinus</u>	<u>5</u>	<u>yes</u>	<u>FACU</u>	Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____				
50% = <u>5</u> , 20% = <u>5</u>	<u>5</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks: Test plot location passes dominance test; hydrophytic vegetation is present at the sample location.

SOILSampling Point: W6-SP1 (Wet)**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/2	85	10YR 4/6	15	C	M	Sa Lo	Redox starts at 4"

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Hydric soil indicator F6 is present at sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 ☐ Depth (inches): 1 (adjacent)Water Table Present? Yes ☒ No ☐ Depth (inches): 1Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Wetland hydrology indicators are present at sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ /Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W6-SP2 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): toe of slope Local relief (concave, convex, none): convex Slope (%): ≤1
 Subregion (LRR): A Lat: 46.2845309618544 Long: -124.05432878913 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point ~8' southwest of flag W6-B11. Located on berm between wetland and parking lot.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. _____	_____			Number of Dominant Species That Are OBL, FACW, or FAC:	<u>3</u> (A)
2. _____	_____			Total Number of Dominant Species Across All Strata:	<u>5</u> (B)
3. _____	_____			Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>60</u> (A/B)
4. _____	_____				
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:	
1. <u>Alnus rubra</u>	<u>35</u>	<u>yes</u>	<u>FAC</u>	Total % Cover of:	Multiply by:
2. _____	_____			OBL species _____	x1 = _____
3. _____	_____			FACW species _____	x2 = _____
4. _____	_____			FAC species _____	x3 = _____
5. _____	_____			FACU species _____	x4 = _____
50% = _____, 20% = _____	<u>35</u>	= Total Cover		UPL species _____	x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A)	_____ (B)
1. <u>Dactylis glomerata</u>	<u>25</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____	
2. <u>Phalaris arundinacea</u>	<u>20</u>	<u>yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators:	
3. <u>Carex obnupta</u>	<u>18</u>	<u>yes</u>	<u>OBL</u>	<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation	
4. <u>Equisetum telmateia</u>	<u>10</u>	<u>no</u>	<u>FACW</u>	<input checked="" type="checkbox"/> 2 – Dominance Test is >50%	
5. <u>Galium aparine</u>	<u>3</u>	<u>no</u>	<u>FACU</u>	<input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹	
6. _____	_____			<input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
7. _____	_____			<input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹	
8. _____	_____			<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
9. _____	_____			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
10. _____	_____				
11. _____	_____				
50% = <u>28</u> , 20% = <u>15.2</u>	<u>76</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Woody Vine Stratum (Plot size: 15' diam)					
1. <u>Rubus ursinus</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>		
2. <u>Rubus armeniacus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>		
50% = <u>10</u> , 20% = <u>4</u>	<u>20</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>24</u>					
Remarks: Vegetation community passes the dominance test.					

SOIL**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 3/2	100					Si Cl	
4-10	10YR 3/2	97	10YR 4/6	3	C	N	Si Cl Lo	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**Type: gravel/packed clayDepth (inches): 10**Hydric Soils Present?**

Yes

☐

No

☒

Remarks: No hydric soil indicators are present at the sample location. Soil is dry.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <input type="checkbox"/> Water-Stained Leaves (B9) |
| <input type="checkbox"/> (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	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Depth (inches):	<u> </u>
Water Table Present?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Depth (inches):	<u> </u>
Saturation Present? (includes capillary fringe)	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Depth (inches):	<u> </u>

Wetland Hydrology Present?

Yes

☐

No

☒

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

Remarks: No wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ / Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W7-SP1 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR): A Lat: 46.2841005348174 Long: -124.05373430074 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located south of W7-A20.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Salix hookeriana</u>	35	yes	FACW	
2. <u>Alnus rubra</u>	15	yes	FAC	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
50% = <u>25</u> , 20% = <u>10</u>	<u>50</u>	= Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x1 = _____ FACW species _____ x2 = _____ FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: 15' diam)				
1. <u>Salix hookeriana</u>	75	yes	FACW	
2. <u>Rubus spectabilis</u>	5	no	FAC	
3. <u>Rubus armeniacus</u>	2	no	FAC	
4. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% = <u>41</u> , 20% = <u>16.4</u>	<u>82</u>	= Total Cover		
Herb Stratum (Plot size: 5' diam)				
1. <u>Carex obnupta</u>	90	yes	OBL	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
50% = <u>-</u> , 20% = <u>-</u>	<u>90</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>10% Water</u>				

Remarks: Test plot location passes dominance test; hydrophytic vegetation is present at the sample location.

SOIL**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	2.5Y 3/1	100					Sa lo	
4-18	2.5Y 4/1	92	10YR 4/6	8	C	M	Sa lo	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input checked="" type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <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"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Hydric soil indicator F3 and A4 are present at sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 ☐ Depth (inches): adjacentWater Table Present? Yes ☒ No ☐ Depth (inches): 1Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Wetland hydrology indicators are present at sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: / Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W7-SP2 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 12
 Subregion (LRR): A Lat: 46.2841421856081 Long: -124.05380162295 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Sample point located upslope of flag W7-A20. Hillslope.		

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30' diam</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:														
1. <u><i>Alnus rubra</i></u>	<u>55</u>	<u>yes</u>	<u>FAC</u>	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</u> (A/B)														
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
50% = <u> </u> , 20% = <u> </u>	<u>55</u>	= Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u> </u></td> <td>x1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x2 = <u> </u></td> </tr> <tr> <td>FAC species <u>125</u></td> <td>x3 = <u>375</u></td> </tr> <tr> <td>FACU species <u>85</u></td> <td>x4 = <u>340</u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u>210</u> (A)</td> <td><u>715</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.4</u>	Total % Cover of:	Multiply by:	OBL species <u> </u>	x1 = <u> </u>	FACW species <u> </u>	x2 = <u> </u>	FAC species <u>125</u>	x3 = <u>375</u>	FACU species <u>85</u>	x4 = <u>340</u>	UPL species <u> </u>	x5 = <u> </u>	Column Totals: <u>210</u> (A)	<u>715</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u> </u>	x1 = <u> </u>																	
FACW species <u> </u>	x2 = <u> </u>																	
FAC species <u>125</u>	x3 = <u>375</u>																	
FACU species <u>85</u>	x4 = <u>340</u>																	
UPL species <u> </u>	x5 = <u> </u>																	
Column Totals: <u>210</u> (A)	<u>715</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15' diam</u>)																		
1. <u><i>Sambucus racemosa</i></u>	<u>55</u>	<u>yes</u>	<u>FACU</u>															
2. <u><i>Rubus armeniacus</i></u>	<u>5</u>	<u>no</u>	<u>FAC</u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
50% = <u>30</u> , 20% = <u>12</u>	<u>60</u>	= Total Cover																
Herb Stratum (Plot size: <u>5' diam</u>)																		
1. <u><i>Hydrophyllum tenuipes</i></u>	<u>65</u>	<u>yes</u>	<u>FAC</u>															
2. <u><i>Polystichum munitum</i></u>	<u>20</u>	<u>yes</u>	<u>FACU</u>															
3. <u><i>Tellima grandiflora</i></u>	<u>10</u>	<u>no</u>	<u>FACU</u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
11. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
50% = <u>47.5</u> , 20% = <u>19</u>	<u>95</u>	= Total Cover																
Woody Vine Stratum (Plot size: <u>15' diam</u>)																		
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover																
% Bare Ground in Herb Stratum <u>5 - dirt/rock</u>																		

Remarks: Vegetation community does not meet any hydrophytic vegetation indicators; hydrophytic vegetation is not present at the sample location.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/2	100	_____	_____	_____	_____	Sand	dry
3-16	10YR 3/2	100	_____	_____	_____	_____	Sand	dry
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: No hydric soil indicators are present at the sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**

Yes

☐

No

☒

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

Remarks: No wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ /Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: W7-SP3 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Coast floodplain Local relief (concave, convex, none): none Slope (%): 1-2
 Subregion (LRR): A Lat: 46.2846207353496 Long: -124.05308357946 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Wetland plot located waterward of flag W7-A11.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>			
2. <u> </u>	<u> </u>			Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. <u> </u>	<u> </u>			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>			
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>			
2. <u> </u>	<u> </u>			OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>			FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>			FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>			FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: 5' diam)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Phalaris arundinacea</u>	<u>75</u>	<u>yes</u>	<u>FACW</u>	Prevalence Index = B/A = <u> </u>
2. <u>Oenanthe sarmentosa</u>	<u>5</u>	<u>no</u>	<u>OBL</u>	
3. <u>Astragalus sp.</u>	<u>3</u>	<u>no</u>	<u>FAC</u>	
4. <u> </u>	<u> </u>			
5. <u> </u>	<u> </u>			
6. <u> </u>	<u> </u>			
7. <u> </u>	<u> </u>			
8. <u> </u>	<u> </u>			
9. <u> </u>	<u> </u>			
10. <u> </u>	<u> </u>			
11. <u> </u>	<u> </u>			
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>			
2. <u> </u>	<u> </u>			<input checked="" type="checkbox"/> 2 – Dominance Test is >50%
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		<input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹
% Bare Ground in Herb Stratum <u>17</u>				<input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Remarks: Test plot location passes dominance test; hydrophytic vegetation is present at the sample location. Astragalus (vetch) species assumed FAC. Wrack lines and debris observed.				<input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Project Site: Cape Disappointment State Park Visitor Center

Sampling Point: W7-SP3 (Wet)

SOIL

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 2/1	100					Muck	
8-14	10YR 3/1	82	10YR 4/6	18			Sa Si Lo	
14-18+	10YR 4/1	85	10YR 4/6	15			Sand	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Hydric soil indicator F3 is present at sample location.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 ☒ Depth (inches): 2

Water Table Present? Yes ☒ No ☐ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 4

Wetland Hydrology Present?

Yes

☒

No

☐

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

Remarks: Wetland hydrology indicators are present at sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: /Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W7-SP4 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Embankment/slope Local relief (concave, convex, none): none Slope (%): 8
 Subregion (LRR): A Lat: 46.2846176598186 Long: -124.05318199026 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point located 5' north of flag W7-A11 upslope.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. <u><i>Alnus rubra</i></u>	<u>35</u>	<u>yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>75</u> (A/B)
4. _____	_____	_____	_____		
50% = <u>35</u> , 20% = <u>7</u>	<u>35</u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:	
1. <u><i>Rubus armeniacus</i></u>	<u>50</u>	<u>yes</u>	<u>FAC</u>	Total % Cover of:	Multiply by:
2. <u><i>Picea sitchensis</i></u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	OBL species _____	x1 = _____
3. <u><i>Sambucus racemosa</i></u>	<u>8</u>	<u>no</u>	<u>FACU</u>	FACW species _____	x2 = _____
4. _____	_____	_____	_____	FAC species _____	x3 = _____
5. _____	_____	_____	_____	FACU species _____	x4 = _____
50% = <u>36.5</u> , 20% = <u>14.6</u>	<u>73</u>	= Total Cover		UPL species _____	x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A)	_____ (B)
1. <u><i>Polystichum munitum</i></u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____	
2. <u><i>Hedera helix</i></u>	<u>3</u>	<u>no</u>	<u>FACU</u>		
3. <u><i>Rubus armeniacus</i></u>	<u>2</u>	<u>no</u>	<u>FAC</u>		
4. <u><i>Equisetum hyemale</i></u>	<u>2</u>	<u>no</u>	<u>FACW</u>		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
50% = <u>8.5</u> , 20% = <u>2.4</u>	<u>17</u>	= Total Cover			
Woody Vine Stratum (Plot size: 15' diam)					
1. <u>-</u>	_____	_____	_____		
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum <u>83</u>					

Remarks: **Vegetation community passes dominance test.**

SOIL**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 3/2	100					Sand	
4-18	10YR 3/3	100					Sand	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: No hydric soil indicators are present at the sample location. Along road embankment slope.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 ☒ Depth (inches): :Water Table Present? Yes ☐ No ☒ Depth (inches): :Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): :**Wetland Hydrology Present?**

Yes

☐

No

☒

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

Remarks: No wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ /Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W7-SP5 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR): A Lat: 46.2835688778202 Long: -124.05385197374 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located downslope of flag W7-C8 approximately 12' SE.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Alnus rubra</i></u>	<u>35</u>	<u>yes</u>	<u>FAC</u>	
2. _____	_____			Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____			
50% = <u>35</u> , 20% = <u>35</u>	<u>35</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u>-</u>	_____			
2. _____	_____			OBL species _____ x1 = _____
3. _____	_____			FACW species _____ x2 = _____
4. _____	_____			FAC species _____ x3 = _____
5. _____	_____			FACU species _____ x4 = _____
50% = _____, 20% = _____	_____	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A) _____ (B)
1. <u><i>Carex obnupta</i></u>	<u>100</u>	<u>yes</u>	<u>FACW</u>	Prevalence Index = B/A = _____
2. _____	_____			Hydrophytic Vegetation Indicators:
3. _____	_____			
4. _____	_____			
5. _____	_____			
6. _____	_____			
7. _____	_____			
8. _____	_____			
9. _____	_____			
10. _____	_____			
11. _____	_____			
50% = _____, 20% = _____	_____	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u><i>Rubus ursinus</i></u>	<u>10</u>	<u>yes</u>	<u>FAC</u>	
2. _____	_____			
50% = <u>10</u> , 20% = <u>10</u>	<u>10</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>				

Remarks: Test plot location passes dominance test; hydrophytic vegetation is present at the sample location.

Project Site: Cape Disappointment State Park Visitor Center

SOIL

Sampling Point: W7-SP5 (Wet)

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 3/2	100					Sa Si Lo	
2-6	10YR 3/2	87	10YR 4/6	13	C	M	Sa Si Lo	
6-18	10YR 3/1	78	10YR 4/6	22	C	M	Sa Si Lo	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Remarks: Hydric soil indicator F6 is present at sample location.

Hydric Soils Present?

Yes ☒ No ☐

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>adjacent (8")</u>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>8</u>
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>4</u>

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: Wetland hydrology indicators are present at sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ /Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W7-SP6 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): embankment/slope Local relief (concave, convex, none): none Slope (%): 10
 Subregion (LRR): A Lat: 46.2836174164493 Long: -124.05383493479 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point located upslope of flag W7-C8 approximately 6' northeast on road embankment slope.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. <u>Sambucus racemosa</u>	<u>25</u>	<u>yes</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>4</u> (A)
2. <u>Alnus rubra</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata:	<u>6</u> (B)
3. _____	_____			Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>66</u> (A/B)
4. _____	_____				
50% = <u>20</u> , 20% = <u>8</u>	<u>40</u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:	
1. <u>Sambucus racemosa</u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	Total % Cover of:	Multiply by:
2. <u>Rubus spectabilis</u>	<u>5</u>	<u>yes</u>	<u>FAC</u>	OBL species _____	x1 = _____
3. _____	_____			FACW species _____	x2 = _____
4. _____	_____			FAC species _____	x3 = _____
5. _____	_____			FACU species _____	x4 = _____
50% = <u>7.5</u> , 20% = <u>3</u>	<u>15</u>	= Total Cover		UPL species _____	x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A)	_____ (B)
1. <u>Tiarella trifoliata</u>	<u>25</u>	<u>yes</u>	<u>FAC</u>	Prevalence Index = B/A = _____	
2. <u>Agrostis sp. (Assumed FAC)</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
3. <u>Heracleum maximum</u>	<u>12</u>	<u>no</u>	<u>FAC</u>	<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation	
4. <u>Ranunculus repens</u>	<u>8</u>	<u>no</u>	<u>FAC</u>	<input checked="" type="checkbox"/> 2 – Dominance Test is >50%	
5. <u>Viola sp. (assumed FAC)</u>	<u>3</u>	<u>no</u>	<u>FAC</u>	<input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹	
6. <u>Cardamine hirsuta</u>	<u>3</u>	<u>no</u>	<u>FACU</u>	<input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
7. <u>grass spp mix (assumed FAC)</u>	<u>3</u>	<u>no</u>	<u>FAC</u>	<input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹	
8. _____	_____			<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
9. _____	_____			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
10. _____	_____				
11. _____	_____				
50% = <u>34.5</u> , 20% = <u>13.8</u>	<u>69</u>	= Total Cover			
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
1. <u>Rubus ursinus</u>	<u>3</u>	<u>no</u>	<u>FACU</u>		
2. _____	_____				
50% = _____, 20% = _____	<u>3</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>31 - mud</u>					

Remarks: Vegetation community passes dominance test.

SOIL

Sampling Point: W7-SP6 (Upl)

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

[illegible]

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches):

Hydric Soils Present?

Yes

1

No

No

Remarks: No hydric soil indicators are present at the sample location.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0

Water Table Present? Yes ☐ No ☒ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): 1

Wetland Hydrology Present?

Ye

9

9

9

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

Remarks: No wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: _____ / Pacific County Sampling Date: 03/22/2022
 Applicant/Owner: Parks State: WA Sampling Point: WB-SP1 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): A Lat: 46.2844871343328 Long: -124.05519074173 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located in Wetland 8.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Alnus rubra</i></u>	<u>40</u>	<u>yes</u>	<u>FAC</u>	
2. <u><i>Salix hookeriana</i></u>	<u>20</u>	<u>yes</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____	_____			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____			
50% = <u>30</u> , 20% = <u>12</u>	<u>60</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u><i>Salix hookeriana</i></u>	<u>12</u>	<u>yes</u>	<u>FACW</u>	
2. <u><i>Lonicera involucrata</i></u>	<u>3</u>	<u>no</u>	<u>FAC</u>	OBL species _____ x1 = _____
3. _____	_____			FACW species _____ x2 = _____
4. _____	_____			FAC species _____ x3 = _____
5. _____	_____			FACU species _____ x4 = _____
50% = <u>7.5</u> , 20% = <u>3</u>	<u>15</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A) _____ (B)
1. <u><i>Carex obnupta</i></u>	<u>100</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = _____
2. _____	_____			Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____	_____			
4. _____	_____			
5. _____	_____			
6. _____	_____			
7. _____	_____			
8. _____	_____			
9. _____	_____			
10. _____	_____			
11. _____	_____			
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. <u><i>Rubus ursinus</i></u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	
2. _____	_____			
50% = <u>10</u> , 20% = <u>2</u>	<u>10</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>				

Remarks: Test plot location passes dominance test; hydrophytic vegetation is present at the sample location. Vegetation adjacent to the plot is mowed and maintained as a campground.

Project Site: Cape Disappointment State Park Visitor Center

SOIL

Sampling Point: W8-SP1 (Wet)

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

[illegible]

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

²Location: PL=Pore Lining, M=Matrix

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☒

No.

☐

Remarks: Hydric soil indicator F1 and F6 are present at sample location. at 24" depth the soil is so saturated it cannot be removed from the pit. Saturation and water table at soil surface. Assumed that saturation is masking redox. OBL plant community is present.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): adjacent 2"

Water Table Present? Yes ☒ No ☐ Depth (inches): 0

Saturation Present? Yes ☒ No ☐ Depth (inches): 0

Wetland Hydrology Present?

Yes

☒

do

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

Remarks: Wetland hydrology indicators are present at sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: / Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W8-SP2 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR): A Lat: 46.2844447916856 Long: -124.05520561989 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point for upland conditions at W8. Located south of flag W8-A22.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Alnus rubra</u>	<u>70</u>	<u>yes</u>	<u>FAC</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>70</u> , 20% = <u>70</u>	<u>70</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x1 = <u> </u> FACW species <u> </u> x2 = <u> </u> FAC species <u> </u> x3 = <u> </u> FACU species <u> </u> x4 = <u> </u> UPL species <u> </u> x5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Herb Stratum (Plot size: 5' diam)				
1. <u>Unknown grass species mix</u>	<u>85</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 – Dominance Test is >50% <input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Hypochaeris radicata</u>	<u>8</u>	<u>no</u>	<u>FACU</u>	
3. <u>Bellis perennis</u>	<u>5</u>	<u>no</u>	<u>NL (UPL)</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
11. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>49</u> , 20% = <u>19.6</u>	<u>98</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
% Bare Ground in Herb Stratum <u>2</u>				

Remarks: Vegetation community passes the dominance test. Grass species mix assumed FAC.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: /Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W8-SP3 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): convex Slope (%): 1-2
 Subregion (LRR): A Lat: 46.2843154158145 Long: -124.05586333235 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point of wetland for W8.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Alnus rubra</i></u>	<u>40</u>	<u>yes</u>	<u>FAC</u>	
2. _____	_____			Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____			
50% = <u>20</u> , 20% = <u>8</u>	<u>40</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u>=</u>	_____			
2. _____	_____			OBL species _____ x1 = _____
3. _____	_____			FACW species _____ x2 = _____
4. _____	_____			FAC species _____ x3 = _____
5. _____	_____			FACU species _____ x4 = _____
50% = _____, 20% = _____	_____	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 5' diam)				Column Totals: _____ (A) _____ (B)
1. <u><i>Carex obnupta</i></u>	<u>85</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = _____
2. <u><i>Lysichiton americanus</i></u>	<u>10</u>	<u>no</u>	<u>OBL</u>	
3. <u><i>Rumex crispus</i></u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
4. _____	_____			
5. _____	_____			
6. _____	_____			
7. _____	_____			
8. _____	_____			
9. _____	_____			
10. _____	_____			
11. _____	_____			
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Indicators:
1. <u>=</u>	_____			
2. _____	_____			<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
50% = _____, 20% = _____	_____	= Total Cover		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
% Bare Ground in Herb Stratum <u>0</u>				<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: Test plot location passes dominance test; hydrophytic vegetation is present at the sample location.

SOILSampling Point: W8-SP3 (Wet)**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/2	100					Sa Lo	
2-18	10YR 2/2	80	10YR 4/6	20	C	M/PL	Sa Lo	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Hydric soil indicator F3 is present at sample location.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input checked="" 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 ☒ Depth (inches): 0Water Table Present? Yes ☒ No ☐ Depth (inches): 3Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Wetland hydrology indicators are present at sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: / Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W8-SP4 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Gentle slope Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): A Lat: 46.2843291252728 Long: -124.05580967379 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point located south of wetland 8 along border between forest and campground. Upslope of flag W8-A12.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30' diam</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. <u>Alnus rubra</u>	<u>60</u>	<u>yes</u>	<u>FAC</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
50% = <u>30</u> , 20% = <u>12</u>	<u>60</u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15' diam</u>)					
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Prevalence Index worksheet:	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total % Cover of: <u> </u> Multiply by: <u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		FAC species <u> </u> x3 = <u> </u>	
Herb Stratum (Plot size: <u>5' diam</u>)					
1. <u>Poa annua</u>	<u>100</u>	<u>yes</u>	<u>FAC</u>	FACU species <u> </u> x4 = <u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	UPL species <u> </u> x5 = <u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Column Totals: <u> </u> (A) <u> </u> (B)	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Prevalence Index = B/A = <u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
11. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>15' diam</u>)					
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks: Vegetation community does not meet any hydrophytic vegetation indicators; hydrophytic vegetation is not present at the sample location. Moss is intermixed with grass.

Project Site: Cape Disappointment State Park Visitor Center

SOIL

Sampling Point: W8-SP4 (Upl)

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		
0-16	10YR 2/2	100					Sa Lo	
16-20	10YR 2/2	90	10YR 4/6	10	C	M	Sa Lo	Dry

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes ☐ No ☒

Remarks: No hydric soil indicators are present at the sample location.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 <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? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No wetland hydrology indicators are present at the sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: /Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W8-SP5 (Wet)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 3
 Subregion (LRR): A Lat: 46.2840471849902 Long: -124.05680756624 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sample point located northwest edge of cabins along Lake O'Neill. North of flag W8-A4.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diam)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15' diam)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: 5' diam)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Carex obnupta</u>	<u>50</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = <u> </u>
2. <u>Juncus effusus</u>	<u>25</u>	<u>yes</u>	<u>FACW</u>	
3. <u>Oenanthe sarmentosa</u>	<u>8</u>	<u>no</u>	<u>OBL</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
11. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>41.5</u> , 20% = <u>16.6</u>	<u>83</u>	= Total Cover		
Woody Vine Stratum (Plot size: 15' diam)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
% Bare Ground in Herb Stratum <u>17</u>				<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: Test plot location passes dominance test; hydrophytic vegetation is present at the sample location. Water/mud under plants, Nuphar sp. observed along lake edge.

SOILSampling Point: W8-SP5 (Wet)**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		
<u>0-8</u>	<u>10YR 2/1</u>	<u>100</u>					<u>Loam</u>	<u>lake edge</u>

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input checked="" type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

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

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☒ No ☐

Remarks: Hydric soil indicator mud at 8" depth - lake water level.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

- | |
|--|
| <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 checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input checked="" 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 ☐ Depth (inches): adjacentWater Table Present? Yes ☒ No ☐ Depth (inches): 8Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?** Yes ☒ No ☐

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

Remarks: Wetland hydrology indicators are present at sample location.

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

Project Site: Cape Disappointment State Park Visitor Center City/County: /Pacific County Sampling Date: 03/23/2022
 Applicant/Owner: Parks State: WA Sampling Point: W8-SP6 (Upl)
 Investigator(s): Z. Roman, J. Gray Section, Township, Range: S09, T09 N, R11 W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
 Subregion (LRR): A Lat: 46.2840049356236 Long: -124.05681539553 Datum: WGS1984
 Soil Map Unit Name: Yaquina loamy fine sand (162) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Sample point located upslope of SP5 for wetland 8.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: <u>30' diam</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Alnus rubra</i></u>	<u>35</u>	<u>yes</u>	<u>FAC</u>	
2. _____	_____			Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____			Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____			
50% = <u>35</u> , 20% = <u>35</u>	<u>35</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15' diam</u>)				Prevalence Index worksheet:
1. <u>-</u>	_____			
2. _____	_____			OBL species _____ x1 = _____
3. _____	_____			FACW species _____ x2 = _____
4. _____	_____			FAC species _____ x3 = _____
5. _____	_____			FACU species _____ x4 = _____
50% = _____, 20% = _____	_____	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: <u>5' diam</u>)				Column Totals: _____ (A) _____ (B)
1. <u><i>Grass spp. mix (assumed FAC)</i></u>	<u>80</u>	<u>yes</u>	<u>FAC</u>	Prevalence Index = B/A = _____
2. <u><i>Poa annua</i></u>	<u>15</u>	<u>no</u>	<u>FAC</u>	
3. <u><i>Bellis perennis</i></u>	<u>5</u>	<u>no</u>	<u>NL (UPL)</u>	
4. _____	_____			
5. _____	_____			
6. _____	_____			
7. _____	_____			
8. _____	_____			
9. _____	_____			
10. _____	_____			
11. _____	_____			
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>15' diam</u>)				Hydrophytic Vegetation Indicators:
1. <u>-</u>	_____			
2. _____	_____			<input checked="" type="checkbox"/> 2 – Dominance Test is >50%
50% = _____, 20% = _____	_____	= Total Cover		<input type="checkbox"/> 3 – Prevalence Index is ≤3.0 ¹
% Bare Ground in Herb Stratum <u>0</u>				<input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Remarks: Vegetation community passes the dominance test.				<input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

SOILSampling Point: W8-SP6 (Upl)**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		
<u>0-16</u>	<u>10YR 2/2</u>	<u>100</u>					<u>Sa Lo</u>	
<u>16-20</u>	<u>10YR 2/2</u>	<u>95</u>	<u>10YR 4/6</u>	<u>5</u>	<u>C</u>	<u>M/PL</u>	<u>Sa Lo</u>	

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 Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

Indicators for Problematic Hydric Soils³:

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

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

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Plot meets for F6.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): Water Table Present? Yes ☐ No ☒ Depth (inches): Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): **Wetland Hydrology Present?**

Yes

☐

No

☒

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

Remarks: No wetland hydrology indicators are present at the sample location.

Appendix D

Ecology Wetland Rating Forms

Wetland name or number 1

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 1 Date of site visit: 3/23/2022
Rated by J. Gray, Z. Roman Trained by Ecology? ☒ Yes ☐ No Date of training 2011
HGM Class used for rating N/A Wetland has multiple HGM classes? ☐ Y ☐ N

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

OVERALL WETLAND CATEGORY I (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				

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number 1

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

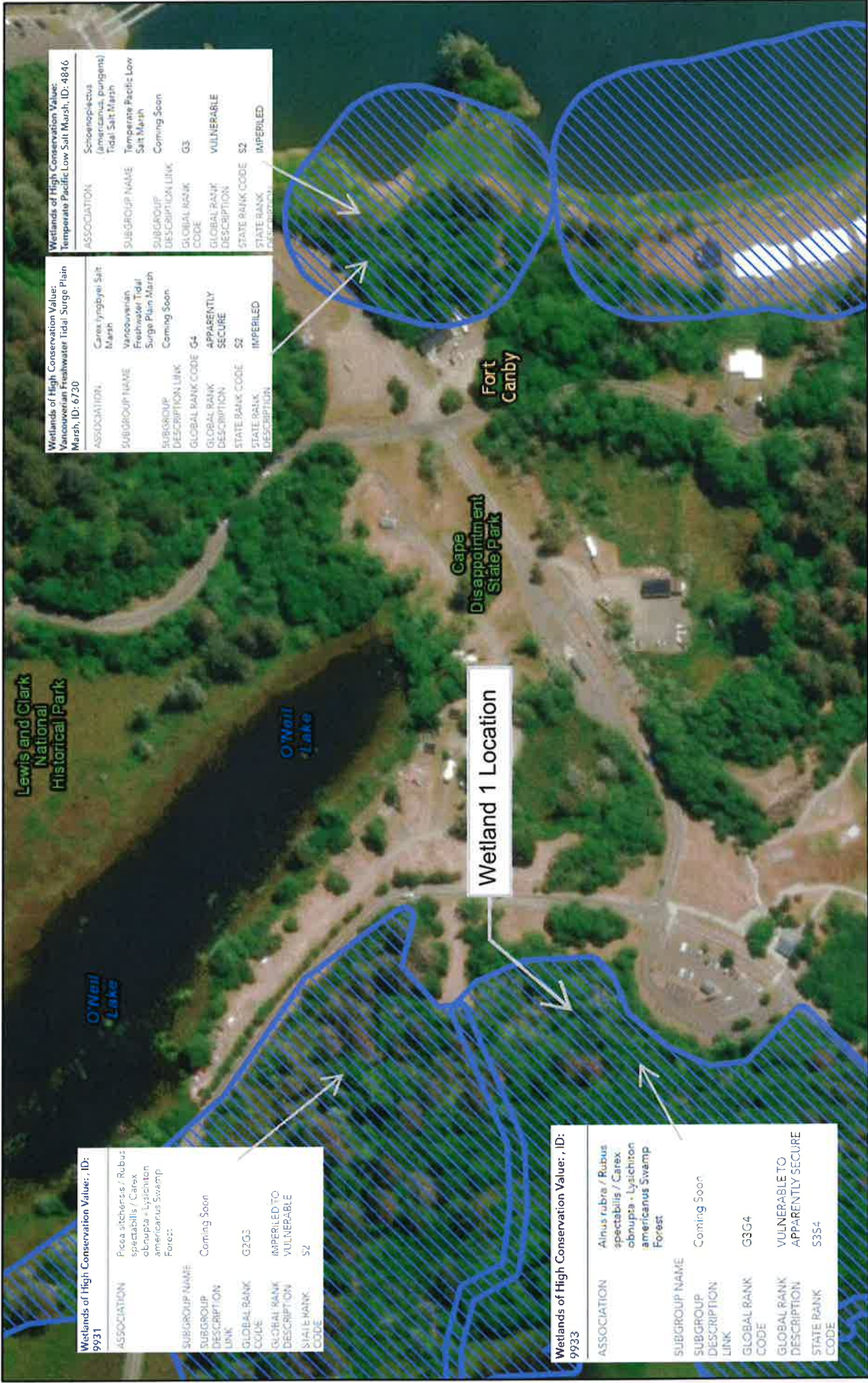
Wetland name or number 1

<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>) <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 on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than $\frac{1}{10}$ ac (4350 ft²) <p style="text-align: right;">Yes = Category I No = Category II</p>	<p style="text-align: center; vertical-align: middle;">Cat. I</p> <p style="text-align: center; vertical-align: middle;">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 <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; vertical-align: middle;">Cat I</p> <p style="text-align: center; vertical-align: middle;">Cat. II</p> <p style="text-align: center; vertical-align: middle;">Cat. III</p> <p style="text-align: center; vertical-align: middle;">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>	Cat. I

Wetland name or number 1

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Wetlands of High Conservation Value Map



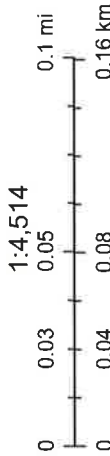
5/27/2022, 8:54:48 AM



Known Wetlands of High Conservation Value



Counties



Wetland name or number 2

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 2 Date of site visit: 3/23/2022
Rated by J. Gray, Z. Roman Trained by Ecology? ☒ Yes ☐ No Date of training 2011
HGM Class used for rating Depressional Wetland has multiple HGM classes? ☐ Y ☒ N

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

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

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality			Hydrologic			Habitat			
Circle the appropriate ratings										
Site Potential	H	(M)	L	H	(M)	L	H	M	(L)	
Landscape Potential	H	(M)	L	(H)	M	L	(H)	M	L	
Value	H	(M)	L	H	M	(L)	H	(M)	L	
Score Based on Ratings	6			6			6			TOTAL 18

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number 2

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants <i>(can be added to 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of 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 sheetflow, or in a swale without distinct banks,

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

NO – go to 5

YES – The wetland class is **Slope**

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

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

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

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

Wetland name or number 2

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 2

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. <u>The soil 2 in below the surface (or duff layer)</u> 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		0
Total for D 1		8

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	1
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?	Yes = 1 No = 0	0
Source _____		
Total for D 2		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 for the basin in which the unit is found)?	Yes = 2 No = 0	0
Total for D 3		1

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

The Columbia River is immediately down-gradient of the unit and is listed as a 303d water for the parameter: Polychlorinated Biphenyls (PCBs). <https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&BBox=-14338616,5395963,-12562831,6503994&RT=0&Layers=27&Filters=y,n,n,n,n,n&F1.4=n,n,n,n,n,y>

Wetland name or number 2

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 or ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0		4
D 4.2. Depth of storage during wet periods: <i>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.</i> 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		3
D 4.3. Contribution of the wetland to storage in the watershed: <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i> 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		3
Total for D 4		10

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 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	1
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.)? <u>Camping and road</u>	Yes = 1 No = 0	1
Total for D 5		3

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

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

D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther down-gradient. points = 1 Flooding from groundwater is an issue in the sub-basin. points = 1 The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. <i>Explain why</i> _____ points = 0 There are no problems with flooding downstream of the wetland. points = 0		0
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0		0
Total for D 6		0

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

Wetland name or number 2

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

- | | |
|---|----------------------------------|
| <input type="checkbox"/> Aquatic bed | 4 structures or more: points = 4 |
| <input 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/ground-cover) that each cover 20% within the Forested polygon

1

H 1.2. Hydroperiods

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

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

0

H 1.3. Richness of plant species

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

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

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

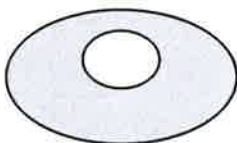
1

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.*



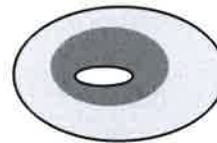
None = 0 points



Low = 1 point

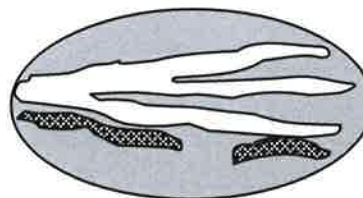


Moderate = 2 points



0

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



Wetland name or number 2

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i> <input checked="" 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 extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <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 (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <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 (<i>structures for egg-laying by amphibians</i>) <input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)		2
Total for H 1	Add the points in the boxes above	4

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

H 2.0. Does the landscape have the potential to support the habitat functions of the site?		
H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). <i>Calculate:</i> % undisturbed habitat <u>24</u> + [(% moderate and low intensity land uses)/2] <u>0</u> = <u>24</u> % If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0		2
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate:</i> % undisturbed habitat <u>58</u> + [(% moderate and low intensity land uses)/2] <u>17</u> = <u>75</u> % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0		3
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0		0
Total for H 2	Add the points in the boxes above	5

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

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

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

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. 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?	Cat. I
Yes = Category I No - Go to SC 1.2	
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	Cat. I
Yes = Category I No = Category II	Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?	Cat. I
Yes – Go to SC 2.2 No – Go to SC 2.3	
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
Yes = Category I No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?	
Yes = Category I No = Not a WHCV	
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i>	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?	
Yes – Go to SC 3.3 No – Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?	
Yes – Go to SC 3.3 No = Is not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?	
Yes = Is a Category I bog No – Go to SC 3.4	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.	
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	Cat. I
Yes = Is a Category I bog No = Is not a bog	

Wetland name or number 2

<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>Yes = Category I No = Not a forested wetland for this section</p>	<p>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>) <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 on p. 100). — At least ⅓ 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>Cat. I</p> <p>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 <p>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>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>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>Yes = Category III No = Category IV</p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>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>	

Wetland name or number 2

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FIGURE 2.1
COWARDIN CLASSES,
AND HYDROPERIOD MAP
WELCOME CENTER AND
ENTRANCE IMPROVEMENTS
PACIFIC COUNTY, WA

Data Sources:
 Date: 9/27/2022
 Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Occasionally Flooded
- Seasonally Flooded
- Palustrine Forested (PFO)
- 150-foot Wetland Buffer

0 20 40 60 ft

Note: No outlet.



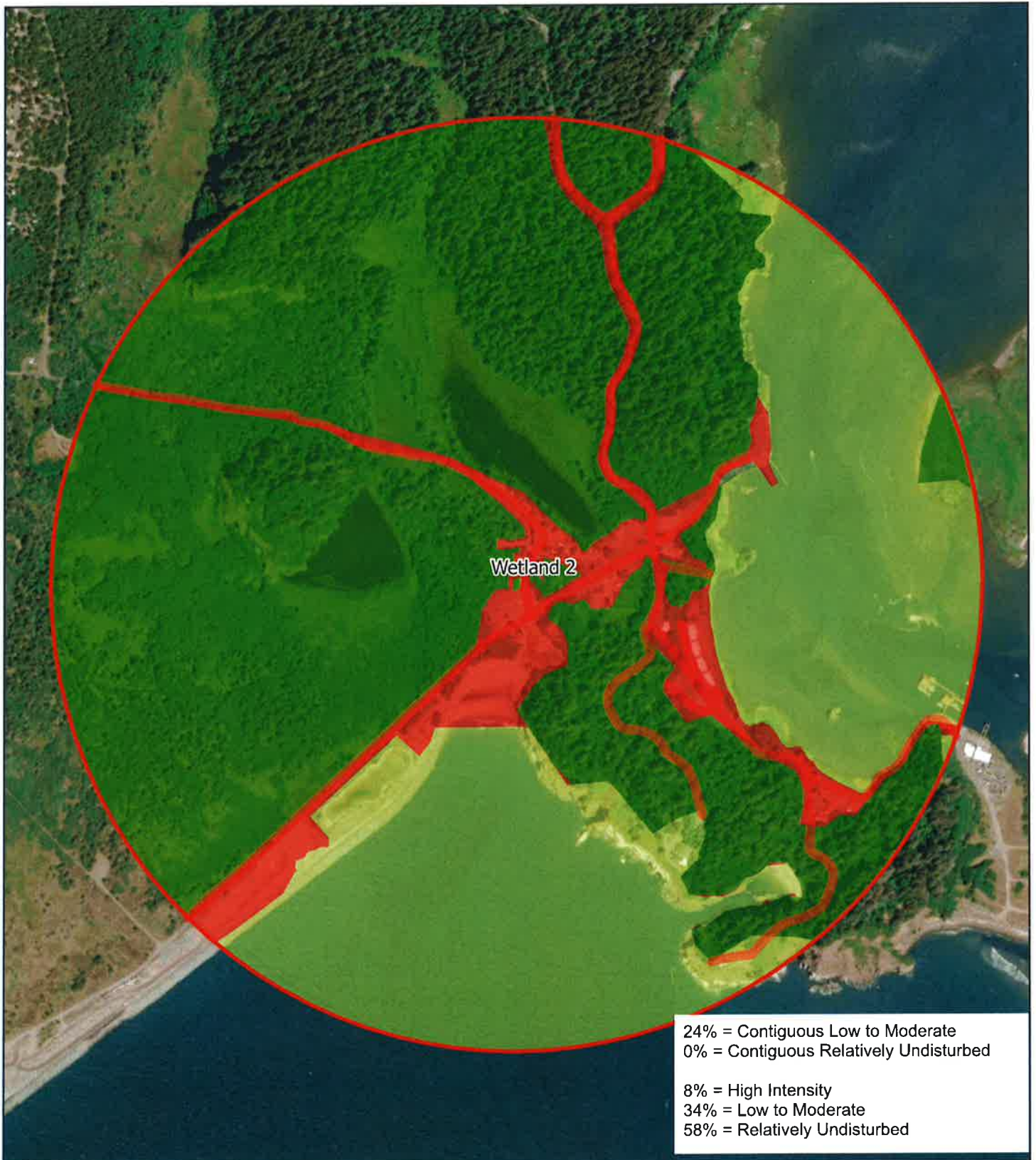


FIGURE 2.2
LAND USE MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources:
Date: 6/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Wetland Area
- 1 km Polygon
- High Intensity Land Use
- Low to Moderate Intensity Land Use
- Relatively Undisturbed Land

0 500 1,000 1,500 ft



Wetland name or number 3

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 3 Date of site visit: 3/22/2022
Rated by J. Gray, Z. Roman Trained by Ecology? X Yes ___ No Date of training 2011
HGM Class used for rating Depressional Wetland has multiple HGM classes? ___ Y X N

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

OVERALL WETLAND CATEGORY III (based on functions X 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 (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	7	5	18

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number 3

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of 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 sheetflow, or in a swale without distinct banks,
___ The water leaves the wetland **without being impounded**.

NO – go to 5

YES – The wetland class is **Slope**

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

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

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

Wetland name or number 3

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 3

DEPRESSIONAL AND FLATS WETLANDS

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

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

D 1.1. Characteristics of surface water outflows from the wetland:

- Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3
- Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2
- Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1
- Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1

3

D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0

0

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

- Wetland has persistent, ungrazed, plants > 95% of area points = 5
- Wetland has persistent, ungrazed, plants > 1/2 of area points = 3
- Wetland has persistent, ungrazed plants > 1/10 of area points = 1
- Wetland has persistent, ungrazed plants < 1/10 of area points = 0

5

D 1.4. Characteristics of seasonal ponding or inundation:

This is the area that is ponded for at least 2 months. See description in manual.

- Area seasonally ponded is > 1/2 total area of wetland points = 4
- Area seasonally ponded is > 1/4 total area of wetland points = 2
- Area seasonally ponded is < 1/4 total area of wetland points = 0

2

Total for D 1

Add the points in the boxes above

10

Rating of Site Potential If score is: 12-16 = H 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

1

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?

0

Source _____

Yes = 1 No = 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 for the basin in which the unit is found)? Yes = 2 No = 0

0

Total for D 3

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

The Columbia River is immediately down-gradient of the unit and is listed as a 303d water for the parameter: Polychlorinated Biphenyls (PCBs). <https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&BBox=-14338616,5395963,-12562831,6503994&RT=0&Layers=27&Filters=y,n,n,n,n,n&F1.4=n,n,n,n,n,y>

Wetland name or number 3

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 or ditch, OR highly constricted permanently flowing outlet points = 2
 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1
 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0

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

5

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

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

5

Total for D 4

Add the points in the boxes above

14

Rating of Site Potential If score is: X 12-16 = H 6-11 = M 0-5 = L

Record the rating on the first page

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

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

1

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

3

Rating of Landscape Potential If score is: X 3 = H 1 or 2 = M 0 = L

Record the rating on the first page

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

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

- The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):
- Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2
 - Surface flooding problems are in a sub-basin farther down-gradient. points = 1
- Flooding from groundwater is an issue in the sub-basin. points = 1
- The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____ points = 0
- There are no problems with flooding downstream of the wetland. points = 0

0

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?

Yes = 2 No = 0

0

Total for D 6

Add the points in the boxes above

0

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

Record the rating on the first page

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

- | | | |
|---|----------------------------------|---|
| <input type="checkbox"/> Aquatic bed | 4 structures or more: points = 4 | 1 |
| <input 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/ground-cover) that each cover 20% within the Forested polygon

H 1.2. Hydroperiods

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

- | | | |
|--|-------------------------------------|---|
| <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 checked="" type="checkbox"/> Occasionally flooded or inundated | 2 types present: points = 1 | |
| <input 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"/> 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, Canadian thistle

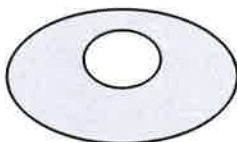
- | | | |
|------------------------------|------------|---|
| If you counted: > 19 species | points = 2 | 1 |
| 5 - 19 species | points = 1 | |
| < 5 species | points = 0 | |

H 1.4. Interspersion of habitats

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



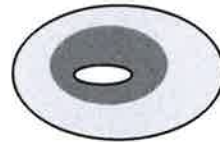
None = 0 points



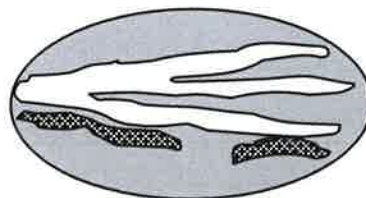
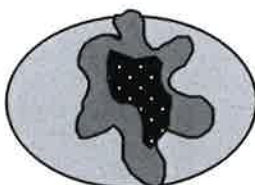
Low = 1 point



Moderate = 2 points



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



0

Wetland name or number 3

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input checked="" 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 extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</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 (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</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 (<i>structures for egg-laying by amphibians</i>)</p> <p><input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>		2
Total for H 1	Add the points in the boxes above	5

Rating of Site Potential If score is: 15-18 = H 7-14 = M 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 <i>only habitat that directly abuts wetland unit</i>).</p> <p>Calculate: % undisturbed habitat <u>0</u> + [(% moderate and low intensity land uses)/2] <u>0</u> = <u>0</u> %</p> <p>If 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. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % undisturbed habitat <u>54</u> + [(% moderate and low intensity land uses)/2] <u>19</u> = <u>73</u> %</p> <p>Undisturbed habitat > 50% of Polygon <u>38/2</u> points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>		3
<p>H 2.3. Land use intensity in 1 km Polygon: If</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>		0
Total for H 2	Add the points in the boxes above	3

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

Record the rating on the first page

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

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

Record the rating on the first page

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<p><i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i></p> <p>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</p>	
<p>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</p>	Cat. I
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or 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</p>	Cat. I Cat. II
<p>SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes — Go to SC 2.2 No — Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasetsearch/wnhpwetlands.pdf Yes — Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = Category I No = Not a WHCV</p>	Cat. I
<p>SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes — Go to SC 3.3 No — Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes — Go to SC 3.3 No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No — Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog</p>	Cat. I

<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>Yes = Category I No = Not a forested wetland for this section</p>	<p>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>) <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 on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) <p>Yes = Category I No = Category II</p>	<p>Cat. I</p> <p>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 <p>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>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>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>	

Wetland name or number 3

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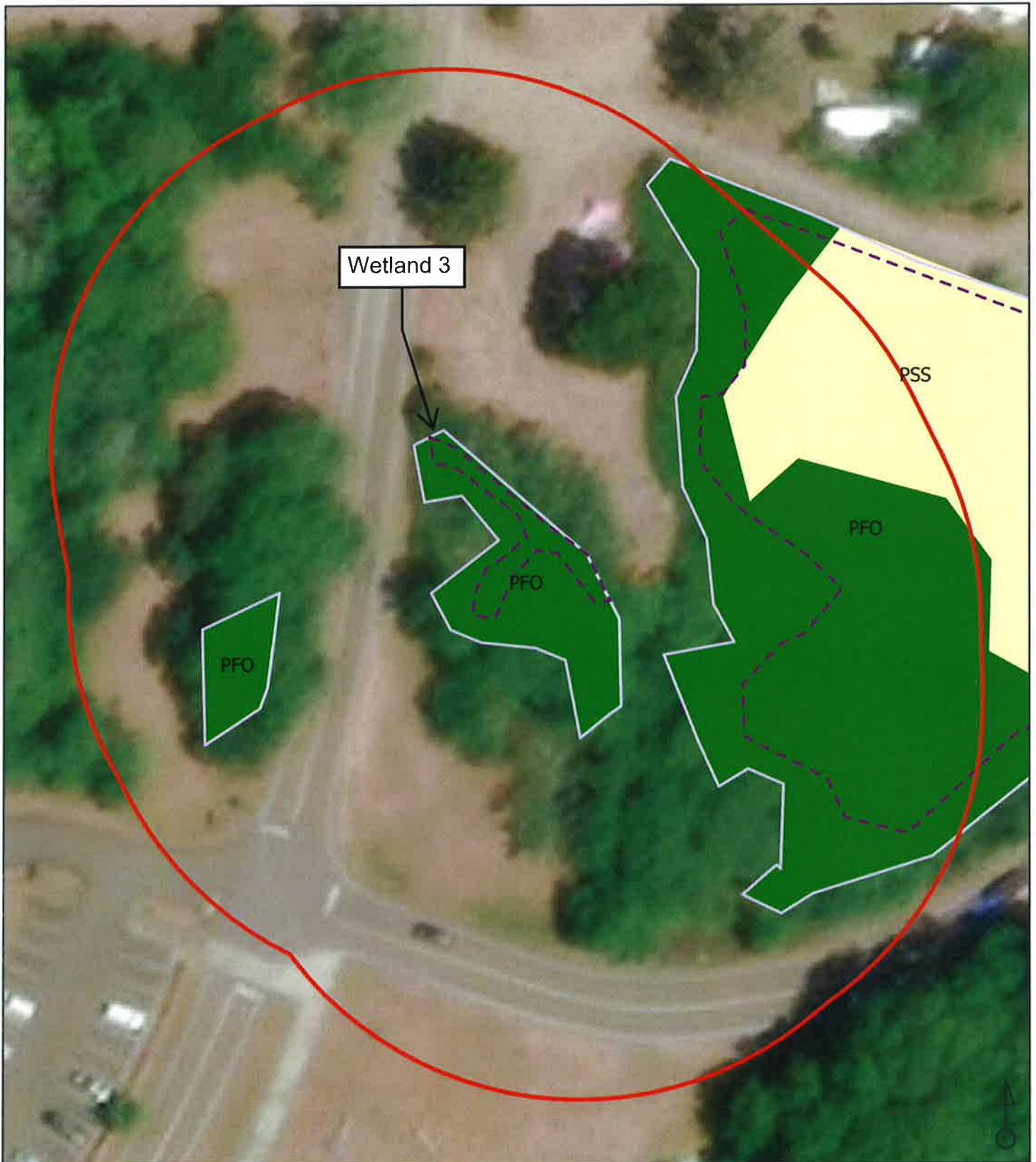


FIGURE 3.1

**COWARDIN CLASSES,
AND HYDROPERIOD MAP**

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources:
Date: 5/27/2022

Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Occasionally Flooded
- Seasonally Flooded
- Palustrine Forested (PFO)
- Palustrine Scrub-Shrub (PSS)
- 150-foot Wetland Buffer

0 20 40 60 ft

Note: No outlet.



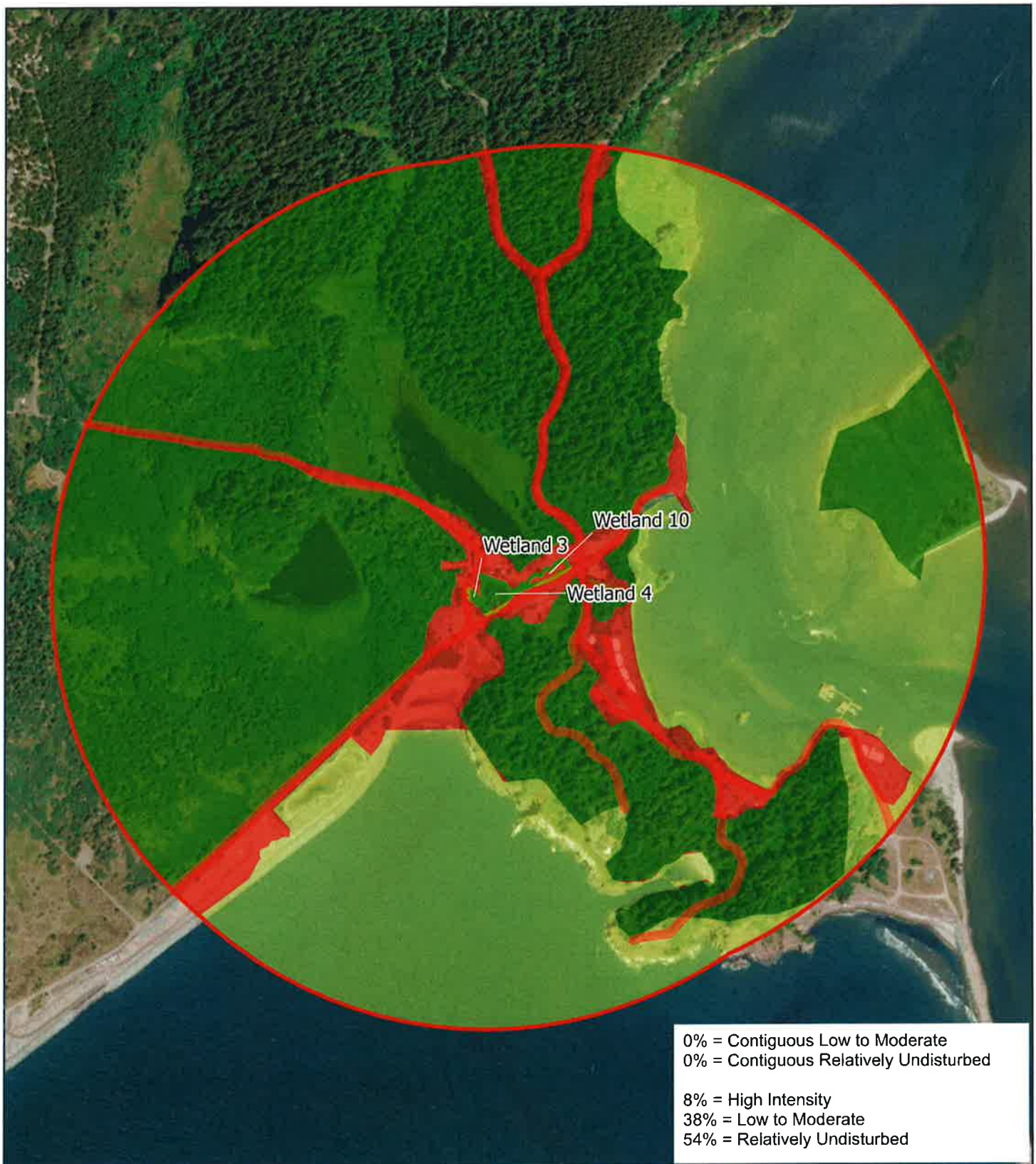


FIGURE 3.2
LAND USE MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources:
Date: 6/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Wetland Area
- 1 km Polygon
- High Intensity Land Use
- Low to Moderate Intensity Land Use
- Relatively Undisturbed Land

0 500 1,000 1,500 ft





FIGURE 3.3
CONTRIBUTING BASIN MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Date Sources:
Date: 6/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Contributing Basin
- Wetland Area

0 50 100 150 ft



Figure 4 - 303d Listed Waters

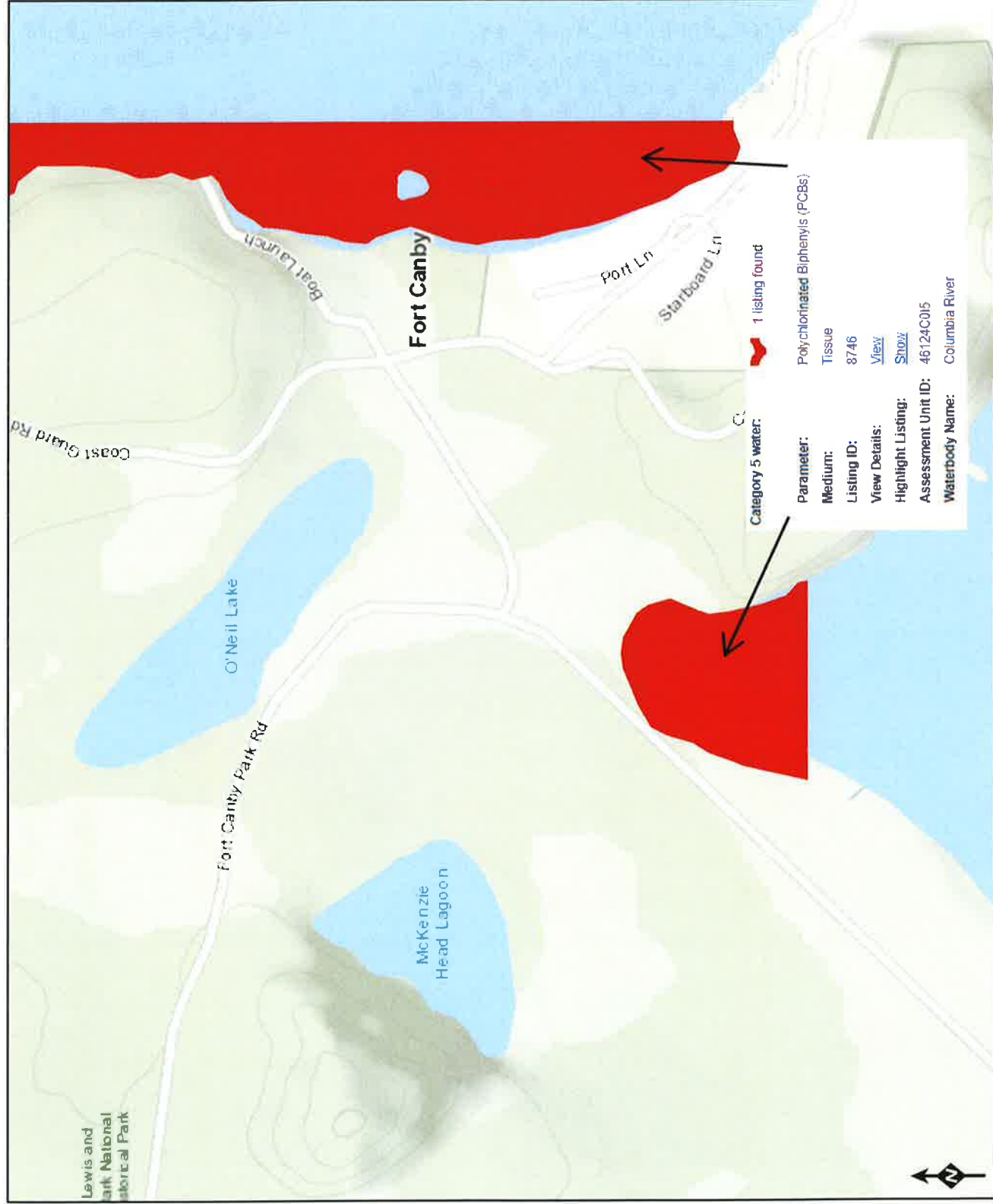
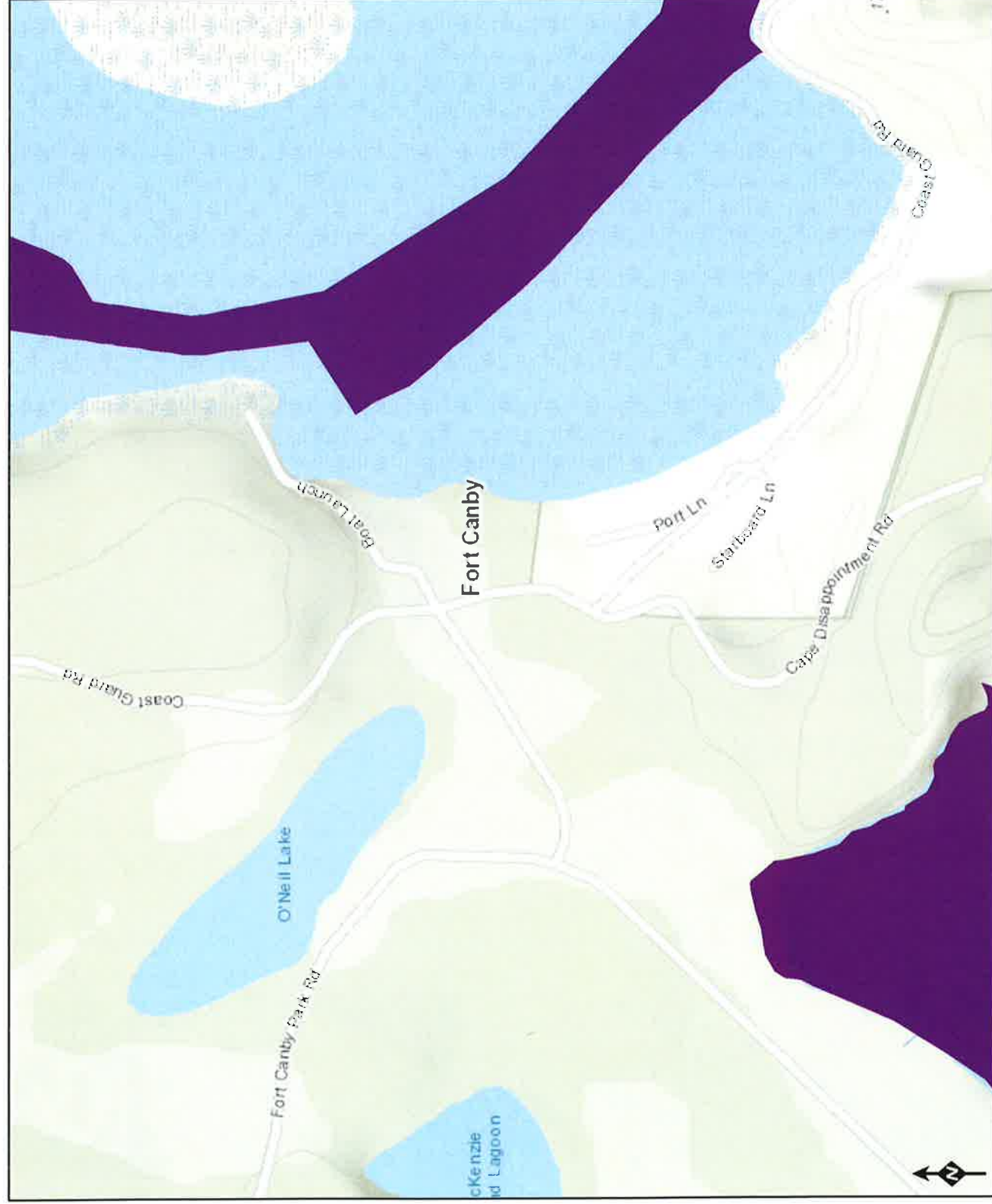


Figure 5 - TMDL Map



WQ Improvement Projects

- Approved
- In Development

TMDL locations are outside of the study area.

Wetland name or number 4

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 4 Date of site visit: 3/23/2022
Rated by J. Gray, Z. Roman Trained by Ecology? ☒ Yes ☐ No Date of training 2011
HGM Class used for rating Depressional Wetland has multiple HGM classes? ☐ Y ☒ N

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

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

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
Site Potential	(H) M L	(H) M L	H (M) L	
Landscape Potential	H (M) L	(H) M L	H (M) L	
Value	H (M) L	H M (L)	H (M) L	TOTAL
Score Based on Ratings	7	7	6	20

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

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	4.1
Hydroperiods	D 1.4, H 1.2	4.1
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	4.1
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	4.1
Map of the contributing basin	D 4.3, D 5.3	4.3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4.2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	5

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of 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 sheetflow, or in a swale without distinct banks,

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

NO – go to 5

YES – The wetland class is **Slope**

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

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

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

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

Wetland name or number 4

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 4

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		
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > 1/2 of area points = 3 Wetland has persistent, ungrazed plants > 1/10 of area points = 1 Wetland has persistent, ungrazed plants < 1/10 of area points = 0		
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 > 1/2 total area of wetland points = 4 Area seasonally ponded is > 1/4 total area of wetland points = 2 Area seasonally ponded is < 1/4 total area of wetland points = 0		
Total for D 1		12

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

D 2.0. Does the landscape have the potential to support the water quality function of the site?		
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0		1
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		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 for the basin in which the unit is found)? Yes = 2 No = 0		0
Total for D 3		1

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

The Columbia River is immediately down-gradient of the unit and is listed as a 303d water for the parameter: Polychlorinated Biphenyls (PCBs). <https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&BBox=-14338616,5395963,-12562831,6503994&RT=0&Layers=27&Filters=y,n,n,n,n,n&F1.4=n,n,n,n,n,y>

Wetland name or number 4

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 or ditch, OR highly constricted permanently flowing outlet	points = 2
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0

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

5

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

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

5

Total for D 4

Add the points in the boxes above

14

Rating of Site Potential If score is: X 12-16 = H ___ 6-11 = M ___ 0-5 = L

Record the rating on the first page

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

D 5.1. Does the wetland receive stormwater discharges?

Yes = 1 No = 0

1

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

3

Rating of Landscape Potential If score is: X 3 = H ___ 1 or 2 = M ___ 0 = L

Record the rating on the first page

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

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

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):

- Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2
- Surface flooding problems are in a sub-basin farther down-gradient. points = 1

Flooding from groundwater is an issue in the sub-basin. points = 1

The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____ points = 0

There are no problems with flooding downstream of the wetland. points = 0

0

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?

Yes = 2 No = 0

0

Total for D 6

Add the points in the boxes above

0

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

Record the rating on the first page

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

- | | | |
|---|----------------------------------|---|
| <input type="checkbox"/> Aquatic bed | 4 structures or more: points = 4 | 2 |
| <input checked="" type="checkbox"/> Emergent | 3 structures: points = 2 | |
| <input checked="" 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/ground-cover) that each cover 20% within the Forested polygon

H 1.2. Hydroperiods

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

- | | | |
|--|-------------------------------------|---|
| <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 checked="" type="checkbox"/> Occasionally flooded or inundated | 2 types present: points = 1 | |
| <input 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"/> 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

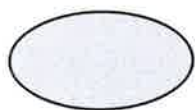
Count the number of plant species in the wetland that cover at least 10 ft².

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, Canadian thistle

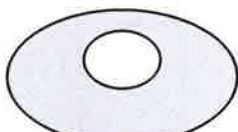
- | | | |
|------------------------------|------------|---|
| If you counted: > 19 species | points = 2 | 1 |
| 5 - 19 species | points = 1 | |
| < 5 species | points = 0 | |

H 1.4. Interspersion of habitats

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



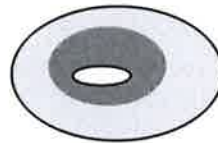
None = 0 points



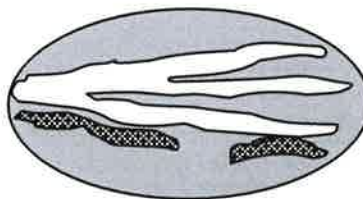
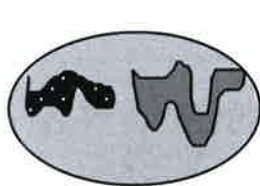
Low = 1 point



Moderate = 2 points



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



2

Wetland name or number 4

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><input checked="" 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 extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</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 (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input checked="" type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>		4
Total for H 1	Add the points in the boxes above	10

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

H 2.0. Does the landscape have the potential to support the habitat functions of the site?		
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat <u>0</u> + [(% moderate and low intensity land uses)/2] <u>0</u> = <u>0</u> %</p> <p>If 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. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>54</u> + [(% moderate and low intensity land uses)/2] <u>19</u> = <u>73</u> %</p> <p>Undisturbed habitat > 50% of Polygon 38/2 points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>		3
<p>H 2.3. Land use intensity in 1 km Polygon: If</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>		0
Total for H 2	Add the points in the boxes above	3

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

H 3.0. Is the habitat provided by the site valuable to society?		
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p> <p>Site meets ANY of the following criteria: points = 2</p> <p>— It has 3 or more priority habitats within 100 m (see next page)</p> <p>— It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p>— It is mapped as a location for an individual WDFW priority species</p> <p>— It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p>— 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>		1

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

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. 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 page 25) — 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. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to SC 2.2 No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = Category I No = Not 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 = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog	Cat. I

<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>) <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 on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or 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 <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>	

Wetland name or number 4

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FIGURE 4.1
COWARDIN CLASSES,
AND HYDROPERIOD MAP
WELCOME CENTER AND
ENTRANCE IMPROVEMENTS
PACIFIC COUNTY, WA

Data Sources:
 Date: 5/27/2022
 Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- | | |
|------------------------------|------------------------------|
| Occasionally Flooded | Palustrine Emergent (PEM) |
| Permanently Flooded | Palustrine Forested (PFO) |
| Saturated Only | Palustrine Scrub-Shrub (PSS) |
| Seasonally Flooded | 150-foot Wetland Buffer |
| Palustrine Aquatic Bed (PAB) | |

50 100 150 ft

Note: No outlet.



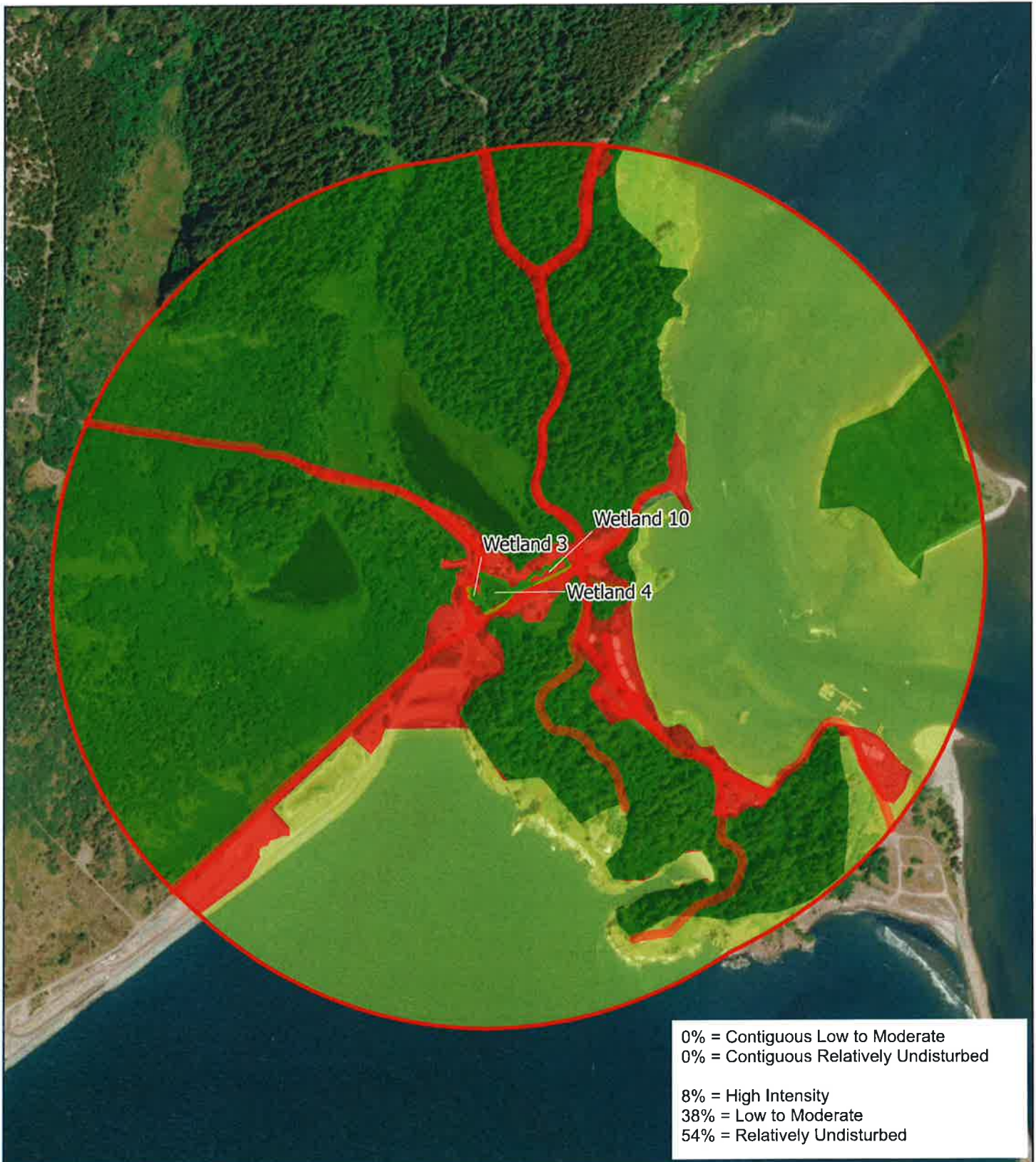


FIGURE 4.2
LAND USE MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources:
Date: 6/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Wetland Area
- 1 km Polygon
- High Intensity Land Use
- Low to Moderate Intensity Land Use
- Relatively Undisturbed Land

0 500 1,000 1,500 ft





FIGURE 4.3
CONTRIBUTING BASIN MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources
Date: 8/3/2022

Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Contributing Basin
- Wetland Area

0 50 100 150 ft



Figure 4 - 303d Listed Waters

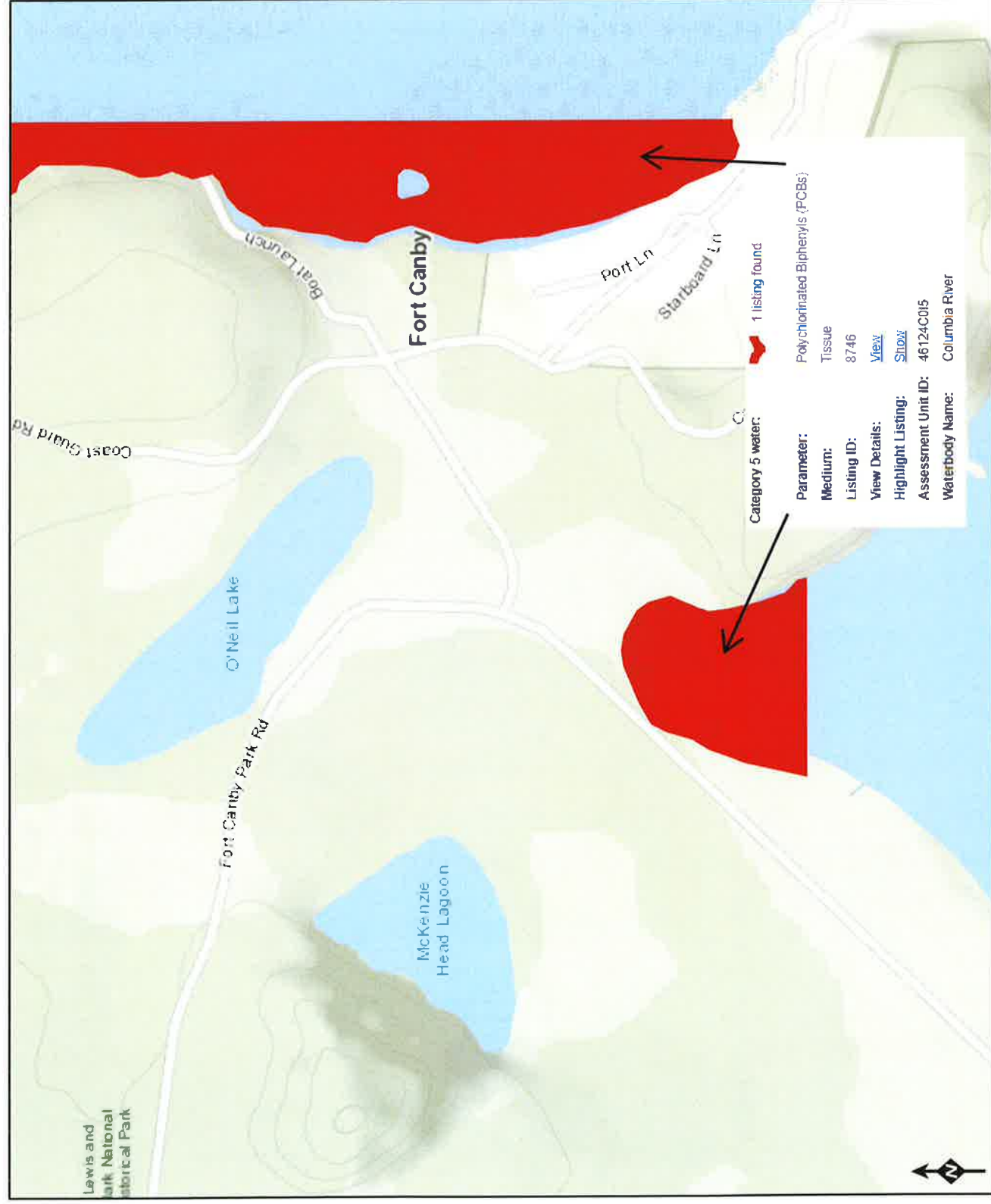
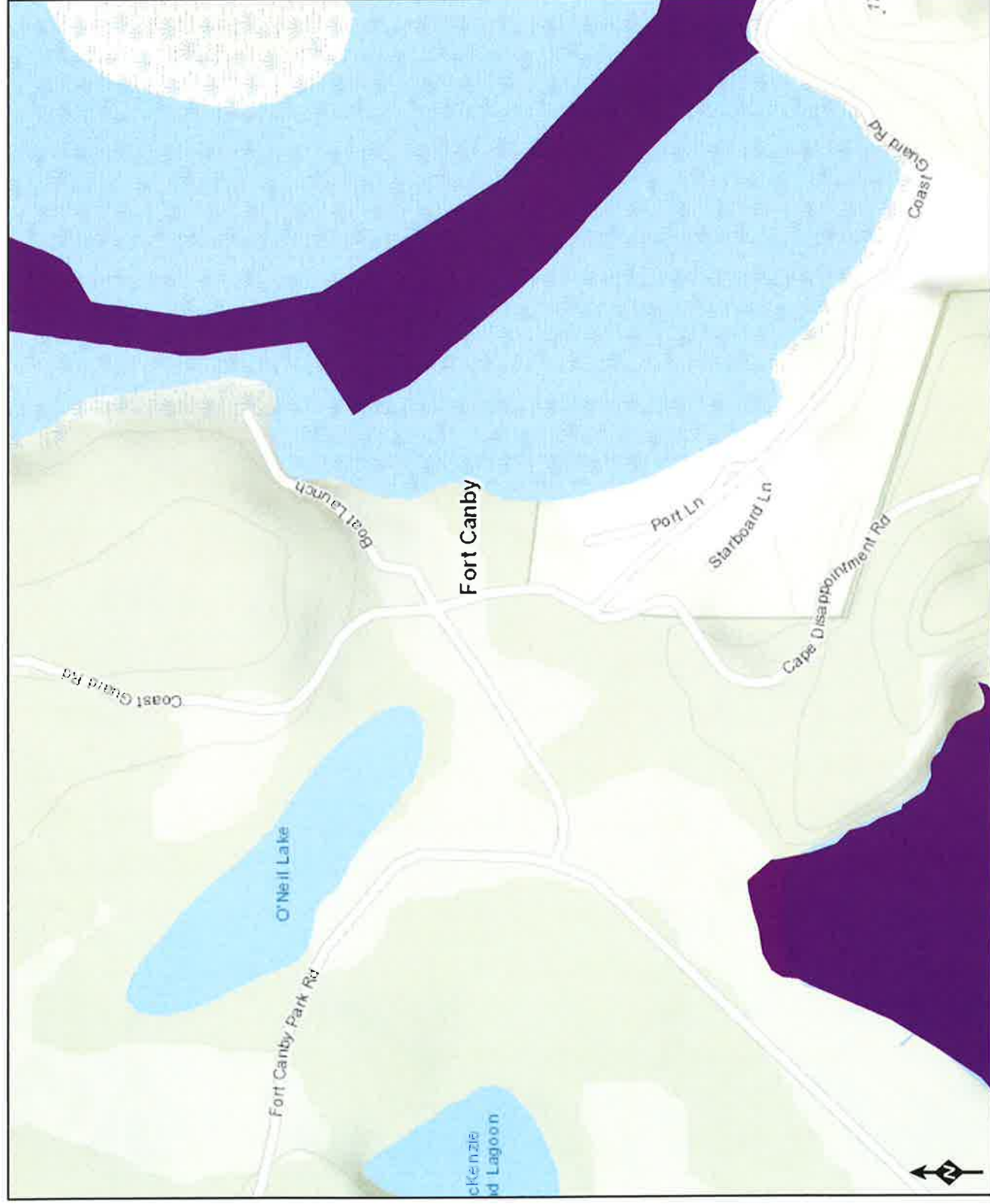


Figure 5 - TMDL Map



WQ Improvement Projects

- Approved
- In Development

TMDL locations are outside of the study area.

Wetland name or number 5

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 5 Date of site visit: 3/22/2022
Rated by J. Gray, Z. Roman Trained by Ecology? ☒ Yes ☐ No Date of training 2011
HGM Class used for rating Depressional Wetland has multiple HGM classes? ☐ Y ☒ N

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

Source of base aerial photo/map ESRA Aerial Imagery

OVERALL WETLAND CATEGORY II (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	7	7	20

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	

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	5.1
Hydroperiods	D 1.4, H 1.2	5.1
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	5.1
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	5.1
Map of the contributing basin	D 4.3, D 5.3	5.3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	5.2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	5

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of 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 sheetflow, or in a swale without distinct banks,

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

NO – go to 5

YES – The wetland class is **Slope**

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

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

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

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

Wetland name or number 5

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 5

DEPRESSIONAL AND FLATS WETLANDS

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

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

D 1.1. Characteristics of surface water outflows from the wetland:

- Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3
- Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2
- Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1
- Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1

3

D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0

0

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

- Wetland has persistent, ungrazed, plants > 95% of area points = 5
- Wetland has persistent, ungrazed, plants > 1/2 of area points = 3
- Wetland has persistent, ungrazed plants > 1/10 of area points = 1
- Wetland has persistent, ungrazed plants < 1/10 of area points = 0

3

D 1.4. Characteristics of seasonal ponding or inundation:

- This is the area that is ponded for at least 2 months. See description in manual.*
- Area seasonally ponded is > 1/2 total area of wetland points = 4
- Area seasonally ponded is > 1/4 total area of wetland points = 2
- Area seasonally ponded is < 1/4 total area of wetland points = 0

4

Total for D 1

Add the points in the boxes above

10

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

1

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

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 for the basin in which the unit is found)?

Yes = 2 No = 0

0

Total for D 3

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

The Columbia River is immediately down-gradient of the unit and is listed as a 303d water for the parameter: Polychlorinated Biphenyls (PCBs). <https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&BBox=-14338616,5395963,-12562831,6503994&RT=0&Layers=27&Filters=y,n,n,n,n,n&F1.4=n,n,n,n,n,y>

Wetland name or number 5

DEPRESSIONAL AND FLATS WETLANDS

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

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

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

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

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

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

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

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

Total for D 4

Add the points in the boxes above

14

Rating of Site Potential If score is: X 12-16 = H 6-11 = M 0-5 = L

Record the rating on the first page

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

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

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

3

Rating of Landscape Potential If score is: X 3 = H 1 or 2 = M 0 = L

Record the rating on the first page

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

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

- | | | |
|---|------------|---|
| The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): | | 0 |
| • Flooding occurs in a sub-basin that is immediately down-gradient of unit. | points = 2 | |
| • Surface flooding problems are in a sub-basin farther down-gradient. | points = 1 | |
| Flooding from groundwater is an issue in the sub-basin. | points = 1 | |
| The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____ | points = 0 | |
| There are no problems with flooding downstream of the wetland. | points = 0 | |

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?		0
--	--	---

Yes = 2 No = 0

Total for D 6

Add the points in the boxes above

0

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

Record the rating on the first page

Wetland name or number 5

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

- | | | |
|---|----------------------------------|---|
| <input checked="" type="checkbox"/> Aquatic bed | 4 structures or more: points = 4 | 4 |
| <input checked="" type="checkbox"/> Emergent | 3 structures: points = 2 | |
| <input checked="" 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/ground-cover) that each cover 20% within the Forested polygon

H 1.2. Hydroperiods

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

- | | | |
|--|-------------------------------------|---|
| <input checked="" type="checkbox"/> Permanently flooded or inundated | 4 or more types present: points = 3 | 2 |
| <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 | |
| <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland | | |
| <input type="checkbox"/> 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, Canadian thistle

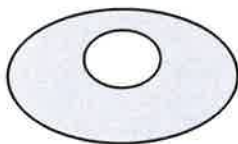
- | | | | |
|------------------------------|---|------------|---|
| If you counted: > 19 species | ALRU, CAOB, SAHO, LOIN, RUUR, Foxtail, bittercress, | points = 2 | 1 |
| 5 - 19 species | NUPO, SPDO, RUSP, JUEF, POMU, SARA | points = 1 | |
| < 5 species | | points = 0 | |

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.*



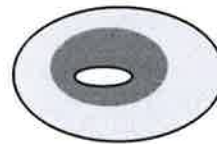
None = 0 points



Low = 1 point

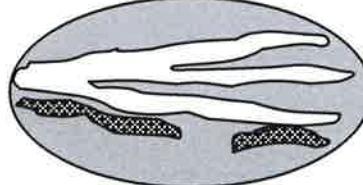
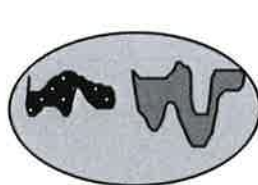


Moderate = 2 points



3

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



Wetland name or number 5

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i> <input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input checked="" 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 extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <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 (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <input checked="" type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>) <input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)		4
Total for H 1	Add the points in the boxes above	14

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

H 2.0. Does the landscape have the potential to support the habitat functions of the site?		
H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). <i>Calculate:</i> % undisturbed habitat <u>10</u> + [(% moderate and low intensity land uses)/2] <u>10</u> = <u>20</u> % If total accessible habitat is: 20/2 > 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		2
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate:</i> % undisturbed habitat <u>58</u> + [(% moderate and low intensity land uses)/2] <u>17</u> = <u>75</u> % Undisturbed habitat > 50% of Polygon 34/2 points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0		3
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0		0
Total for H 2	Add the points in the boxes above	5

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

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

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

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

<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>Yes = Category I No = Not a forested wetland for this section</p>	<p>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>) <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 on p. 100). — At least ¼ 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 $\frac{1}{10}$ ac (4350 ft²) <p>Yes = Category I No = Category II</p>	<p>Cat. I</p> <p>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 <p>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>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>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>	

Wetland name or number 5

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FIGURE 5.1
COWARDIN CLASSES,
AND HYDROPERIOD MAP
WELCOME CENTER AND
ENTRANCE IMPROVEMENTS
PACIFIC COUNTY, WA

Data Sources:
 Date: 5/27/2022
 Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- | | |
|------------------------------|------------------------------|
| Occasionally Flooded | Palustrine Emergent (PEM) |
| Permanently Flooded | Palustrine Forested (PFO) |
| Saturated Only | Palustrine Scrub-Shrub (PSS) |
| Seasonally Flooded | 150-foot Wetland Buffer |
| Palustrine Aquatic Bed (PAB) | |

75 150 225 ft

Note: No outlet.



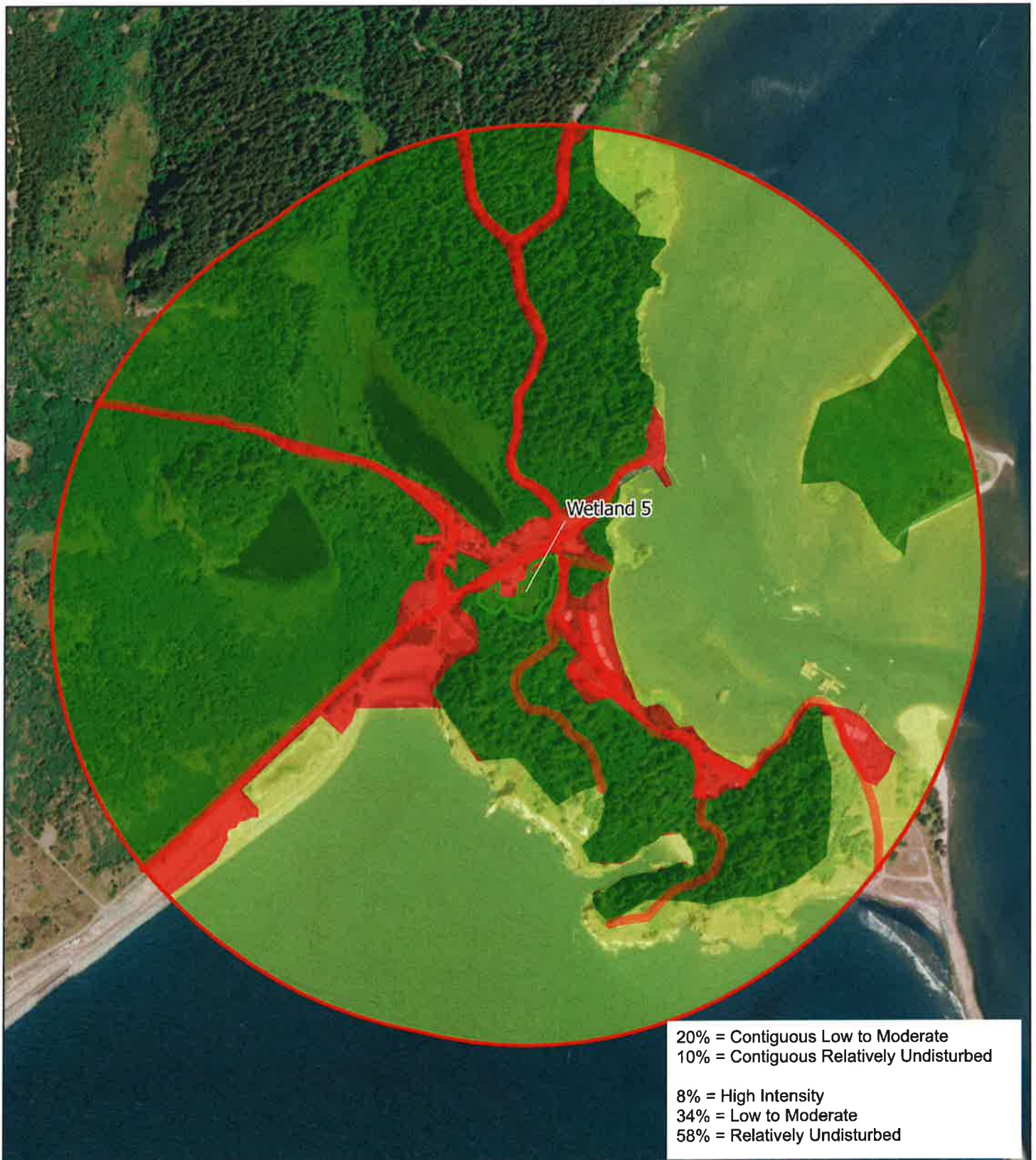


FIGURE 5.2
LAND USE MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources:
Date: 6/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Wetland Area
- 1 km Polygon
- High Intensity Land Use
- Low to Moderate Intensity Land Use
- Relatively Undisturbed Land

0 500 1,000 1,500 ft





FIGURE 5.3
CONTRIBUTING BASIN MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources:
Date: 6/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

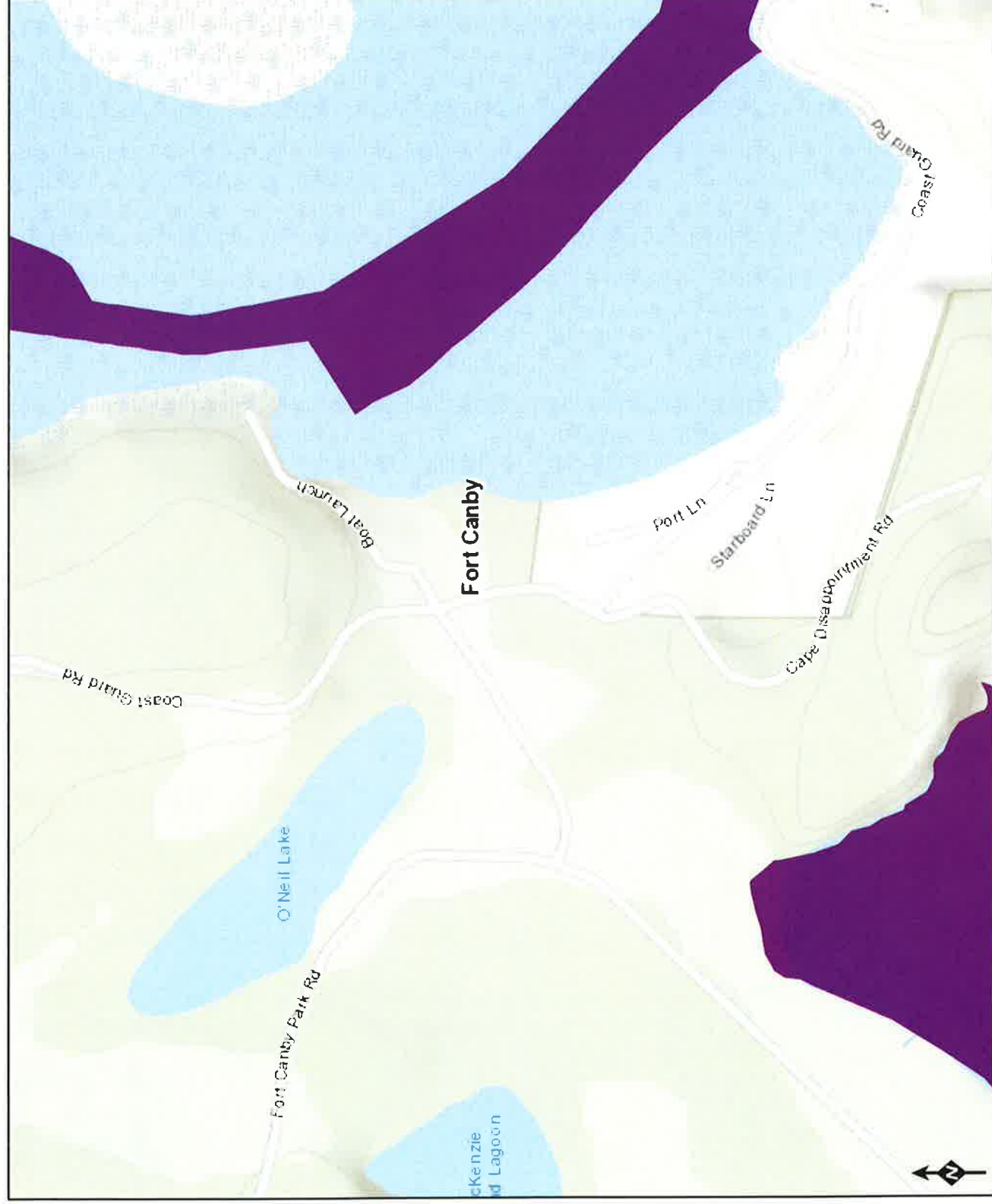
- Contributing Basin
- Wetland Area

0 50 100 150 ft





Figure 5 - TMDL Map



WQ Improvement Projects

- Approved
- In Development

TMDL locations are outside of the study area.

Wetland name or number 6

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 6 Date of site visit: 3/24/2022
Rated by Z. Roman, J. Gray Trained by Ecology? ☒ Yes ☐ No Date of training 2011
HGM Class used for rating Slope Wetland has multiple HGM classes? ☐ Y ☒ N

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

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

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
Site Potential	H M <input checked="" type="radio"/> L	H M <input checked="" type="radio"/> L	H M <input checked="" type="radio"/> L	
Landscape Potential	H <input checked="" type="radio"/> M L	H <input checked="" type="radio"/> M L	<input checked="" type="radio"/> H M L	
Value	<input checked="" type="radio"/> H M L	H M <input checked="" type="radio"/> L	<input checked="" type="radio"/> H M L	TOTAL
Score Based on Ratings	6	4	7	17

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number 6

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	6.1
Hydroperiods	H 1.2	6.1
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	6.1
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	6.1
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	6.1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	6.2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	5

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 sheetflow, or in a swale without distinct banks,
☒ The water leaves the wetland **without being impounded**.

NO - go to 5

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

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

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

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

Wetland name or number 6

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 6

SLOPE WETLANDS

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

S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance) Slope is 1% or less points = 3 Slope is > 1%-2% points = 2 Slope is > 2%-5% points = 1 Slope is greater than 5% points = 0		2
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = 0		0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. <i>Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i> Dense, uncut, herbaceous plants > 90% of the wetland area points = 6 Dense, uncut, herbaceous plants > ½ of area points = 3 Dense, woody, plants > ½ of area points = 2 Dense, uncut, herbaceous plants > ¼ of area points = 1 Does not meet any of the criteria above for plants points = 0 <div style="text-align: right; margin-top: -20px;">Eastern portion of unit is mowed.</div>		3
Total for S 1 Add the points in the boxes above		5

Rating of Site Potential If score is: 12 = H 6-11 = M X 0-5 = L

Record the rating on the first page

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

Rating of Landscape Potential If score is: X 1-2 = M 0 = L

Record the rating on the first page

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

The Columbia River is immediately down-gradient of the unit and is listed as a 303d water for the parameter: Polychlorinated Biphenyls (PCBs). <https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&BBox=-14338616,5395963,-12562831,6503994&RT=0&Layers=27&Filters=y,n,n,n,n,n&F1.4=n,n,n,n,n,y>

Wetland name or number 6

SLOPE WETLANDS

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

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

<p>S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.</i></p> <p>Dense, uncut, rigid plants cover > 90% of the area of the wetland Approximately 80%. points = 1</p> <p>All other conditions points = 0</p>	0
---	---

Rating of Site Potential If score is: 1 = M X 0 = L

Record the rating on the first page

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

<p>S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?</p> <p style="text-align: right;">Yes = 1 No = 0</p>	1
---	---

Rating of Landscape Potential If score is: X 1 = M 0 = L

Record the rating on the first page

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

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

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

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

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

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

- | | | |
|---|----------------------------------|---|
| <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 | |
| <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/ground-cover) that each cover 20% within the Forested polygon | | |

H 1.2. Hydroperiods

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

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

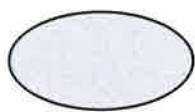
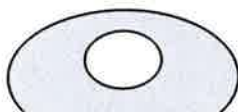
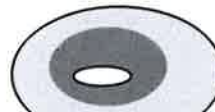
Count the number of plant species in the wetland that cover at least 10 ft².

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, Canadian thistle

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

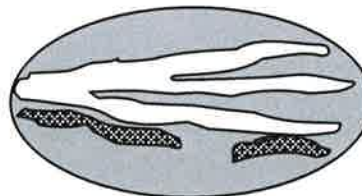
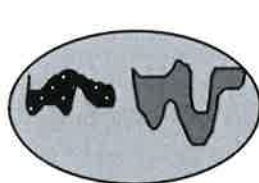
H 1.4. Interspersion of habitats

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

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

1

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



Wetland name or number 6

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input checked="" 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 extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</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 (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</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 (<i>structures for egg-laying by amphibians</i>)</p> <p><input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>		2
Total for H 1	Add the points in the boxes above	6

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 <i>only habitat that directly abuts wetland unit</i>).</p> <p>Calculate: % undisturbed habitat <u>15</u> + [(% moderate and low intensity land uses)/2] <u>20</u> = <u>35</u> %</p> <p>If total accessible habitat is: <u>40/2</u></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>		3
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % undisturbed habitat <u>46</u> + [(% moderate and low intensity land uses)/2] <u>24</u> = <u>70</u> %</p> <p>Undisturbed habitat > 50% of Polygon <u>48/2</u> points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>		3
<p>H 2.3. Land use intensity in 1 km Polygon: If</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>		0
Total for H 2	Add the points in the boxes above	6

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

Record the rating on the first page

H 3.0. Is the habitat provided by the site valuable to society?	
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></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</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>	

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

Record the rating on the first page

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. 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 page 25) — 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. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to SC 2.2 No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = Category I No = Not 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 = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog	Cat. I

<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>Yes = Category I No = Not a forested wetland for this section</p>	<p>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>) <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 on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) <p>Yes = Category I No = Category II</p>	<p>Cat. I</p> <p>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 <p>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>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>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>Yes = Category III No = Category IV</p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>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>	

Wetland name or number 6

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FIGURE 6.1
COWARDIN CLASSES,
AND HYDROPERIOD MAP
WELCOME CENTER AND
ENTRANCE IMPROVEMENTS
PACIFIC COUNTY, WA

Data Sources:
 Date: 5/27/2022
 Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- | | |
|---------------------------|---------------------------|
| Occasionally Flooded | Palustrine Forested (PFO) |
| Saturated Only | 150-foot Wetland Buffer |
| Palustrine Emergent (PEM) | |

0 50 100 150 ft

Note: Plant cover of dense trees, shrubs, and herbaceous plants is >50%, while dense, rigid cover of these plants is <90%.



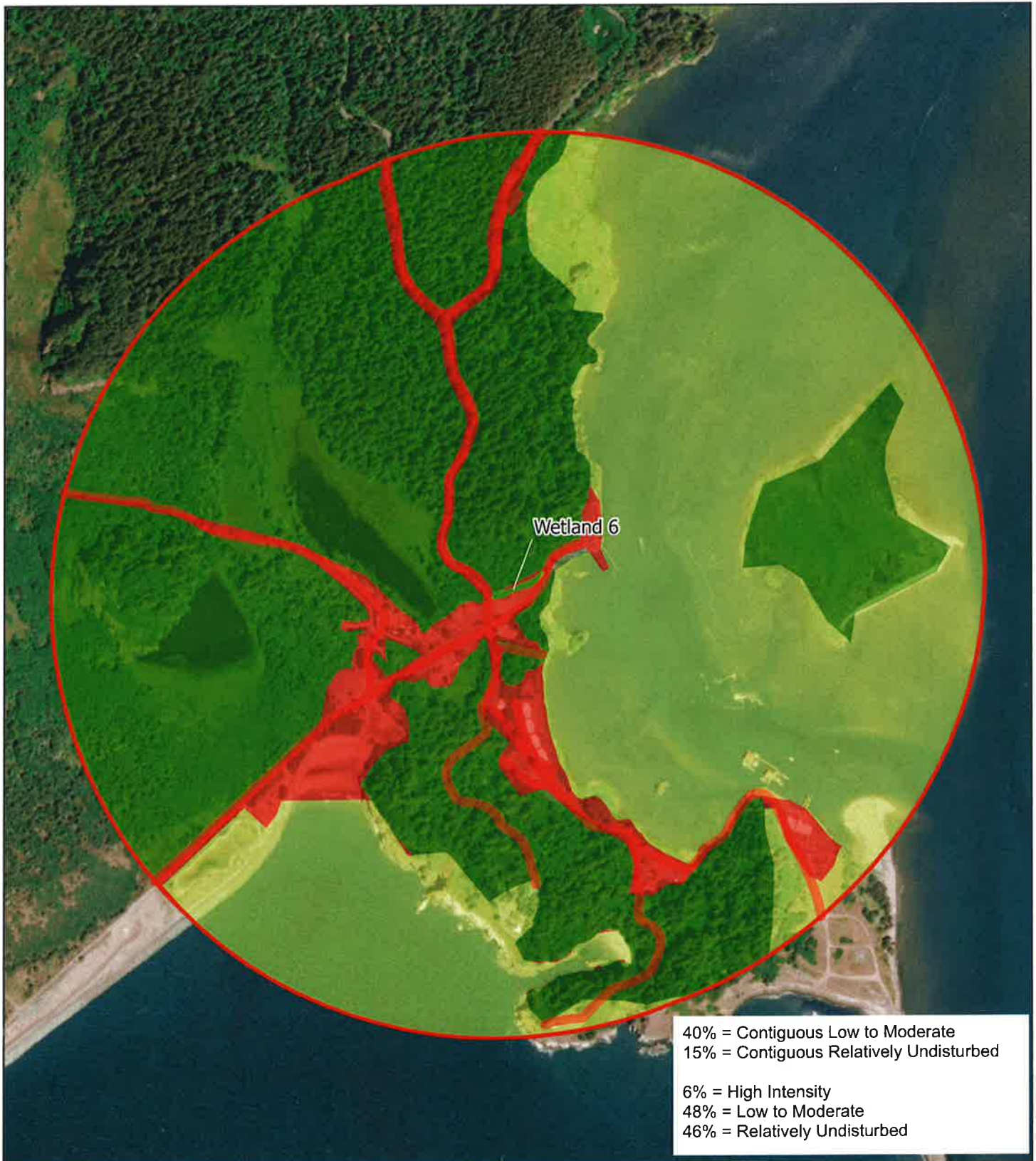


FIGURE 6.2
LAND USE MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources:
Date: 6/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Wetland Area
- 1 km Polygon
- High Intensity Land Use
- Low to Moderate Intensity Land Use
- Relatively Undisturbed Land

0 500 1,000 1,500 ft

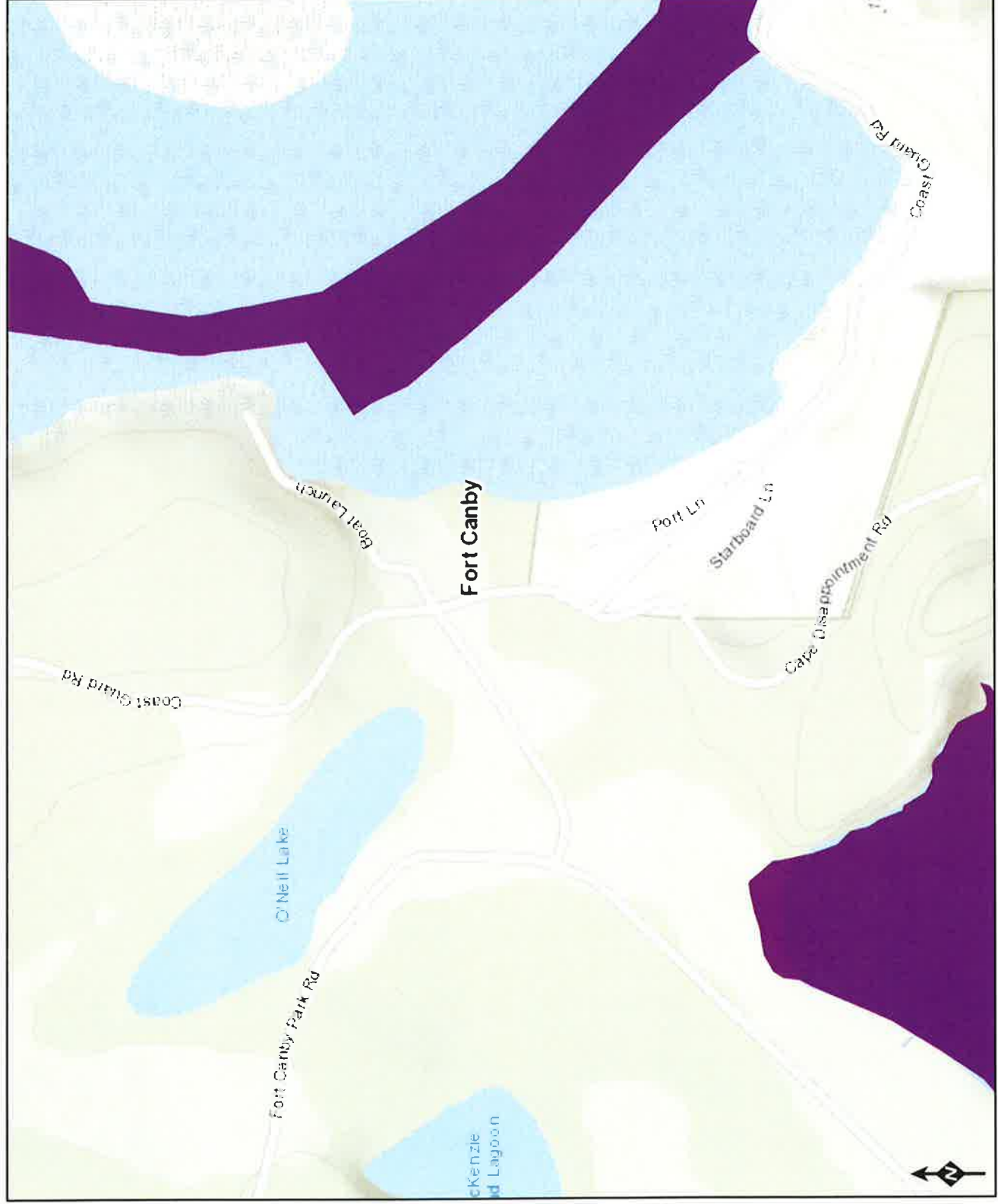


Figure 4 - 303d Listed Waters



Miles 0 0.05 0.1 0.2

Figure 5 - TMDL Map



WQ Improvement Projects

Approved

In Development

TMDL locations are outside of the study area.

Wetland name or number 7

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 7 Date of site visit: 3/24/2022
Rated by Z. Roman, J. Gray Trained by Ecology? ☒ Yes ☐ No Date of training 2011
HGM Class used for rating Depressional Wetland has multiple HGM classes? ☐ Y ☒ N

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

OVERALL WETLAND CATEGORY I (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				

**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	

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

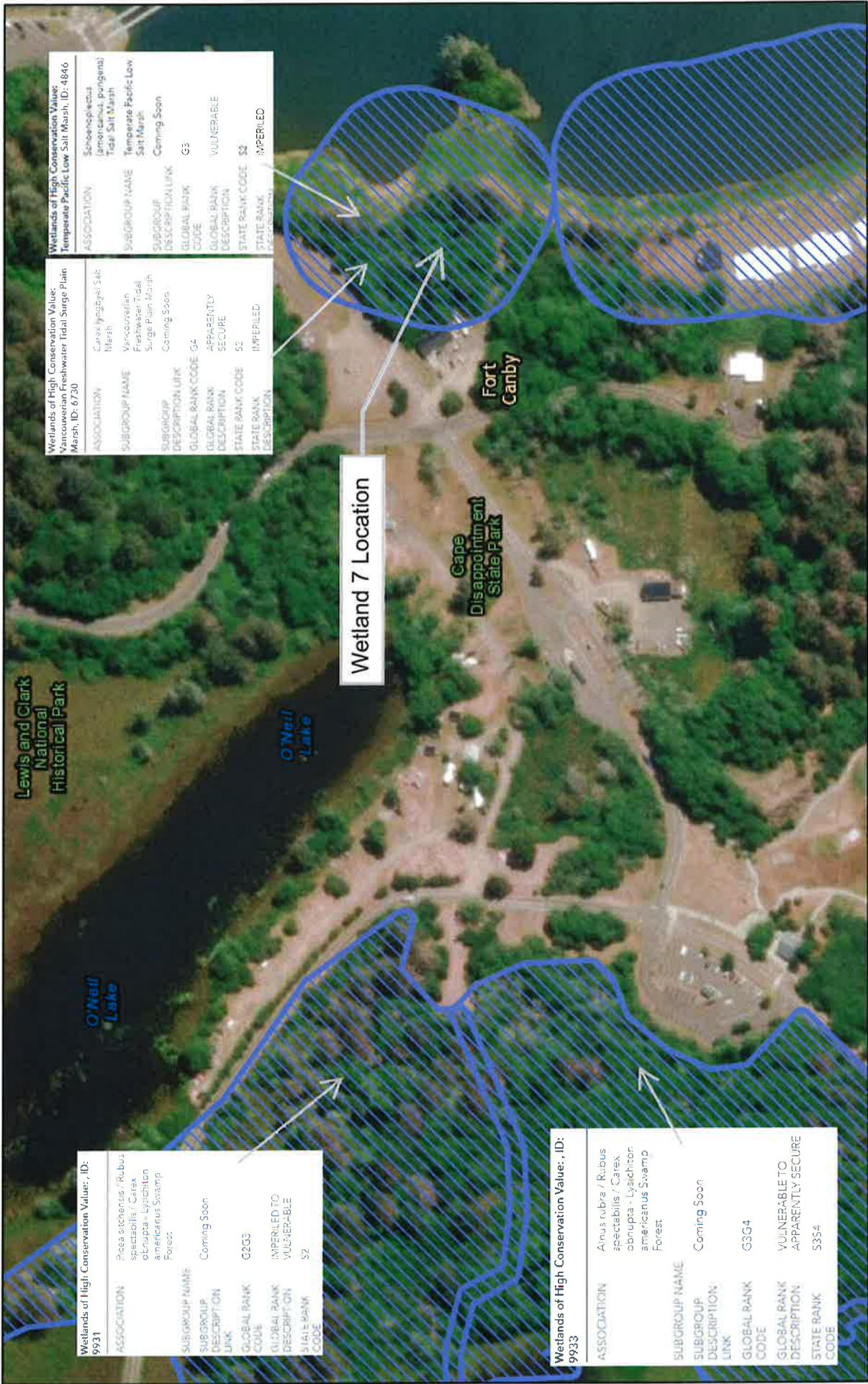
Wetland name or number 7

<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>) <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 on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or 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 <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;">Cat. I</p>

Wetland name or number 7

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Wetlands of High Conservation Value Map



5/27/2022, 8:54:48 AM



Known Wetlands of High Conservation Value



Counties

1:4,514

0 0.03 0.05 0.1 mi

0 0.04 0.08 0.16 km

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, Maxar, Earthstar Geographics, and the GIS User community, Source: Esri, HERE, Garmin, GeoTechnologies, Inc. | Washington Natural Heritage Program

Washington State Department of Natural Resources | Washington Natural Heritage Program | Maxar | State of Oregon, State of Oregon GEO, Esri, HERE, Garmin, GeoTechnologies, Inc. |

Wetland name or number 8

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 8 Date of site visit: 3/24/2022
Rated by J. Gray, Z. Roman Trained by Ecology? X Yes ___ No Date of training 2011
HGM Class used for rating Depressional Wetland has multiple HGM classes? ___ Y X N

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

OVERALL WETLAND CATEGORY II (based on functions X or special characteristics ___)

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
Site Potential	H (M) L	H (M) L	(H) M L	
Landscape Potential	H (M) L	H (M) L	(H) M L	
Value	(H) M L	H M (L)	(H) (M) L	TOTAL
Score Based on Ratings	7	5		

**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	

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?	Cat. I
Yes = Category I No - Go to SC 1.2	
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least ⅓ 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.	Cat. I Cat. II
Yes = Category I No = Category II	
SC 2.0. Wetlands of High Conservation Value (WHCV)	
SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?	Cat. I
Yes – Go to SC 2.2 No – Go to SC 2.3	
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
Yes = Category I No = Not a WHCV	
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV	
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?	
Yes = Category I No = Not a WHCV	
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i>	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?	
Yes – Go to SC 3.3 No – Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?	
Yes – Go to SC 3.3 No = Is not a bog	
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?	
Yes = Is a Category I bog No – Go to SC 3.4	
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.	
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	Cat. I
Yes = Is a Category I bog No = Is not a bog	

<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>) <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 on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or 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; vertical-align: middle;">Cat. I</p> <p style="text-align: center; vertical-align: middle;">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 <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; vertical-align: middle;">Cat I</p> <p style="text-align: center; vertical-align: middle;">Cat. II</p> <p style="text-align: center; vertical-align: middle;">Cat. III</p> <p style="text-align: center; vertical-align: middle;">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>	Cat. I

Wetland name or number 8


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Wetlands of High Conservation Value Map



5/27/2022, 8:54:48 AM

 Known Wetlands of High Conservation Value

 Counties



Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, Maxar, Earthstar Geographics, and the GIS User community

Washington Natural Heritage Program

Washington State Department of Natural Resources | Washington Natural Heritage Program | Maxar | State of Oregon, State of Oregon GEO, Esri, HERE, Garmin, GeoTechnologies, Inc. |

Wetland name or number 9

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 9 Date of site visit: 3/24/2022
Rated by J. Gray, Z. Roman Trained by Ecology? ☒ Yes ☐ No Date of training 2011
HGM Class used for rating Depressional Wetland has multiple HGM classes? ☐ Y ☒ N

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

OVERALL WETLAND CATEGORY II (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 <u>(L)</u>	H <u>(M)</u> L	H M <u>(L)</u>	
Landscape Potential	<u>(H)</u> M L	<u>(H)</u> M L	<u>(H)</u> M L	
Value	H <u>(M)</u> L	H M <u>(L)</u>	H <u>(M)</u> L	TOTAL
Score Based on Ratings	6	6	6	18

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number 9

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	9.1
Hydroperiods	D 1.4, H 1.2	9.1
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	9.1
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	9.1
Map of the contributing basin	D 4.3, D 5.3	9.3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	9.2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	5

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of 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 sheetflow, or in a swale without distinct banks,
☐ The water leaves the wetland **without being impounded**.

☒ NO - go to 5

YES - The wetland class is **Slope**

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

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

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

Wetland name or number 9

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 9

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). <div style="text-align: right;">points = 3</div> Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. <div style="text-align: right;">points = 2</div> Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing. <div style="text-align: right;">points = 1</div> Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. <div style="text-align: right;">points = 1</div>	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 <div style="text-align: right;">points = 5</div> Wetland has persistent, ungrazed, plants > ½ of area <div style="text-align: right;">points = 3</div> Wetland has persistent, ungrazed plants > 1/10 of area <div style="text-align: right;">points = 1</div> Wetland has persistent, ungrazed plants < 1/10 of area <div style="text-align: right;">points = 0</div>	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 <div style="text-align: right;">points = 4</div> Area seasonally ponded is > ¼ total area of wetland <div style="text-align: right;">points = 2</div> Area seasonally ponded is < ¼ total area of wetland <div style="text-align: right;">points = 0</div>	0	
Total for D 1 Add the points in the boxes above		3

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	1
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 <u>Campers</u>	Yes = 1 No = 0	1
Total for D 2 Add the points in the boxes above		3

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

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)?	Yes = 2 No = 0	0
Total for D 3 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 9

DEPRESSIONAL AND FLATS WETLANDS

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

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

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

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

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

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

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

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

Total for D 4

Add the points in the boxes above

10

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 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	1
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	3

Rating of Landscape Potential If score is: X 3 = H 1 or 2 = M 0 = L

Record the rating on the first page

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

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

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):		0
• Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	
• Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
Flooding from groundwater is an issue in the sub-basin.	points = 1	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____	points = 0	
There are no problems with flooding downstream of the wetland.	points = 0	

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?

Yes = 2 No = 0

0

Total for D 6

Add the points in the boxes above

0

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

Record the rating on the first page

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

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

- | | | |
|---|----------------------------------|---|
| <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/ground-cover) that each cover 20% within the Forested polygon | | |

H 1.2. Hydroperiods

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

- | | | |
|--|-------------------------------------|---|
| <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 checked="" type="checkbox"/> Occasionally flooded or inundated | 2 types present: points = 1 | |
| <input 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"/> 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

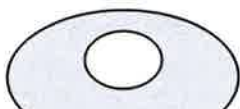
Count the number of plant species in the wetland that cover at least 10 ft².

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, Canadian thistle

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

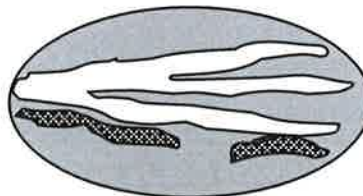
H 1.4. Interspersion of habitats

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

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

0

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



Wetland name or number 9

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></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 extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</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 (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</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 (<i>structures for egg-laying by amphibians</i>)</p> <p><input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>		1
Total for H 1	Add the points in the boxes above	2

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 <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat <u>17</u> + [(% moderate and low intensity land uses)/2] <u>0</u> = <u>17</u> %</p> <p>If 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>		1
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>54</u> + [(% moderate and low intensity land uses)/2] <u>19</u> = <u>73</u> %</p> <p>Undisturbed habitat > 50% of Polygon 38/2 points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>		3
<p>H 2.3. Land use intensity in 1 km Polygon: If</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>		0
Total for H 2	Add the points in the boxes above	4

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

H 3.0. Is the habitat provided by the site valuable to society?	
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p> <p>Site meets ANY of the following criteria: points = 2</p> <p><input 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</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>	

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

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

<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>Yes = Category I No = Not a forested wetland for this section</p>	<p>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>) <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 on p. 100). — At least ⅓ 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>Cat. I</p> <p>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 <p>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>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>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>	

Wetland name or number 9

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FIGURE 9.1
COWARDIN CLASSES,
AND HYDROPERIOD MAP
WELCOME CENTER AND
ENTRANCE IMPROVEMENTS
PACIFIC COUNTY, WA

Data Sources:
 Date: 5/27/2022
 Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

\\red-ae.otak.com\proj\Project\33400\33427\CADD\GIS\MXDs\33425_Wetlands_20220401\33425_Wetlands_20220401.aprx

LEGEND

- | | |
|---------------------------|------------------------------|
| Occasionally Flooded | Palustrine Forested (PFO) |
| Saturated Only | Palustrine Scrub-Shrub (PSS) |
| Seasonally Flooded | 150-foot Wetland Buffer |
| Palustrine Emergent (PEM) | |

0 25 50 75 ft

Note: No outlet.



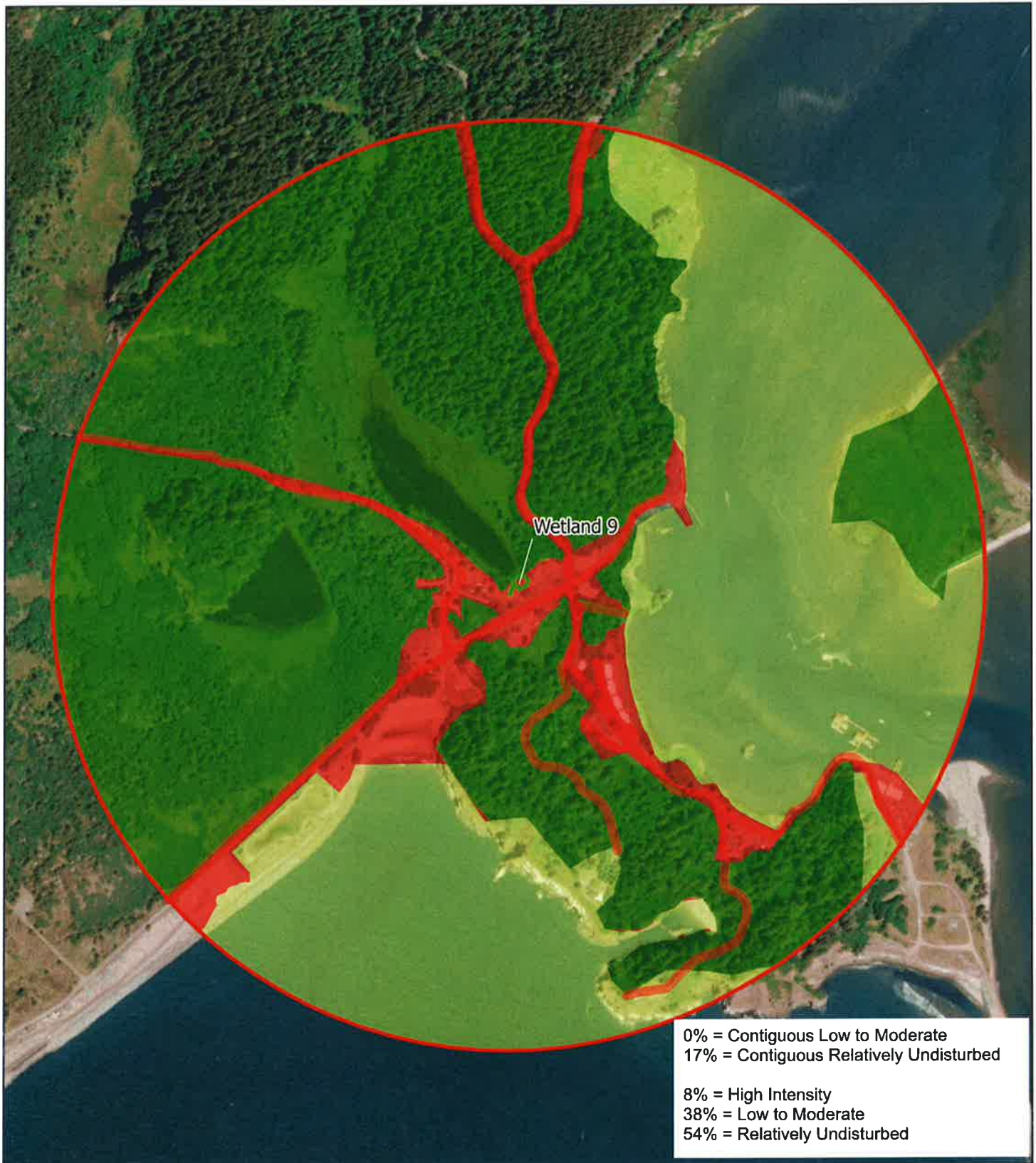


FIGURE 9.2
LAND USE MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**
PACIFIC COUNTY, WA

Data Sources:
Date: 6/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Wetland Area
- 1 km Polygon
- High Intensity Land Use
- Low to Moderate Intensity Land Use
- Relatively Undisturbed Land

0 500 1,000 1,500 ft



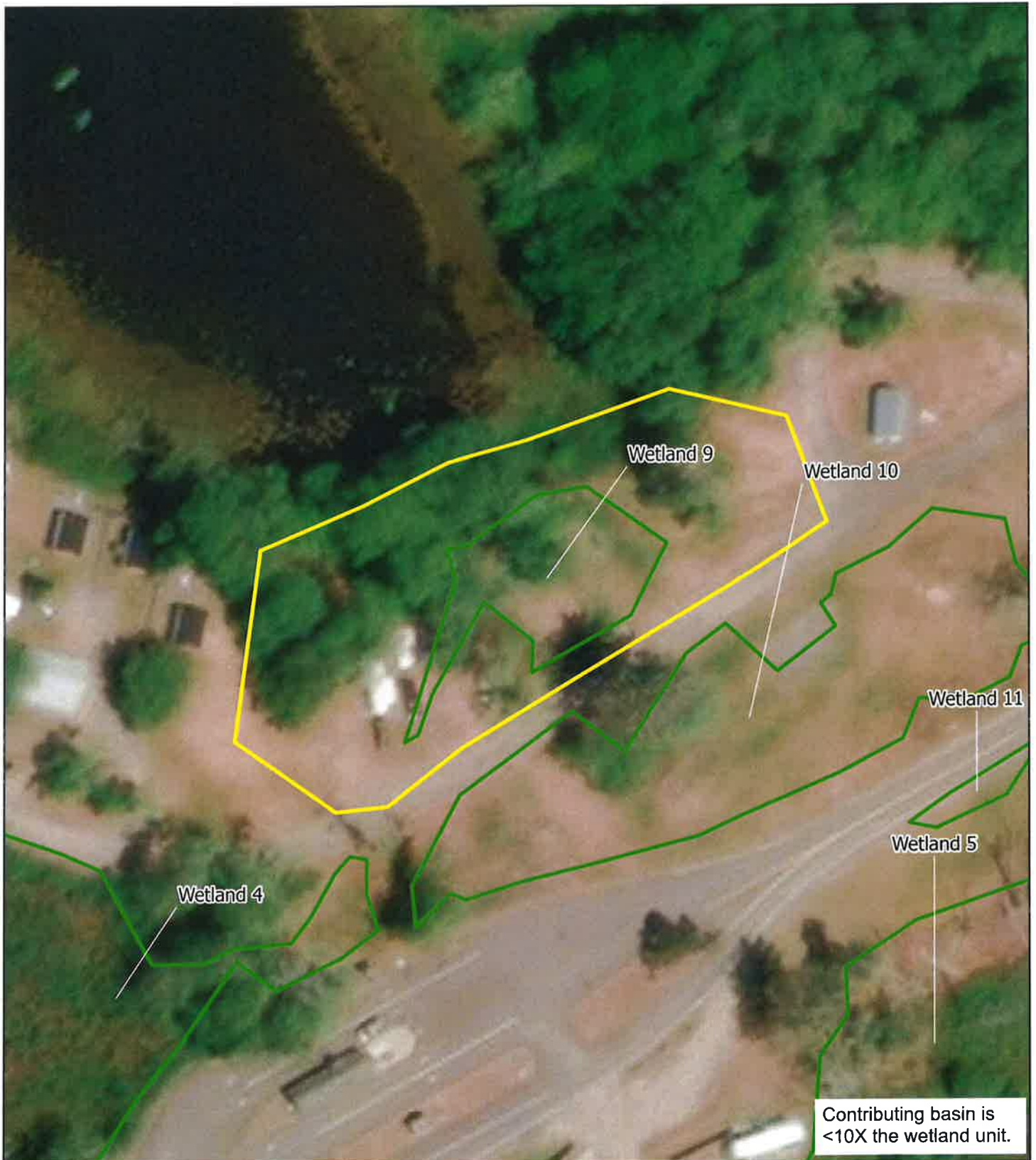


FIGURE 9.3
CONTRIBUTING BASIN MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources
Date: 6/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Contributing Basin
- Wetland Area

0 25 50 75 ft



Figure 4 - 303d Listed Waters

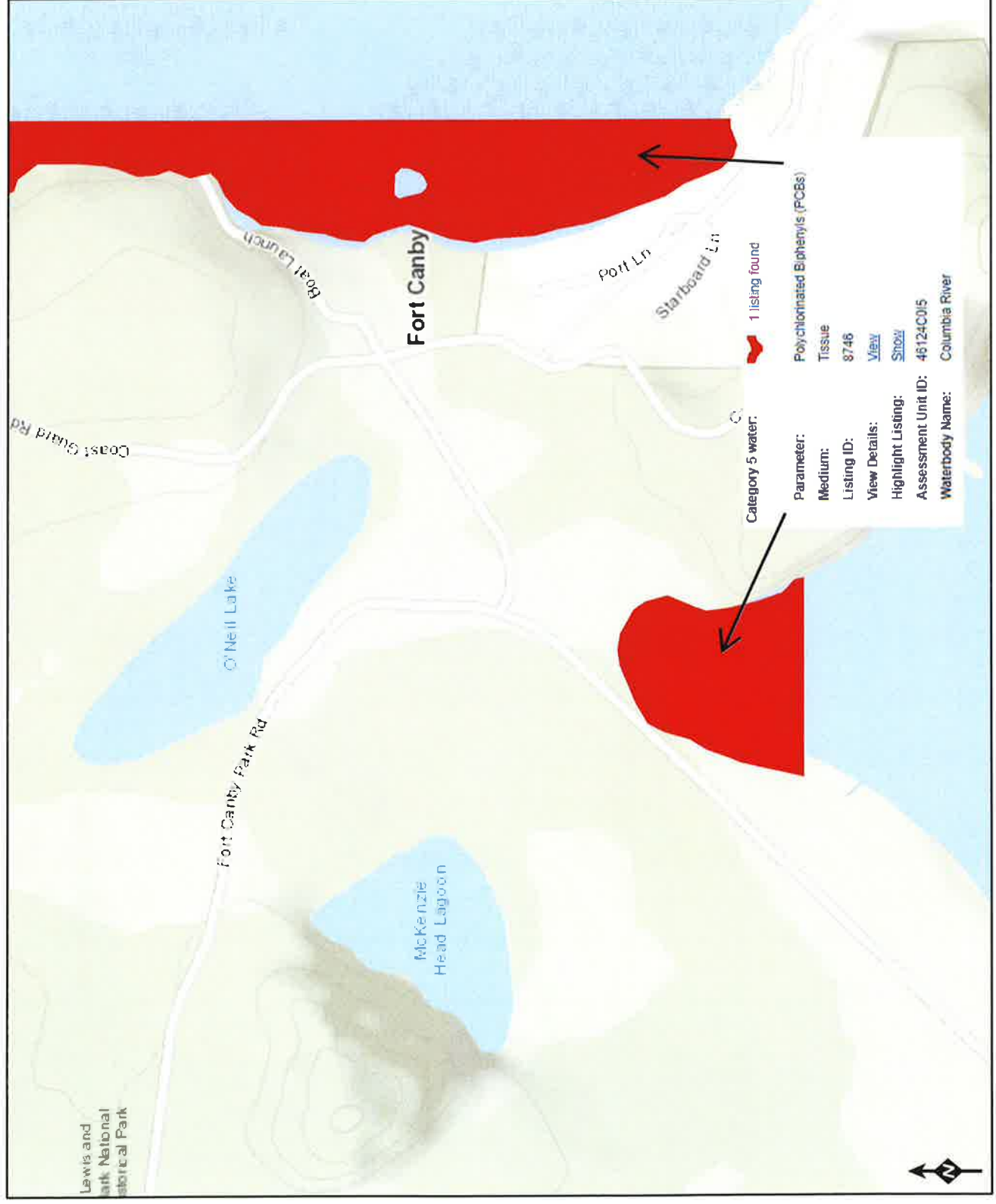


Figure 5 - TMDL Map



WQ Improvement Projects
Approved
In Development

TMDL locations are outside of the study area.

Wetland name or number 10

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 10 Date of site visit: 3/24/2022
 Rated by J. Gray, Z. Roman Trained by Ecology? ☒ Yes ☐ No Date of training 2011
 HGM Class used for rating Depressional Wetland has multiple HGM classes? ☐ Y ☒ N

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

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

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H M <u>(L)</u>	<u>(H)</u> M L	H M <u>(L)</u>	
Landscape Potential	<u>(H)</u> M L	<u>(H)</u> M L	H <u>(M)</u> L	
Value	H <u>(M)</u> L	H M <u>(L)</u>	H <u>(M)</u> L	TOTAL
Score Based on Ratings	6	7	5	18

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number 10

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	10.1
Hydroperiods	D 1.4, H 1.2	10.1
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	10.1
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	10.1
Map of the contributing basin	D 4.3, D 5.3	10.3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	10.2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	5

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of 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 sheetflow, or in a swale without distinct banks,
☐ The water leaves the wetland **without being impounded**.

☒ NO – go to 5

YES – The wetland class is **Slope**

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

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

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

Wetland name or number 10

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 10

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

Add the points in the boxes above

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	1
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 <u>Camping</u>	Yes = 1 No = 0	1
Total for D 2		3

Add the points in the boxes above

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

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

Add the points in the boxes above

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

The Columbia River is immediately down-gradient of the unit and is listed as a 303d water for the parameter: Polychlorinated Biphenyls (PCBs). <https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&BBBox=-14338616,5395963,-12562831,6503994&RT=0&Layers=27&Filters=y,n,n,n,n,n&F1.4=n,n,n,n,n,y>

Wetland name or number 10

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 or ditch, OR highly constricted permanently flowing outlet | points = 2 | 4 |
| Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch | points = 1 | |
| Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing | points = 0 | |

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

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

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

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

Total for D 4

Add the points in the boxes above

12

Rating of Site Potential If score is: X 12-16 = H 6-11 = M 0-5 = L

Record the rating on the first page

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

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

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.)? (camping)	Yes = 1 No = 0	1
---	------------------	---

Total for D 5

Add the points in the boxes above

3

Rating of Landscape Potential If score is: X 3 = H 1 or 2 = M 0 = L

Record the rating on the first page

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

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

- | | | |
|--|------------|---|
| The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): | | 0 |
| • Flooding occurs in a sub-basin that is immediately down-gradient of unit. | points = 2 | |
| • Surface flooding problems are in a sub-basin farther down-gradient. | points = 1 | |
| Flooding from groundwater is an issue in the sub-basin. | points = 1 | |
| The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. <i>Explain why</i> _____ | points = 0 | |
| There are no problems with flooding downstream of the wetland. | points = 0 | |

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

Total for D 6

Add the points in the boxes above

0

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

Record the rating on the first page

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

- | | | |
|---|----------------------------------|---|
| <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/ground-cover) that each cover 20% within the Forested polygon | | |

H 1.2. Hydroperiods

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

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

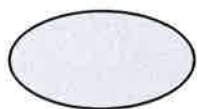
Count the number of plant species in the wetland that cover at least 10 ft².

*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, Canadian thistle***

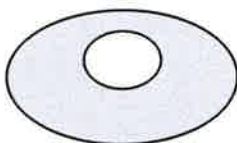
- | | | |
|------------------------------|------------|---|
| If you counted: > 19 species | points = 2 | 1 |
| 5 - 19 species | points = 1 | |
| < 5 species | points = 0 | |

H 1.4. Interspersion of habitats

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



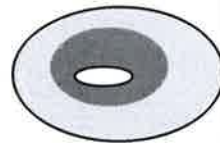
None = 0 points



Low = 1 point

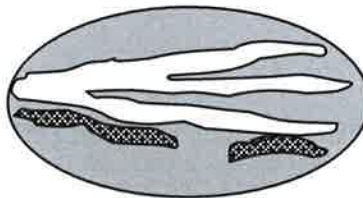
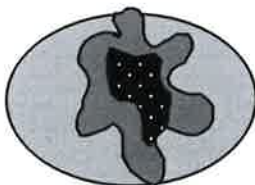
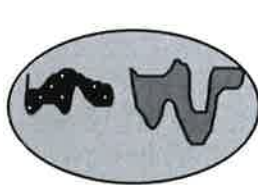


Moderate = 2 points



0

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



Wetland name or number 10

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i> <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 extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <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 (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <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 (<i>structures for egg-laying by amphibians</i>) <input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)		1
Total for H 1	Add the points in the boxes above	4

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 <i>only habitat that directly abuts wetland unit</i>). <i>Calculate:</i> % undisturbed habitat <u>0</u> + [(% moderate and low intensity land uses)/2] <u>0</u> = <u>0</u> % If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0		0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate:</i> % undisturbed habitat <u>54</u> + [(% moderate and low intensity land uses)/2] <u>19</u> = <u>73</u> % Undisturbed habitat > 50% of Polygon <u>38/2</u> points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0		3
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0		0
Total for H 2	Add the points in the boxes above	3

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

Record the rating on the first page

H 3.0. Is the habitat provided by the site valuable to society?		
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i> Site meets ANY of the following criteria: points = 2 — It has 3 or more priority habitats within 100 m (see next page) — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) — It is mapped as a location for an individual WDFW priority species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a <u>Shoreline Master Plan, or in a watershed plan</u> <u>Site has 1 or 2 priority habitats (listed on next page) within 100 m</u> 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

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. 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
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or 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
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?	Yes = Category I No – Go to SC 2.3 Yes = Category I No = Not a WHCV Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV Yes = Category I No = Not a WHCV
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? 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? 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? 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 – Go to SC 3.3 No = Go to SC 3.2 Yes – Go to SC 3.3 No = Is not a bog Yes = Is a Category I bog No – Go to SC 3.4 Yes = Is a Category I bog No = Is not a bog

<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>Yes = Category I No = Not a forested wetland for this section</p>	<p>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>) <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 on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) <p>Yes = Category I No = Category II</p>	<p>Cat. I</p> <p>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 <p>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>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>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>Yes = Category III No = Category IV</p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>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>	

Wetland name or number 10

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FIGURE 10.1

COWARDIN CLASSES, AND HYDROPERIOD MAP

WELCOME CENTER AND ENTRANCE IMPROVEMENTS

PACIFIC COUNTY, WA

Data Sources:
Date: 5/27/2022

Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

Y:red-ae.otak.com/proj/Project/33400/33427/CADD/GIS/MXD/33425_Wetlands_20220401/33425_Wetlands_20220401.aprx

LEGEND

- | | |
|------------------------------|------------------------------|
| Occasionally Flooded | Palustrine Emergent (PEM) |
| Permanently Flooded | Palustrine Forested (PFO) |
| Saturated Only | Palustrine Scrub-Shrub (PSS) |
| Seasonally Flooded | 150-foot Wetland Buffer |
| Palustrine Aquatic Bed (PAB) | |

0 50 100 150 ft

Note: No outlet.



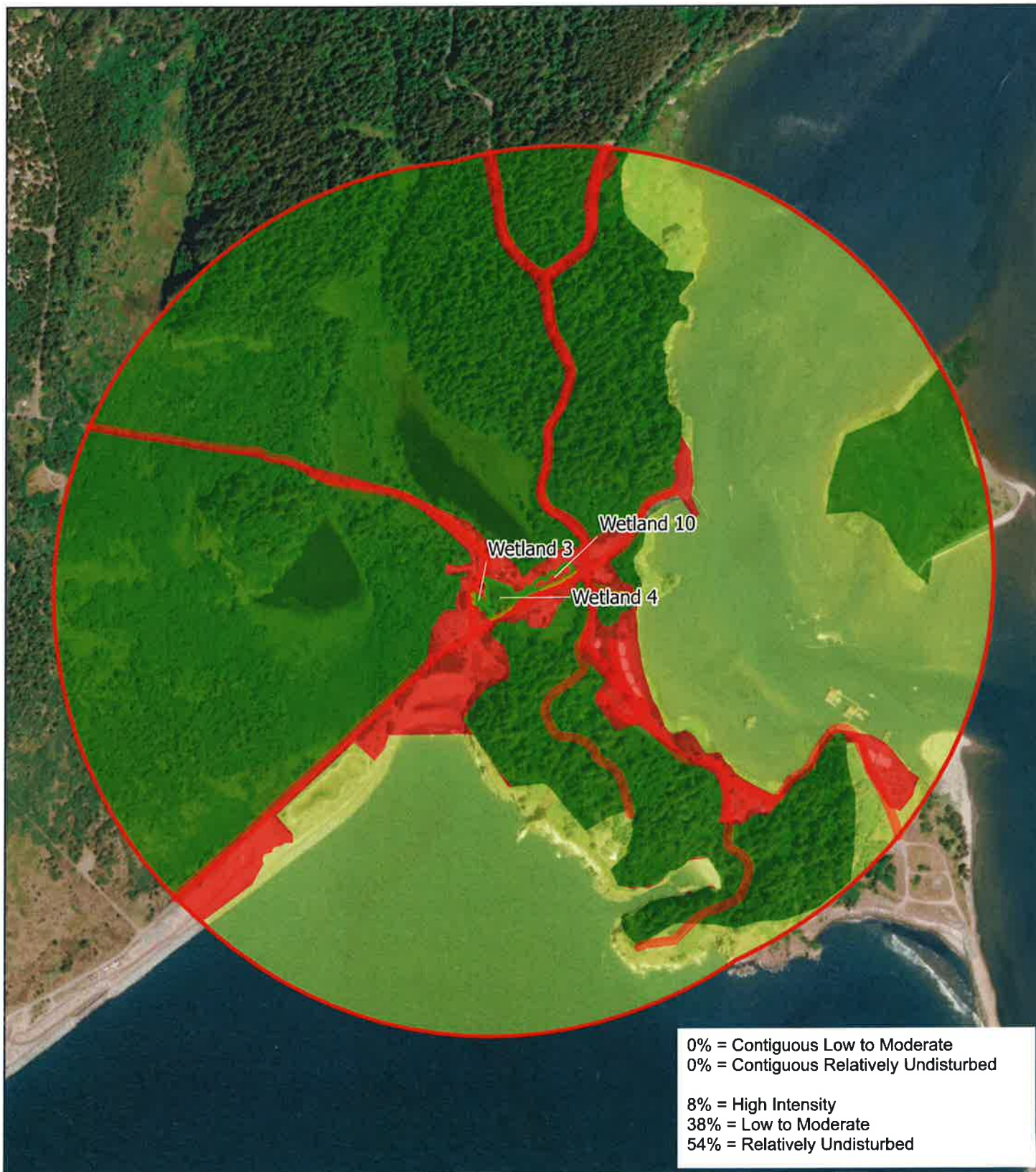


FIGURE 10.2
LAND USE MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources:
Date: 6/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

\\red-ae.otak.com\proj\Project\33400\33427\CADD\GIS\MXDs\33425_Wetlands_20220401\Rating Figure Project\W3 2_LUIMap.aprx

LEGEND

- Wetland Area
- 1 km Polygon
- High Intensity Land Use
- Low to Moderate Intensity Land Use
- Relatively Undisturbed Land

0 500 1,000 1,500 ft





FIGURE 10.3
CONTRIBUTING BASIN MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources:
Date: 6/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Contributing Basin
- Wetland Area

0 25 50 75 ft



Otak

Figure 4 - 303d Listed Waters

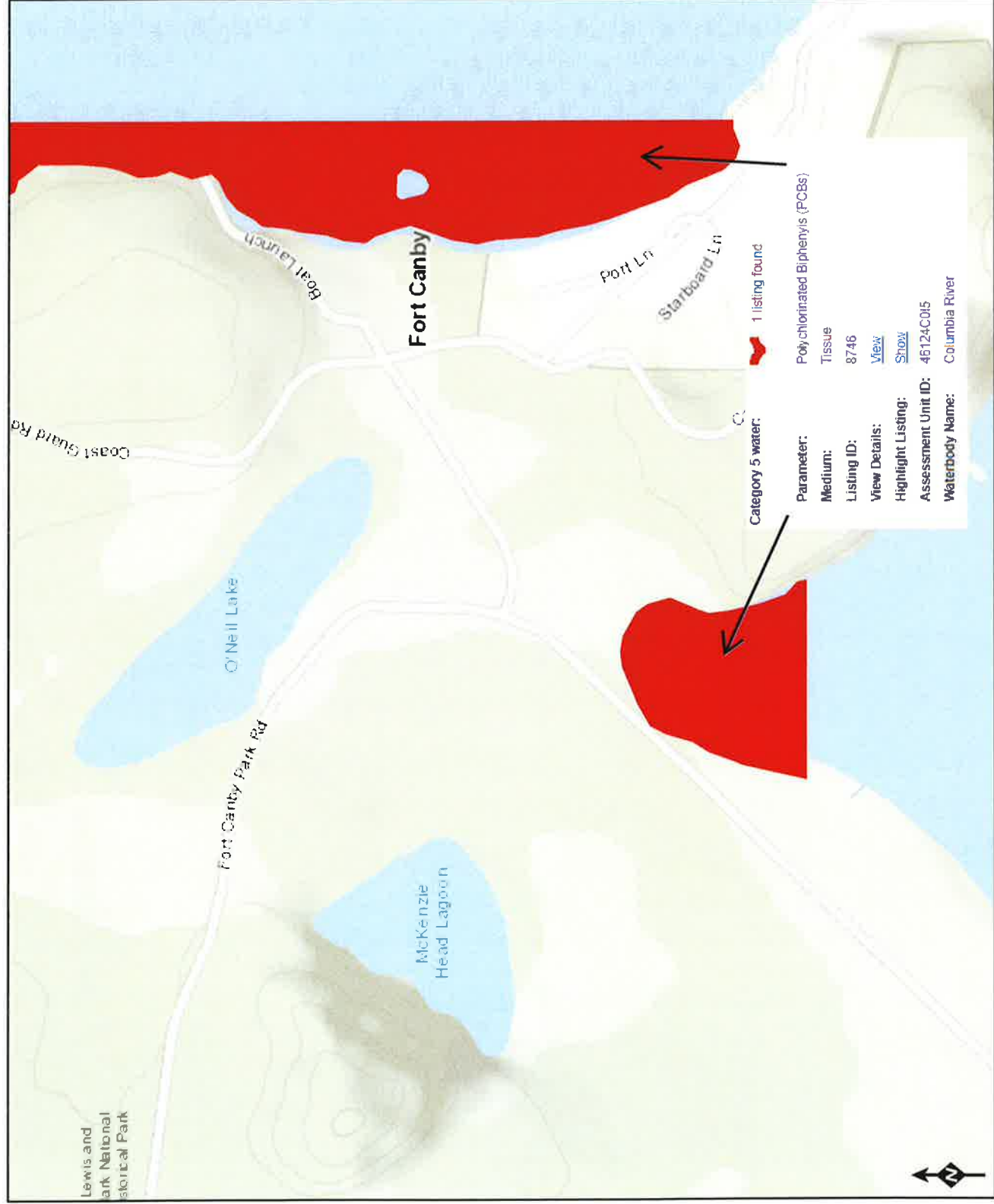
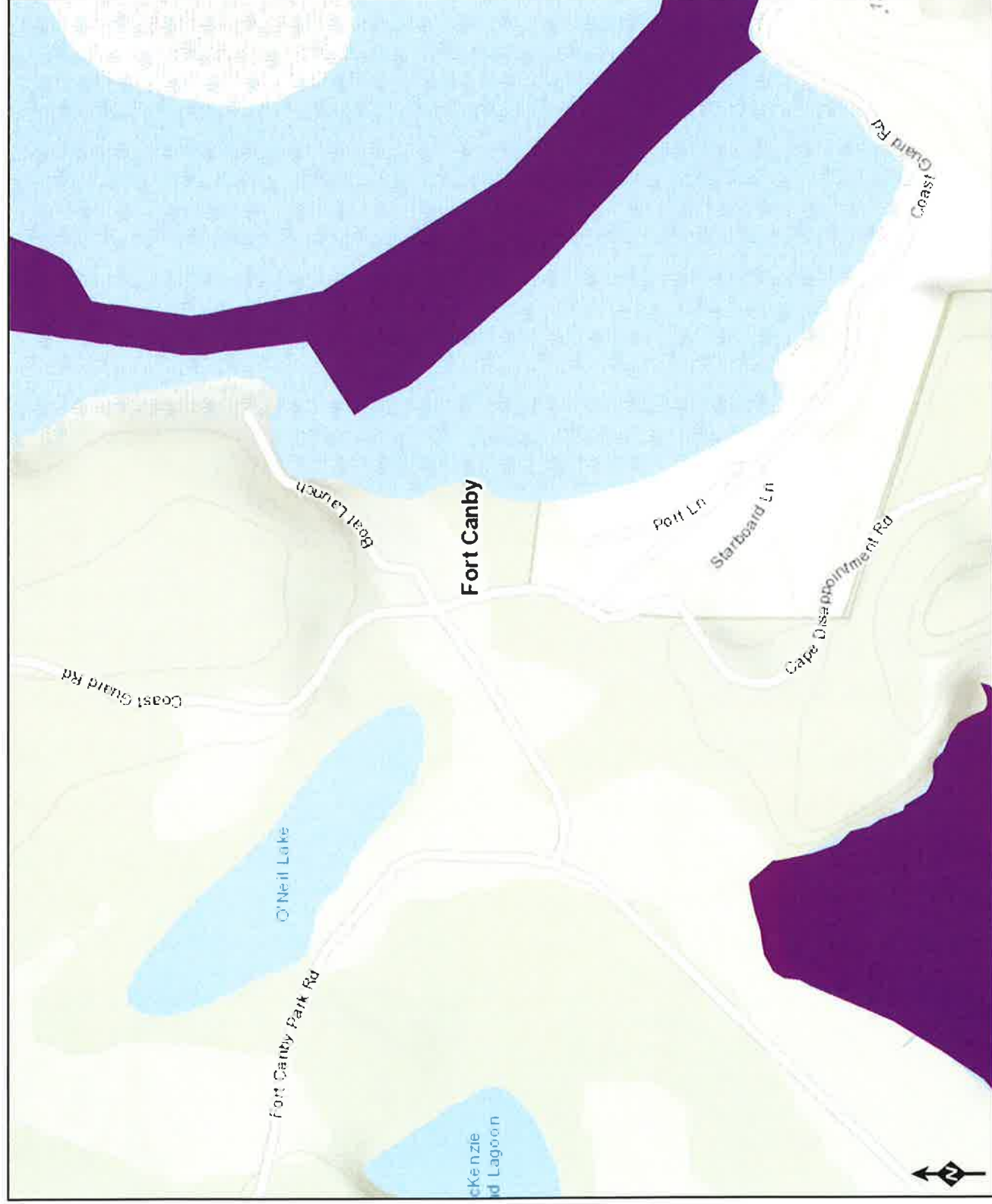


Figure 5 - TMDL Map



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and

Wetland name or number 11

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 11 Date of site visit: 3/24/2022
Rated by J. Gray, Z. Roman Trained by Ecology? ☒ Yes ☐ No Date of training 2011
HGM Class used for rating Depressional Wetland has multiple HGM classes? ☐ Y ☒ N

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

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

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality		Hydrologic	Habitat	
Circle the appropriate ratings					
Site Potential	H	M (L)	H (M) L	H	M (L)
Landscape Potential	H	(M) L	H (M) L	(H) M	L
Value	H	(M) L	H	M (L)	H (M) L
Score Based on Ratings	5		5	6	TOTAL 16

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number 11

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	11.1
Hydroperiods	D 1.4, H 1.2	11.1
Location of outlet <i>(can be added to map of hydroperiods)</i>	D 1.1, D 4.1	11.1
Boundary of area within 150 ft of the wetland <i>(can be added to another figure)</i>	D 2.2, D 5.2	11.1
Map of the contributing basin	D 4.3, D 5.3	11.3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	11.2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	5

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants <i>(can be added to 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of 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 sheetflow, or in a swale without distinct banks,
☐ The water leaves the wetland **without being impounded**.

☒ NO - go to 5

YES - The wetland class is **Slope**

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

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

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

Wetland name or number 11

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 11

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. <u>Characteristics of surface water outflows from the wetland:</u> 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. <u>Characteristics and distribution of persistent plants</u> (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > 1/2 of area points = 3 Wetland has persistent, ungrazed plants > 1/10 of area points = 1 Wetland has persistent, ungrazed plants < 1/10 of area points = 0	0	
D 1.4. <u>Characteristics of seasonal ponding or inundation:</u> <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > 1/2 total area of wetland points = 4 Area seasonally ponded is > 1/4 total area of wetland points = 2 Area seasonally ponded is < 1/4 total area of wetland points = 0	0	
Total for D 1	Add the points in the boxes above	3

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	1
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	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 for the basin in which the unit is found)?	Yes = 2 No = 0	0
Total for D 3	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

The Columbia River is immediately down-gradient of the unit and is listed as a 303d water for the parameter: Polychlorinated Biphenyls (PCBs). <https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&BBox=-14338616,5395963,-12562831,6503994&RT=0&Layers=27&Filters=y,n,n,n,n,n&F1.4=n,n,n,n,n,y>

Wetland name or number 11

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 or ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	4	
D 4.2. Depth of storage during wet periods: <i>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.</i> 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 (marks on concrete foundations) 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	1	
D 4.3. Contribution of the wetland to storage in the watershed: <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i> 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	3	
Total for D 4 Add the points in the boxes above		8

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

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

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

- | | | |
|---|----------------------------------|---|
| <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/ground-cover) that each cover 20% within the Forested polygon | | |

H 1.2. Hydroperiods

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

- | | | |
|--|-------------------------------------|---|
| <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 checked="" type="checkbox"/> Occasionally flooded or inundated | 2 types present: points = 1 | |
| <input 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"/> 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

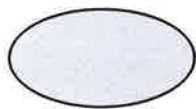
Count the number of plant species in the wetland that cover at least 10 ft².

*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, Canadian thistle***

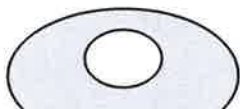
- | | | |
|------------------------------|------------|---|
| If you counted: > 19 species | points = 2 | 1 |
| 5 - 19 species | points = 1 | |
| < 5 species | points = 0 | |

H 1.4. Interspersion of habitats

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



None = 0 points



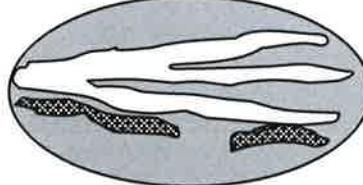
Low = 1 point



Moderate = 2 points



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



0

Wetland name or number 11

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i> <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 extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <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 (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <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 (<i>structures for egg-laying by amphibians</i>) <input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)		1
Total for H 1	Add the points in the boxes above	2

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 <i>only habitat that directly abuts wetland unit</i>). <i>Calculate:</i> % undisturbed habitat <u>10</u> + [(% moderate and low intensity land uses)/2] <u>10</u> = <u>20</u> % <div style="text-align: right;">20/2</div> If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0		2
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate:</i> % undisturbed habitat <u>58</u> + [(% moderate and low intensity land uses)/2] <u>17</u> = <u>75</u> % <div style="text-align: right;">34/2</div> Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0		3
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0		0
Total for H 2	Add the points in the boxes above	5

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

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose <i>only the highest score that applies to the wetland being rated</i>. 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 <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 <input checked="" type="checkbox"/> Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 Site does not meet any of the criteria above points = 0	

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

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. 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 page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II	Cat. I Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to SC 2.2 No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = Category I No = Not 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 = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog	Cat. I

Wetland name or number 11

<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>Yes = Category I No = Not a forested wetland for this section</p>	<p>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>) <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 on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) <p>Yes = Category I No = Category II</p>	<p>Cat. I</p> <p>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 <p>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>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>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>	

Wetland name or number 11

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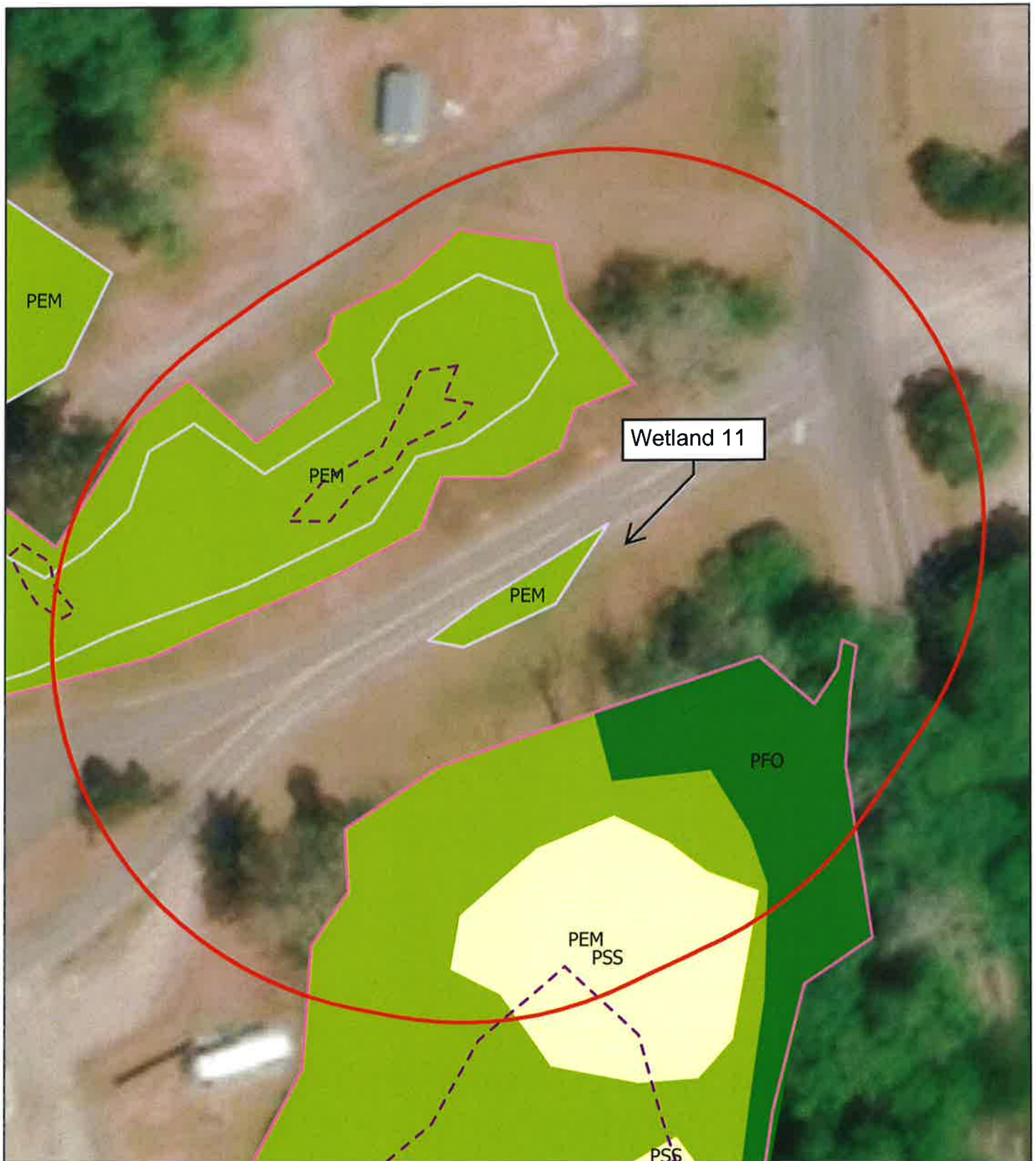


FIGURE 11.1
COWARDIN CLASSES,
AND HYDROPERIOD MAP
WELCOME CENTER AND
ENTRANCE IMPROVEMENTS
PACIFIC COUNTY, WA

Data Sources
 Date: 5/27/2022
 Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- | | |
|---------------------------|------------------------------|
| Occasionallly Flooded | Palustrine Forested (PFO) |
| Saturated Only | Palustrine Scrub-Shrub (PSS) |
| Seasonally Flooded | 150-foot Wetland Buffer |
| Palustrine Emergent (PEM) | |

0 25 50 75 ft

Note: No outlet.



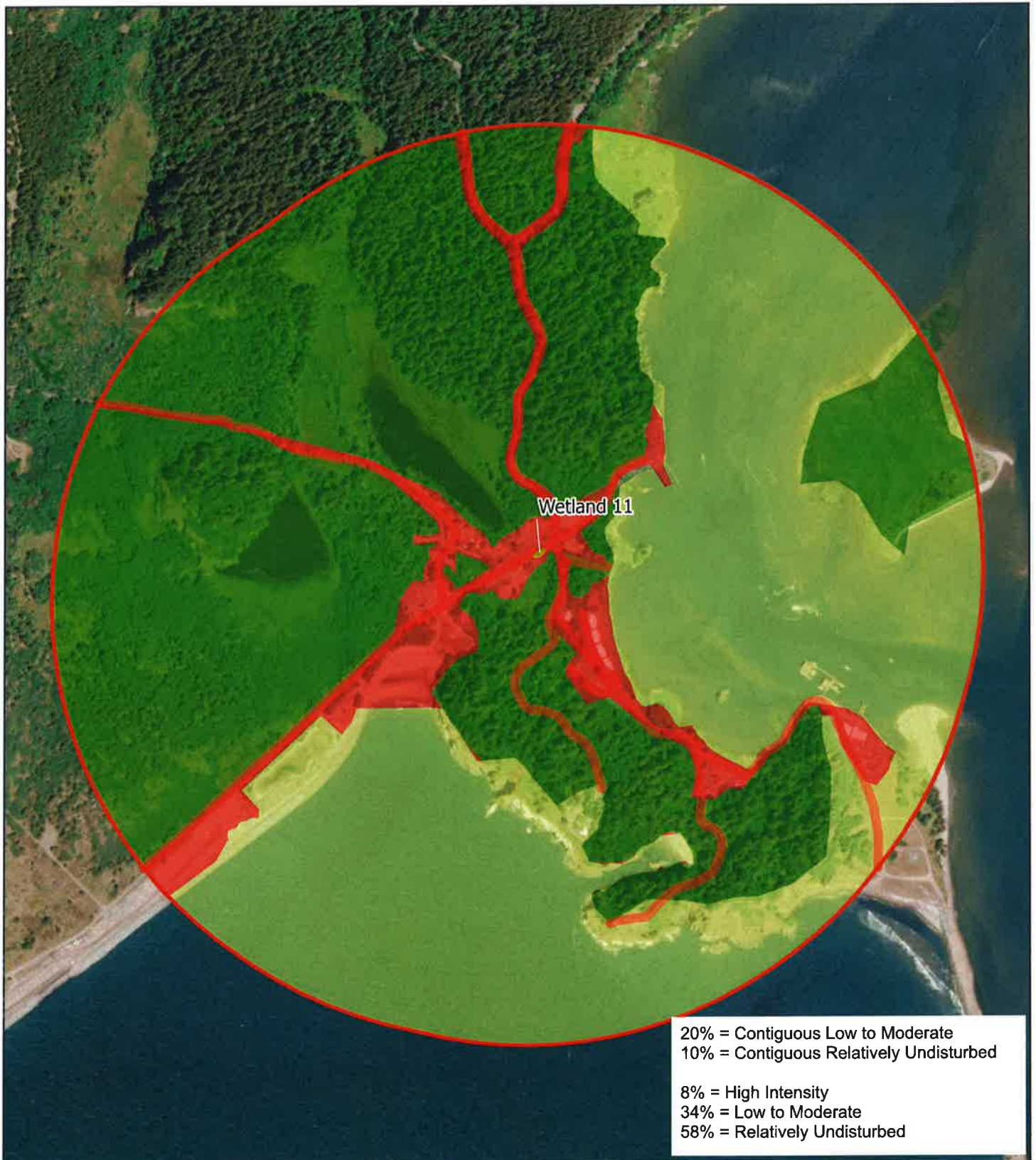


FIGURE 11.2
LAND USE MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources:
Date: 8/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Wetland Area
- 1 km Polygon
- High Intensity Land Use
- Low to Moderate Intensity Land Use
- Relatively Undisturbed Land

0 500 1,000 1,500 ft





FIGURE 11.3
CONTRIBUTING BASIN MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources
Date: 6/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Contributing Basin
- Wetland Area

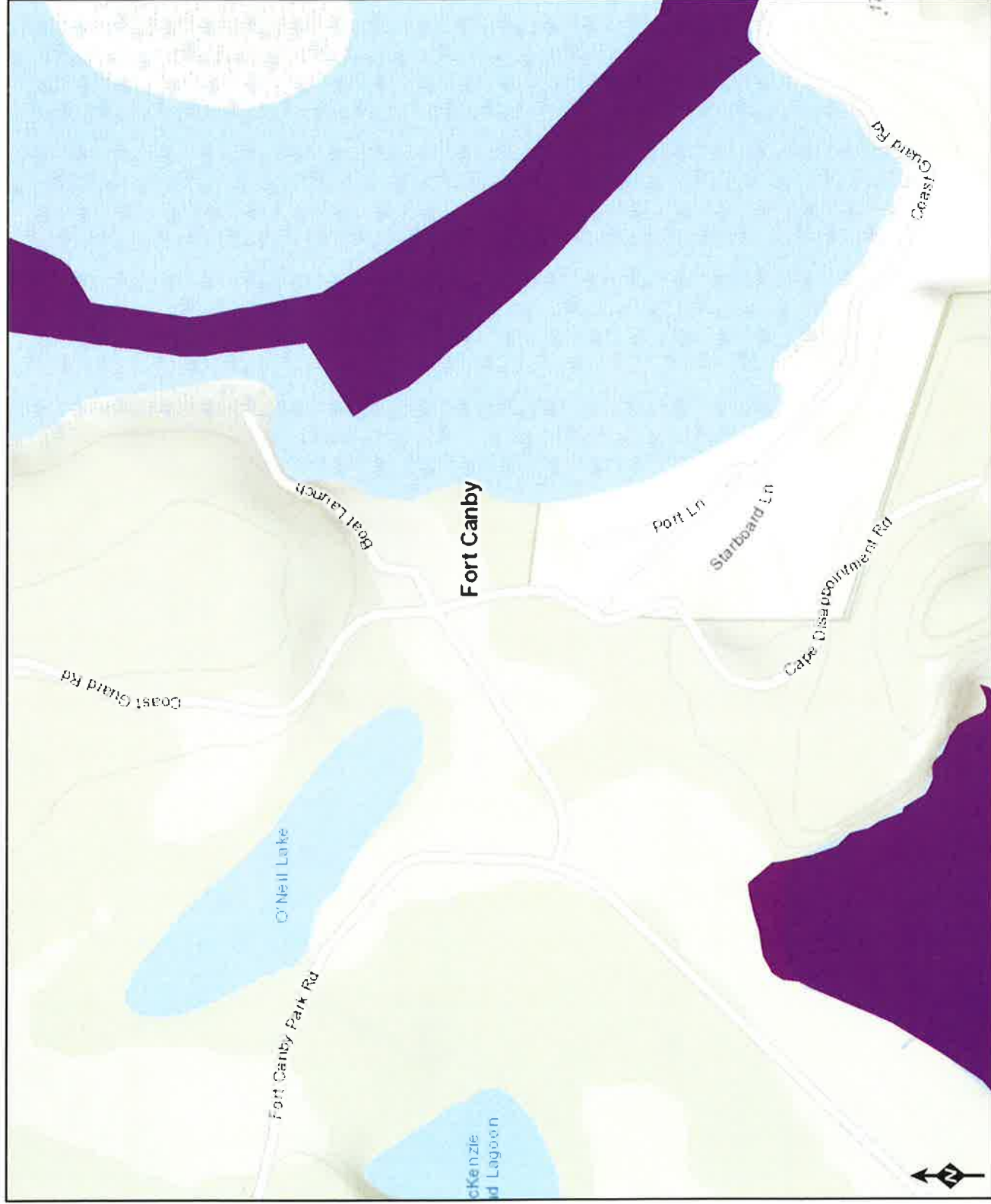
0 25 50 75 ft



Figure 4 - 303d Listed Waters



Figure 5 - TMDL Map



WQ Improvement Projects

Approved

In Development

TMDL locations are outside of the study area.



FIGURE 2.3
CONTRIBUTING BASIN MAP

**WELCOME CENTER AND
ENTRANCE IMPROVEMENTS**

PACIFIC COUNTY, WA

Data Sources:
Date: 6/3/2022
Disclaimer: This data is not to survey accuracy and is meant for planning purposes only.

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LEGEND

- Contributing Basin
- Wetland Area

0 25 50 75 ft



Figure 4 - 303d Listed Waters

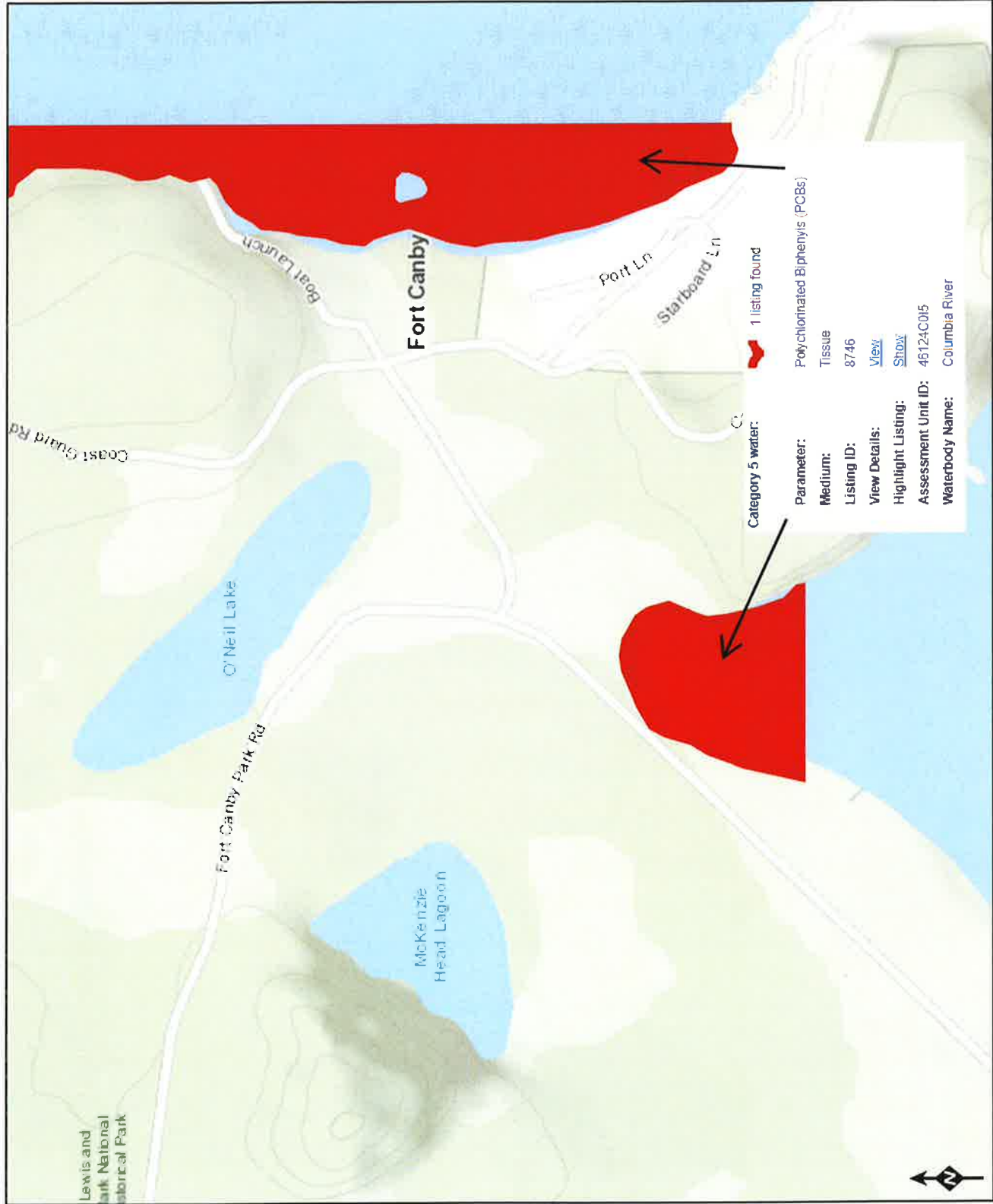
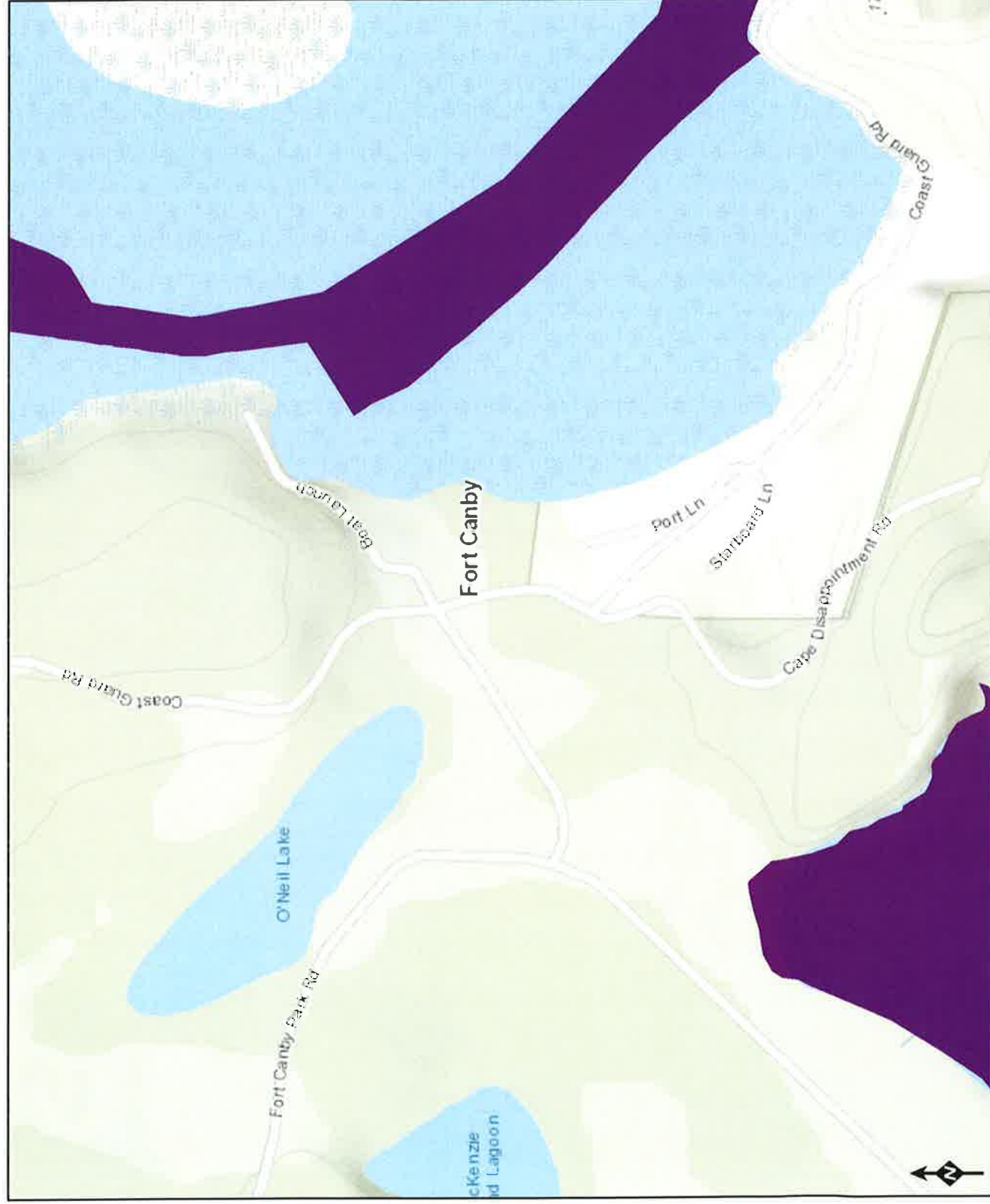


Figure 5 - TMDL Map



WQ Improvement Projects
Approved
In Development

TMDL locations are outside of the study area.