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Reference Number (if applicable): _____

Grantor(s): additional grantor names on page ____

- 1) Cook, Frank
- 2) _____

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- 1) Public
- 2) _____

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Lf 2, Short Plat No. 94-042
09/35/06

Assessor Parcel /Tax ID Number: additional parcel numbers on page ____

P109094

Wetland Technology, LLC.

Wetland Delineation & Habitat
Assessment Report

Cook, 4.72 acres

Address: 32966 Hamilton Cemetery
Road, Skagit County, WA

Parcel # P109094

Wetland Technology Biologist,
Dennis Dickson, B.S.

8-15-23

Cook
32966 Hamilton Cemetery Rd
Skagit County, WA
Jurisdictional wetland delineation evaluation

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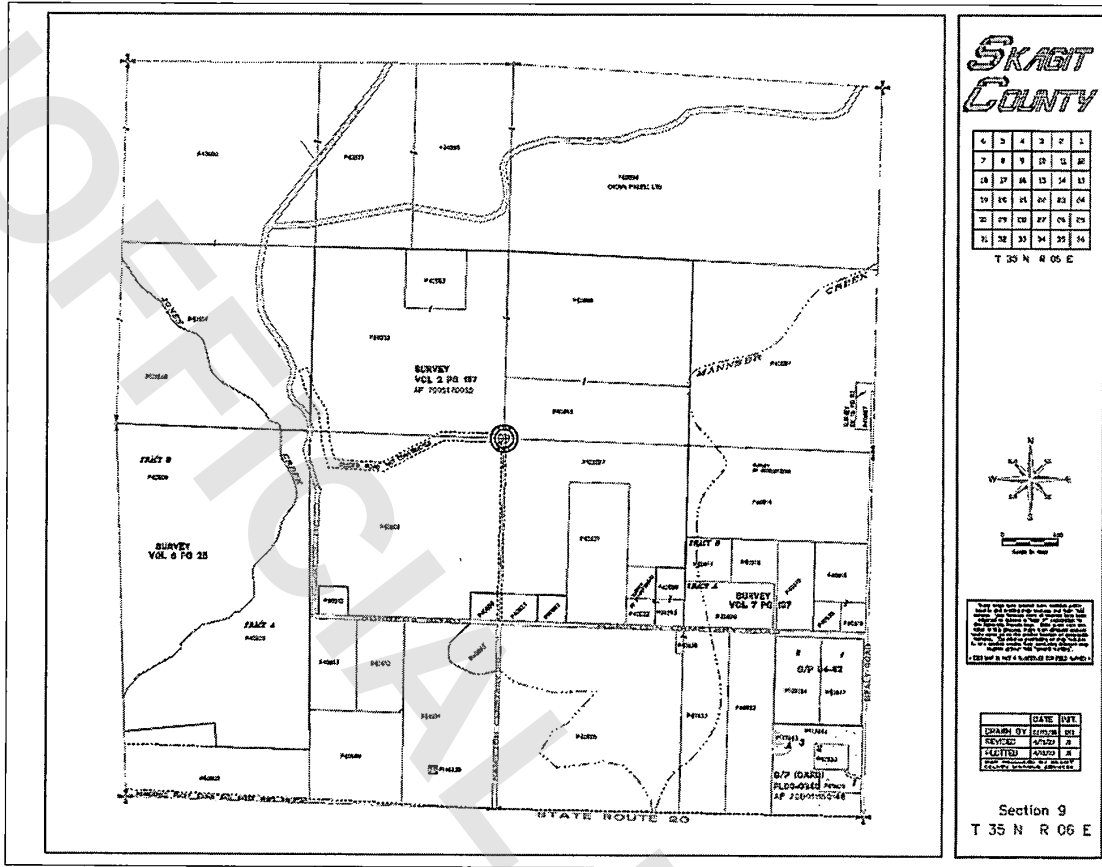
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Introduction & Proposal

Wetland Technology biologist Dennis Dickson has completed a wetland evaluation and delineation on a 4.72-acre property located at 32966 Hamilton Cemetery Rd., Skagit County WA. The property consists of tax lots P109094. The parcel is also identified as Sec 09 TWP 35 R 06. The purpose of this work was to prepare a report describing the existing conditions of the property, including the Critical Area and Wetland "A".

Site Description

The site is a rectangular property adjacent to Hamilton Cemetery Rd. Parts of the central property are planted and vegetated with trees and shrubs. A low-lying area with woody debris is present near the center of the property. One depressional wetland is present on the property.



Methodology

Wetland Technology utilized the U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center. Department of Ecology (DOE) (2014 revised) Wetlands Identification Manual is also applied. The two comprise an accepted standard guideline for identifying and jurisdictional delineating wetlands by Federal, State, County, and Municipal governments.

Wetland Vegetation Criteria

The 2010 edition of the Washington State Wetlands Identification and Delineation Manual defines hydrophytic vegetation as “the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present.” Field indicators were used to determine whether the vegetation meets the definition for hydrophytic vegetation.

Wetlands hydrology exists when the soil is inundated or saturated near the surface for a period of one week or more during the growing season and is evidenced by hydrophilic vegetation and hydric soils.

Hydrology is visibly assessed for visual inundation and/or saturation. Depth to standing water in soil test-holes was measured. Additional field indicators of wetlands hydrology that were assessed for oxidized root zones, water marks, drift lines, water borne sediment deposits, water-stained leaves, surface scoured areas, wetland drainage patterns, and morphological plant adaptations.

Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic (oxygen deficient) conditions. The U.S. Soil Conservation Service soil Survey of Skagit County was referenced for listed soils on the subject parcel.

The routine on-side determination method was chosen to be the appropriate specific field method. The disturbed site methodology was not integrated with the on-site methodology because vegetative units were intact and established.

Under standard routine method, the process for making a wetland determination is based on three sequential steps:

- 1.) Examination of the site for hydrophytic vegetation (species present and percent cover);
- 2.) If hydrophytic vegetation is found, then the presence of hydric soils is determined.
- 3.) The final step is determining if wetland hydrology exists in the area examined under the first two steps.

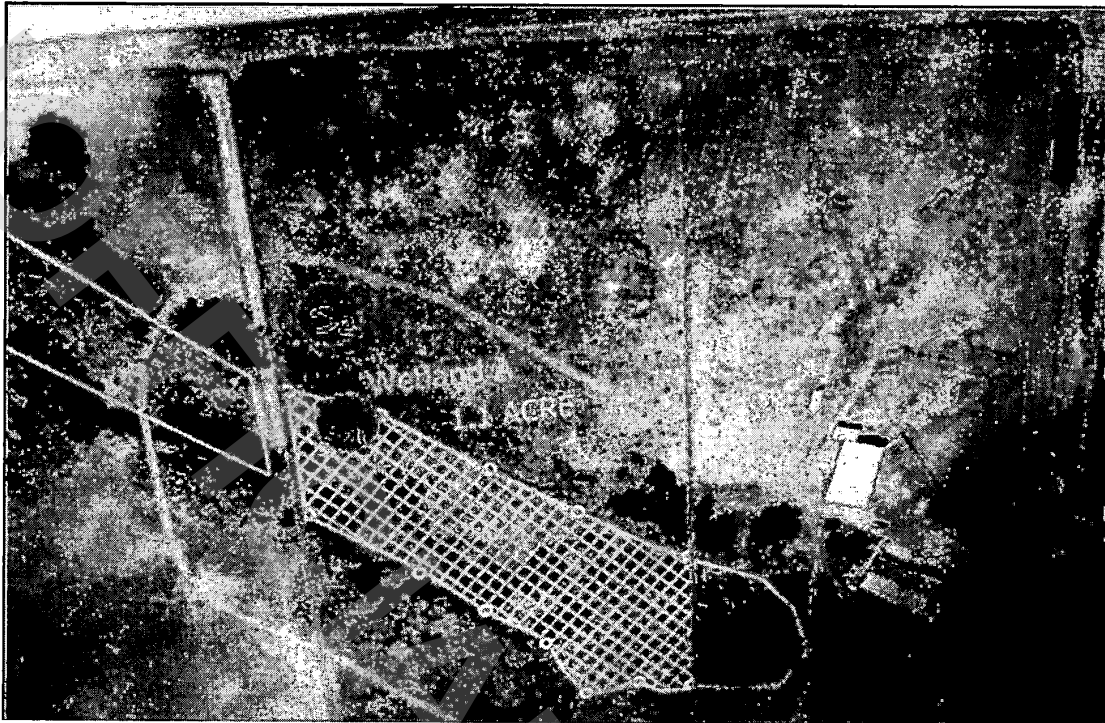
The study site was walked through along roughly 50' lines, sampling for both upland & wetland soils and vegetation indicators. Once the wetland(s) were approximately established, more extensive research was done at specific locations identified as Sample Sites.

The following criteria descriptions were used in the boundary determination: (See also the delineation map)

Sample Sites

S1- Wetland "A" Forested Depressional Wetland Swamp

S2- Upland



Representative soil samples were analyzed from each of these ecological map units. Soil test holes were dug to a depth of 18 inches at each Sample Site. Each horizon was evaluated for hydric indications and the Munsell Soil Color Chart was utilized to determine chroma, hue, and value. These are identified on the map as S1 and S2 on the Field Data Sheets. (See Attached A)

Plant Identification

Plant species for each ecological vegetative unit were identified and analyzed for Aerial cover. The herb, shrub, and tree stratum were segregated for statistical analysis purposes.

Plants were separated into four basic groups for wetlands indicator status according to the "National List of Plant Species that occur in Wetlands/Northwest Edition

Obligate wetlands plants (OBL) that occur almost always in wetlands under natural conditions (estimated probability >99%)

Facultative wetland plants (FACW) that usually occur in Wetlands estimated probability 67-99%, but occasionally are found in non-wetlands

Facultative plants (FAC) that is equally likely to occur in wetlands (estimated probability 34-66%) or non-wetlands

Facultative upland plants (FACU) that usually occur in non-wetlands (estimated probability 67-99%) but occasionally are found in wetlands (estimated probability 1-33%).

NC indicates no category listed.

Both wetlands and adjacent areas were analyzed for comparison and comprehensive characterization. Wetland boundaries were marked with pink flagging.

General Vegetation Evaluation (see Attached A)

Wetland "A" S1:

Wetland "A" is a forested depressional wetland swamp. The tree stratum consists of western redcedar (*Thuja plicata* FAC), black cottonwood (*Populus Trichocarpa* FAC), red alder (*Alnus Rubra* FACW), and willow (*Salix* spp. FAC). The sapling and shrub strata contains red alder (*alnus rubra*, FACW), willow (*Salix* spp., FAC), salmonberry (*Rubus spectabilis* FACW), and pacific ninebark (*Physocarpus captatus* FAC). The herb strata consists of reed canary grass (*Phalaris arundinacea* FACW), western skunk cabbage (*Lysichiton americanus* OBL), blue water lily (*Nymphaea nouchali* FACW), lamp rush (*Juncus effusus* FACW), creeping buttercup (*ranunculus repens* FACW), and slough sedge (*Carex obnutra* Obl.). The woody vine strata is populated by Himalayan blackberry (*Rubus armeniacus* FAC).

Upland Pasture S2:

The tree stratum consists of Douglas fir (*Psuedotsuga menziesii* NC). The herb strata consists of domestic grasses, creeping thistle (*Cirsium arvense* FACU), white clover (*trifolium repens* FACU), and dandelion (*Taraxacum officinale* FACU). The woody vine strata is populated by Himalayan blackberry (*Rubus armeniacus* FAC).

Hydrology (see Attached A)

Wetland "A" S1:

Hydrology indicators include surface water, high water table, saturation, water marks, sediment deposit, iron deposits, and inundation visible on aerial imagery. Surface water and saturation is present at 2". Water table is present at the surface.

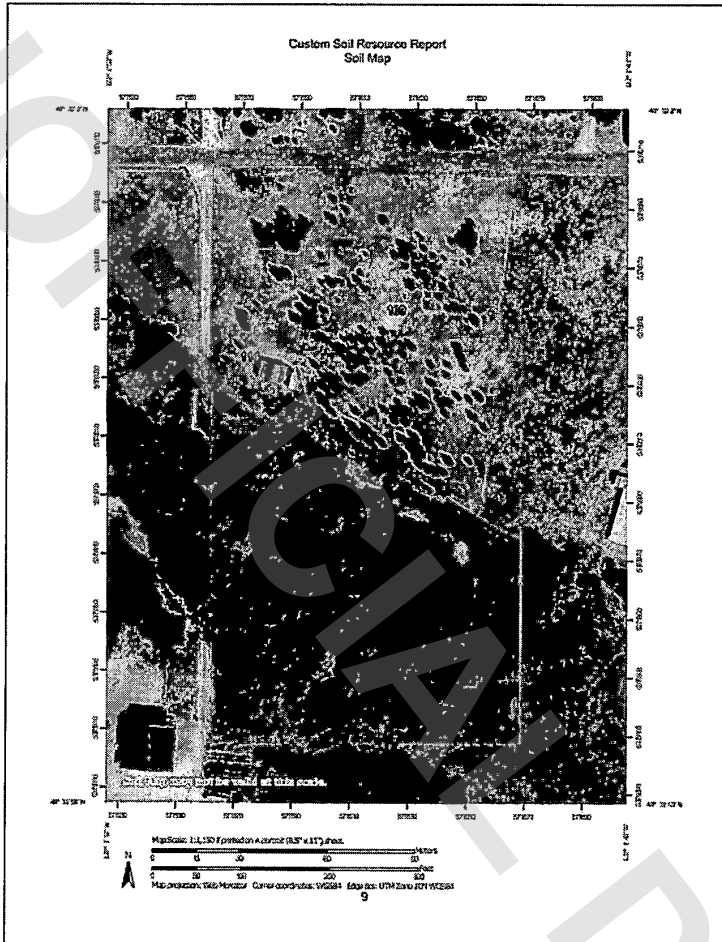
Upland pasture S2:

No hydrological indicators are present.

Soils (see Attached A)

USGS Soil Survey

The U.S. Conservation Service (USSCS) Soil Survey of Skagit County lists the dominant soil type on this property to be Larush fine sandy loam and Nargar loam with trace amounts of Samish silt loam. Samish silt loam is classified as a hydric soil while Larush fine sandy loam and Nargar loam are non-hydric.



Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
B7	Larush fine sandy loam	2.6	49.4%
100	Nargor loam, 0 to 8 percent slopes	2.3	44.3%
114	Samish silt loam	0.3	5.3%
Totals for Area of Interest		5.2	100.0%

Wetland "A" S1:

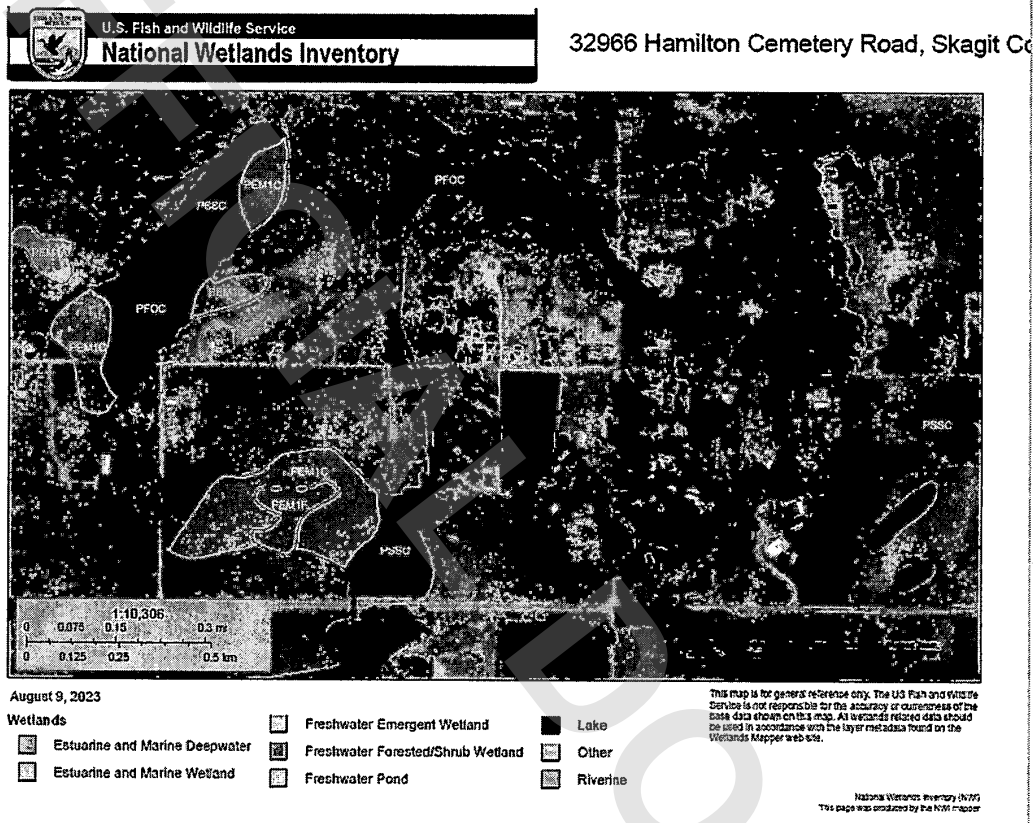
Soils within wetland "A" have a Munsell color of 10YR 3/2 and a texture of silty loam from 0 to 6 inches. From 7 to 18 inches below the surface, the color is 10YR 3/1 with a texture of silty sandy loam, with redoximorphic features of 10YR 4/6. Hydric soils indicators for S1 include sandy muck material.

Upland S2:

Soils within upland area have a Munsell color of 10YR 4/2 and a texture of silty loam from 0 to 3 inches. From 4 to 20 inches below the surface, the color is 10YR 4/3 with a texture of silty gravelly loam. Hydric soils indicators include high chroma.

National Wetland Inventory (NWI)

The National Wetland Inventory is compiled by the U.S. Department of Interior’s Fish & Wildlife Service. NWI relies upon visual aerial photo interpretation of wetland indicators including hydrologic, vegetation and topographic signatures. Wetland areas identified under NWI are also classified in accordance with the Cowardin classification system. Wetland Technology utilized the NWI only as a generalized map indication of the possible presence and extent of wetlands. Jurisdictional wetlands are always based on site-specific analysis. The NWI does not identify Wetland “A” as it exists on the property.



Wetland Values

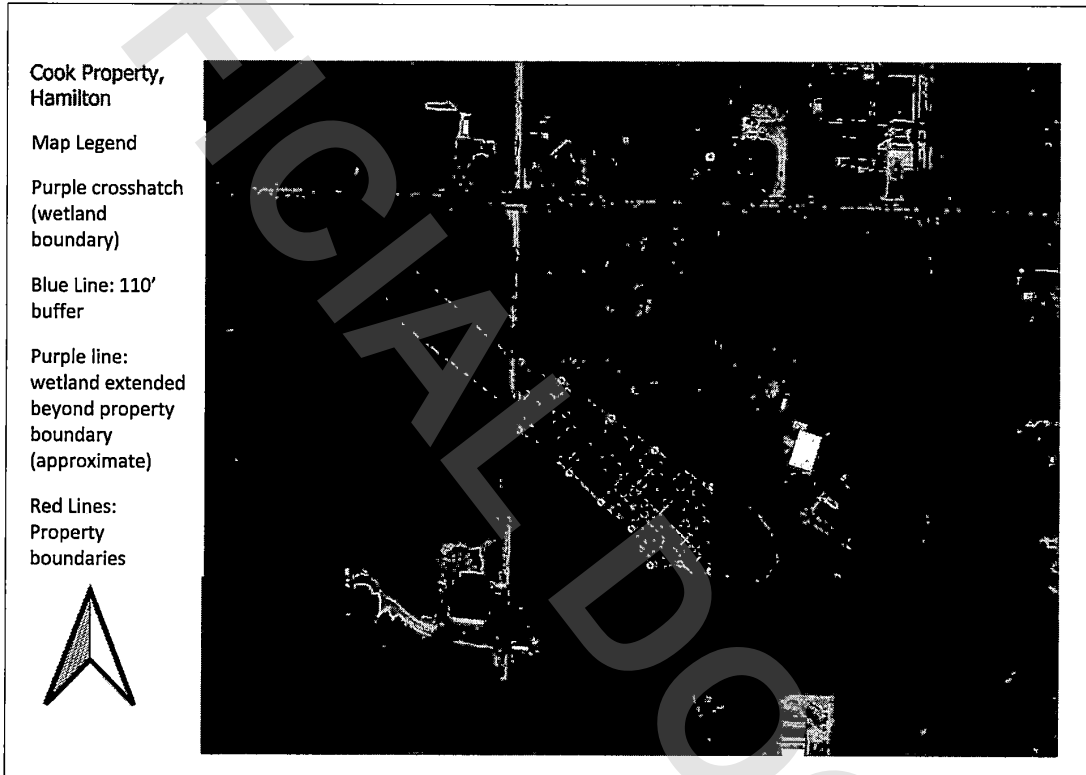
Wetland ecosystems serve numerous functions with respect to fish, wildlife, plants, water, soil, and air. Wetlands serve as specialized habitat for waterfowl, certain furbearers, amphibians, crustaceans, and fish. The complexity of these environs is exemplified by the prolific biochemical nature of an aquatic system.

Various species of wetlands vegetation absorb and breakdown elements and compounds that would otherwise become toxic within natural water systems. Examples of these substances are petroleum products, nitrates (fertilizers), organophosphates (detergents), and minerals such as iron, aluminum, manganese, and copper. The physical retention of eroded soils and sediments is also one of the valuable attributes of wetlands. The end result is a natural biofiltration process that affords water quality and viable fish habitat. Wetlands also act as natural water storage and aquifer recharge areas. It

should be remembered that wetland ecosystems are susceptible to degradation due to significant levels of pollutants and are therefore normally subject to setback buffer zones. Artificial biofiltration swale and detention ponds are often utilized to enhance water quality before flows enter wetlands.

Wetland Functions and Values Assessment

As described in the NWI section, the wetland "A" was rated under Washington State Rating System for Western Washington, Revised (Ecology 2014 revised). The criteria for rating wetlands include; sensitivity to disturbance, rarity, and designation as National Heritage wetlands, reparability and the functions they provide.



Wetland Categorization Methodology

The methodology for this functions and values assessment is based on professional opinion developed through past field analyses and interpretations. This assessment pertains specifically to the on-site wetland systems but is typical for assessments of similar systems throughout western Washington.

Wetland "A" scored: 6 points for water quality functions, 4 points for Hydrologic functions, and 7 points for Habitat function.

Wetland A: Score 17 points, Category 3

Wetlands in western Washington perform a variety of ecosystem functions. Included among the most important and analyzed functions provided by wetlands are storm-water storage/flood-flow attenuation, water quality, and fish and wildlife habitat.

Wildlife

Mammalian species that may utilize this site include species that easily adapt to suburban environments such as bats, black-tailed deer, deer mice, eastern cottontail rabbits, moles, raccoons, shrews, skunks, squirrels, and Virginia opossums. Although no egg masses, juveniles, or adult amphibians were observed during the field survey, some species are expected to occur within the wetlands or adjacent habitats. The expected amphibian species include the pacific tree frog, the bullfrog, and the northwestern salamander. These lists are not intended to be all-inclusive, and may omit some bird, mammal, or amphibian species that utilize the site. No known, threatened, or endangered species are associated with this site.

Priority Species (1000' radius)

There are two priority species within 1000 feet of the property. Townsend's big-eared bat (*Corynorhinus townsendii*) and elk (*Cervus elaphus*).

Townsend's bat is listed as a species of great conservation need under the State Wildlife Action Plan. This insectivorous bat is at risk due to climate change and loss or alteration of habitat and foraging areas. The conservation of forests, wetlands, and shrub and grasslands protects the productivity and quality of foraging habitat.

Elk is listed as an occurrence. This game mammal is a grazing species, preferring open areas with grass, small shrubs, and trees to forage on.



Buffer radius: 300 Feet

Report Date: 08/09/2023, Parcel ID: P109094

Wetland Regulatory Agency Jurisdiction

Jurisdictional wetlands are regulated on three levels; that is, Federal, State, and Municipal agencies.

On the federal level, the US Environmental Protection Agency regulates wetlands under Section 401 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. Regulatory permitting is processed by the US Army Corps of Engineers which has final jurisdiction regarding wetlands.

The State of Washington regulates state waters under the State Shoreline Management Act which pertains to streams of 5 CFS or more, lakes of 20 acres or more, and all marine shorelines. The Washington State Department of Ecology and Washington Department of Fisheries regulate development through Hydraulic Project Applications.

City and County municipalities regulate through ordinances set up in their Growth Management Plan regarding "Critical Areas". As such, the local agencies are generally considered "Lead Agency" and develop set back buffer zones from wetland boundaries and regulate the types of work allowed, in and around wetlands.

Skagit County Municipal Code:

As the lead agency, Skagit County regulates critical areas including wetlands through Skagit County Code Title 14.24. >

14.24.220 Wetlands Site Assessment

Wetland "A" classification explained.

14.24.240

HGM Class: Depression

DOE Rating: Category 3

Skagit County Development Rating: Moderate Intensity

Skagit County Buffer: 110'

14.24.090 Protected critical areas (PCA) requirements.

- (1) PCA. Approval of projects which trigger a development permit and/or other land use activities that require critical areas site assessment(s) shall require the identification and designation of PCAs. PCAs shall include all critical areas and their associated buffers as well as all areas on the parcel not investigated for critical areas. PCAs shall be depicted on a site plan, suitable for recording, and shall include all critical areas and associated buffers which have been identified through the site assessment process.
 - (a) The PCA is to be left undisturbed in its natural state. No clearing, grading, filling, logging, or removal of woody material; building; construction or road construction of any kind; planting of non-native vegetation or occupation by livestock is allowed within the PCA areas except as specifically permitted by Skagit County on a case-by-case basis.
- (2) PCA Field Identification and Buffer Edge Markers.
 - (a) Temporary Markers. During construction phases of development, distinct temporary marking consisting of flagging and/or staking shall be maintained along the outer limits of the delineated PCA or the limits of the proposed site disturbance outside of the PCA. Prior to the start of construction activity, and as necessary during construction, temporary markings shall be inspected by the Administrative Official or qualified professional. Written confirmation is to be included in the record as to whether or not the flagging has been installed consistent with the permit requirements prior to commencement of the permitted activity.
 - (b) Permanent Buffer Edge Markers. Except as provided under Subsection (2)(b)(i) of this Section, the outer edges of all PCAs, with the exception of aquifer recharge areas, shall be clearly marked on-site by the applicant or landowner with permanent stakes and critical areas markers. Critical areas markers may be either approved critical areas signs or inexpensive steel posts painted a standard color approved by the Administrative Official that is clearly identifiable as a critical areas marker. Installation of permanent markers shall be the responsibility of the landowner.
- (i) The Administrative Official may waive or modify the requirement for permanent buffer edge markers; provided, that any such decision shall be based on a site-specific determination that future verification of PCA locations will not be substantially more difficult without the placement of permanent markers and that such waiver or modification will not result in reduced long-term protection of critical areas

- (ii) The site assessment demonstrate that the proposed project allows for development of the subject parcel with the least impact on critical areas while providing a reasonable use of the property.

Impact Assessment/Mitigation sequencing

The parcel is zoned Rural Reserve (RRv). No site plan has been developed at this time. Mitigation sequencing shall be accomplished by avoiding the wetlands and designated buffers. All building including road construction should be designed to:

- (iii) Minimize the impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;
- (iv) Rectify the impact by repairing, rehabilitating or restoring the affected environment to the conditions existing at the time of the initiation of the project or activity;
- (v) Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action;
- (vi) Compensate for the impact by replacing, enhancing, or providing substitute resources or environments. (SCC: 14.24.080 a) mitigation)

Construction Impacts

Damage to the wetland buffer due to any new construction would not likely occur unless runoff from soil is allowed to be distributed within the buffer area, or if construction debris including soils is allowed to remain on the ground surface within the buffer. Best management practices during construction can minimize damage to the wetlands and buffer. A mitigation plan, at a building phase, would not be anticipated at this time.

Conclusions and Recommendations

Wetland "A" has been delineated and mapped. It is the conclusion of this report that, as described by Skagit County ordinance, the wetland is classified as Category "3" Depression Wetland. A 110' buffer is established to protect the Category 3 Wetlands.

The property has been delineated under Skagit County Code, SCC 14.24. The wetland does contain Department of Fish and Wildlife-designated priority species or habitat identified as essential for local populations of priority species. Mitigative efforts as outlined in section 14.24.230 including natural buffers and protective fencing shall be enforced.

Development provisions of this project will fall under the county ordinances regarding wetlands. All site development is still subject to standard building codes of Skagit County.

Thank you for your consideration. If you have any questions regarding this study, please contact me at (425 238 3537).

Respectfully,

Dennis Dickson

Dennis Dickson, B. S. Biologist

Wetland Technology, LLC

Attachment A

Field data sheet S1

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

Project/Site: P 109094 /County:Skagit_Sampling Date: 6-13-23 Applicant /Owner:Cook_State: WA _____ Sampling Point: S1
 Investigator(s): Dennis Dickson Section, Township, Range: Sec. 14 Twp 35 R 06E Landform-(terrace): Local relief _____
 Concave Slope (%): 0-3% Subregion (LRR): LRR-A Lat:48.533 Long: -122.031 Datum: _____ Soil Map Unit Name:
 Samish Silt loam (0-3% Slopes NWI classification: None _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X _____ No _____ Are Vegetation, Soil, or Hydrology _____ naturally problematic? No _____ (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 X _____ No _____	Hydric Soil Present? Yes X _____ No _____	Is the Sampled Area within a Wetland? Yes X _____ No _____
Wetland Hydrology Present? Yes X _____ No _____		
Remarks: unit is an depression forested wetland unit located in the west central portion of property		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 M _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 6 _____ (A) Total Number of Dominant Species Across All Strata: 6 _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% _____ (A)
1. <i>Alnus rubra</i>	15	Yes	Fac	
2. <i>Thuja plicata</i>	10	no	Fac	
3. <i>Salix spp.</i>	3	No	Obl	
4. <i>Populus Trichocarpa</i>	1	no	Facw	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Total _____ (A) _____ (B) Prevalence Index = B/A = _____
29 = Total Cover				
Sapling/Shrub Stratum (Plot size: 10 M _____)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ___ 4 - Morphological Adaptations: (Provide supp data in Remarks or on a separate sheet) ___ 5 - Wetland Non-vascular Plants:
1. <i>Alnus rubra</i>	10	Yes	Fac	
2. <i>Salix spp.</i>	5	No	Obl	
3. <i>Rubus spectabilis</i>	10	Yes	Fac	
4. <i>Physocarpus capitatus</i>	3	No	Fac	
5. _____				Prevalence Index = B/A = _____
28 = Total Cover				
Herb Stratum (Plot size: 10 M _____)				
1. <i>Phalaris arundinacea</i>	20	Yes	Facw	
2. <i>Lysichiton americanus</i>	15	Yes	Obl	
3. <i>Nymphaea nouchali</i>	10	No	Facw	
4. <i>Juncus effusus</i>	5	No	Fac	
5. <i>Ranunculus repens</i>	3	No	Facw	
6. <i>Carex obnuta</i>	1	No	Obl.	
7. _____				
8. _____				

9. _____	_____	_____	_____	_____	___ Problematic Hydrophytic Vegetation; (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
10. _____	_____	_____	_____	_____	
11. _____	_____	_____	_____	_____	
Woody Vine Stratum (Plot size: 10 M _____)				54	= Total Cover
1. _____	Rubus Armenia	10	Yes	Fac	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	_____	
% Bare Ground in Herb Stratum _____				10	
Remarks: forested depressional wetland swamp					

SOIL

Sampling Point: S1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features		Type ₁	Loc ₂	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-6"	10YR 3/2						Silty loam	
7-18"	10YR 3/1		10YR 4/6				Silty sandy 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.)						Indicators for Problematic Hydric Soils:		
<input type="checkbox"/> Histosol (A1)			Sandy Redox (S5)		2 cm Muck (A10)			
<input type="checkbox"/> Histic Epipedon (A2)			Stripped Matrix (S6)		Red Parent Material (TF2)			
<input type="checkbox"/> Black Histic (A3)			Loamy Mucky Mineral (F1) (except MLRA 1)		Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Hydrogen Sulfide (A4)			Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)			Depleted Matrix (F3)		3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<input type="checkbox"/> Thick Dark Surface (A12)			Redox Dark Surface (F6)					
<input checked="" type="checkbox"/> Sandy Mucky Mineral (S1)			Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			Redox Depressions (F8)					
Restrictive Layer (if present):								
Type: _____								
Depth (inches): _____						Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Low Chroma, oxidation along root zones, iron mottles –hydric soil (S1)								

HYDROLOGY

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

Remarks: Topo sloped unit/ .hydrology/ hydric soil indicators/ -hydrophilic vegetation
Remarks: Topo sloped unit/ .hydrology/ hydric soil indicators/ -hydrophilic vegetation
Scrub forested swamp

Field Data Sheet S2
WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: P 109094 /County:Skagit_Sampling Date: 6-13-23 Applicant /Owner:Cook State: WA _____ Sampling Point: S2
Investigator(s): Dennis Dickson Section, Township, Range: Sec. 14 Twp 35 R 06E Landform-(terrace): Local relief _____
Convex Slope (%): 0-8% Subregion (LRR): LRR-A Lat:48.533 Long: -122.031 Datum: _____ Soil Map Unit Name: Nargar loam (0-8% Slopes NWI classification: None)
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
Yes X No _____ Are Vegetation, Soil, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Hydric Soil Present? Yes _____ No <u>X</u>	Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks Upland pastured Doug Fir tree farm unit northeast & adjacent to Wetland A. Non-hydric Soils are moderately well drained on plateau.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Pseudotsuga menziesii</u>	<u>60</u>	<u>Yes</u>	<u>N/C</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</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>33%</u> (A/I)
4. _____	_____	_____	_____	Prevalence Index worksheet:
<u>60</u> = Total Cover				Total % Cover of: _____ Multiply by: _____
Sapling/Shrub Stratum (Plot size: _____)				OBL species _____ x 1 = <u>0</u>
1. _____	_____	_____	_____	FACW species _____ x 2 = <u>0</u>
2. _____	_____	_____	_____	FAC species _____ x 3 = <u>3</u>
3. _____	_____	_____	_____	FACU species _____ x 4 = <u>16</u>
4. _____	_____	_____	_____	UPL species _____ x 5 = _____
5. _____	_____	_____	_____	Column Totals: _____ (A) _____ (I)
= Total Cover				= _____
Herb Stratum (Plot size: <u>10M</u>)				Hydrophytic Vegetation Indicators:
1. *Domestic Grasses	<u>80</u>	<u>Yes</u>	<u>N/A</u>	<u>1</u> - Rapid Test for Hydrophytic Vegetation
2. <u>Cirsium arvense</u>	<u>3</u>	<u>no</u>	<u>Facu.</u>	<u>x</u> <u>2</u> - Dominance Test is >50%
3. <u>Taraxacum officinal</u>	<u>1</u>	<u>no</u>	<u>Facu</u>	<u>3</u> - Prevalence Index is ≤3.0 ₁
4. <u>Trifolium repens</u>	_____	<u>no</u>	<u>Facu</u>	<u>4</u> - Morphological Adaptations: (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____	<u>5</u> - Wetland Non-Vascular Plants:
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	

SOIL

Sampling

Point: S-2

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

Depth (Inches)	Matrix		Redox Features		Type ₁	Loc ₂	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-3"	10YR4/2						Silty Loam	
4-20"	10YR4/3						Silty gravelly 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)	Sandy Redox (S5)	Indicators for Problematic Hydric Soils: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ₃ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Histic Epipedon (A2)	Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks: High chroma, no oxidation along root zones

HYDROLOGY

Wetland Hydrology Indicators:

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

Field Observations:

Surface Water Present?	Yes _____ No X _____	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No X _____
Water Table Present?	Yes _____ No X _____	Depth (inches): _____	
Saturation Present?	Yes _____ No X _____	Depth (inches): Not to 15" _____	

(includes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks : Topographic raised pasture / tree unit. Plateau raised above wetland A depression

Attachment B

Cook forested swamp (western corner)

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 6-13-23

Rated by Dennis Dickson Trained by Ecology? Yes No Date of training 11-05, 11-06-18

HGM Class used for rating Depression 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 Google Earth/NWI/Soils/Skagit Co. IMap

Overall Wetland Category 3 (based on functions or special characteristics)

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

- | | | |
|---|-----------|-----|
| 1. Category of wetland based on FUNCTIONS | 9 = H,H,H | 6 = |
| M,M,M | | |
| _____ Category I - Total score = 23 – 27 | 8 = H,H,M | 5 = |
| H,L,L | | |
| _____ Category II - Total score = 20 – 22 | 7 = H,H,L | 5 = |
| M,M,L | | |
| <u>X</u> Category III - Total score = 16 – 19 | 7 = H,M,M | 4 = |
| M,L,L | | |
| _____ Category IV - Total score = 9 – 15 | 6 = H,M,L | 3 = |
| L,L,L | | |

FUNCTION	Improving Water Quality	Hydrologic	Habitat
			<i>Highlight in red the appropriate ratings</i>

<u>Site Potential</u>	<u>H M L</u>	<u>H M</u> <u> L</u>	<u>H M L</u>	
<u>Landscape Potential</u>	<u>H M L</u>	<u>H M</u> <u> L</u>	<u>H M L</u>	
<u>Value</u>	<u>H M L</u>	<u>H M</u> <u> L</u>	<u>H M L</u>	TOTAL
Score Based on Ratings	6	4	7	17

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

<u>website)</u>		
<u>Screen capture of list of TMDLs for WRIA in which unit is found (from web)</u>	<u>R 3.2, R 3.3</u>	

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetlands in Western Washington

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.*

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.*

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)

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

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

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

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

NO – go to 5

YES – The wetland class is **Slope**

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

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

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

The overbank flooding occurs at least once every 2 years.

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

1. 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

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

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.

<u>GM classes within the wetland unit being rated</u>	<u>HGM class to use in rating</u>
<u>Riverine</u>	<u>Riverine</u>

Depressional	Depressional
Lake Fringe	Lake Fringe
+ Riverine Stream Boundary of Division	Depressional
Flat + Lake Fringe	Depressional
Lake Fringe	Riverine
Flat Fringe Other Shrubwater Fringe	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.

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>	3
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 unobstructed, 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	
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	?
D 1.3. <u>Characteristics and distribution of persistent plants</u> (Emergent, Scrub-shrub, and/or Forested Cowardin classes):	5
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 > 1/3 of area points = 1	
Wetland has persistent, ungrazed plants < 1/3 of area points = 0	

D 1.4. Characteristics of seasonal ponding or inundation:		2
<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	
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	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	0
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?		0
Source _____	Yes = 1 No = 0	
Total for D 2	Add the points in the boxes above	0

Rating of Landscape Potential If score is: 3 or 4 = H 1 or 2 = M X 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	1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)	Yes = 2 No = 0	2
Total for D 3	Add the points in the boxes above	4

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

DEPRESSIONAL AND FLATS WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation		
D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland:		4
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	
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.		3
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	
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.		3
The area of the basin is less than 10 times the area of the unit	points = 5	
The area of the basin is 10 to 100 times the area of the unit	points = 3	
The area of the basin is more than 100 times the area of the unit	points = 0	
Entire wetland is in the Flats class	points = 5	
Total for D 4	Add the points in the boxes above	10

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

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

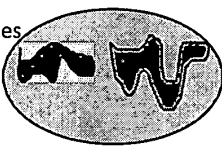
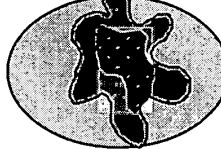
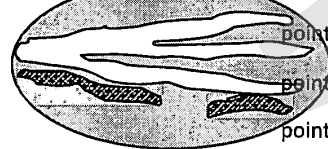
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M x0 = L Record the rating on the first page

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

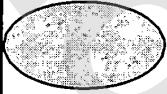
<p>D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.</p> <p>The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):</p> <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 <p>Flooding from groundwater is an issue in the sub-basin. points = 1</p> <p>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</p> <p>There are no problems with flooding downstream of the wetland. points = 0</p>	0
<p>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</p>	0
<p>Total for D 6 Add the points in the boxes above</p>	0

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

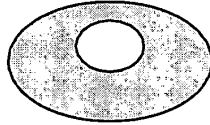
Record the rating on the first page

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?	
<p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i></p> <p>X <input type="checkbox"/> Aquatic bed 4 structures or more: points = 4</p> <p><input type="checkbox"/> Emergent 3 structures: points = 2</p> <p>X <input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1</p> <p>X <input type="checkbox"/> Forested (areas where trees have > 30% cover) 1 structure: points = 0</p> <p><i>If the unit has a Forested class, check if:</i></p> <p>X <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</p>	4
<p>H 1.2. Hydroperiods</p> <p>Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).</p> <p>X <input type="checkbox"/> Permanently flooded or inundated 4 or more types present: points = 3</p> <p>X <input type="checkbox"/> Seasonally flooded or inundated 3 types present: points = 2</p> <p>X <input type="checkbox"/> Occasionally flooded or inundated 2 types present: points = 1</p> <p><input type="checkbox"/> Saturated only 1 type present: points = 0</p> <p><input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland</p> <p><input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland</p> <p><input type="checkbox"/> Lake Fringe wetland 2 points</p> <p><input type="checkbox"/> Freshwater tidal wetland 2 points</p>	2
<p>H 1.3. Richness of plant species</p> <p>Count the number of plant species in the wetland that cover at least 10 ft².</p> <p><i>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i></p> <p>If you counted: > 19 species points = 2</p> <p>5 - 19 species points = 1</p> <p>< 5 species points = 0</p> <div style="display: flex; justify-content: space-around; align-items: center;">    </div>	2
H 1.4. Interspersion of habitats	3

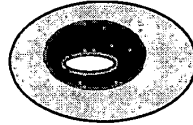
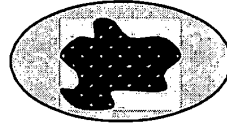
Decide from the diagrams below whether interspersions among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



None = 0 points



Low = 1 point



Moderate = 2 points

All three diagrams
in this row

are **HIGH** = 3points

<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>X <input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p>X <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)</p> <p>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>X <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>X <input 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	15

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

Record the rating on the first page

<p>H 2.0: Does the landscape have the potential to support the habitat functions of the site?</p>		
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p>Calculate: 2% undisturbed habitat <u> </u> + [(% moderate and low intensity land uses)/2] <u>43</u> = 45 %</p> <p>If total accessible habitat is:</p> <p><u> </u> > 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>		2
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: 14% undisturbed habitat <u> </u> + [(% moderate and low intensity land uses)/2] <u>43</u> = <u> </u> %</p> <p>Undisturbed habitat > 50% of Polygon 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>		2
<p>H 2.3: Land use intensity in 1 km Polygon: If</p> <p><u> </u> > 50% of 1 km Polygon is high intensity land use points = (-2)</p> <p><u> </u> ≤ 50% of 1 km Polygon is high intensity points = 0</p>		-2
Total for H 2	Add the points in the boxes above	2

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>	0
Site meets ANY of the following criteria:	points = 2
<ul style="list-style-type: none"> — 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 X 1 = M 0 = L
(next page)

Record the rating on the first page

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

<p>Wetland Type</p> <p><i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i></p>	<p>Category</p>
<p>SC 1.0. Estuarine wetlands</p> <p>Does the wetland meet the following criteria for Estuarine wetlands? <u>The dominant water regime is tidal, Vegetated, and With a salinity greater than 0.5 ppt</u> 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?</p> <p style="text-align: right;">Yes = Category I No - Go to SC 1.2</p>	<p>Cat. I</p>
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? <u>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)</u> <u>At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un- mowed grassland.</u> <u>The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</u> Yes = Category I No = Category II</p>	<p>Cat</p> <p style="text-align: center;">-</p> <p style="text-align: center;">I</p> <p style="text-align: center;">C</p> <p style="text-align: center;">a</p> <p style="text-align: center;">t</p> <p style="text-align: center;">-</p> <p style="text-align: center;">I</p> <p style="text-align: center;">I</p>
<p>SC 2.0. Wetlands of High Conservation Value (WHCV)</p> <p>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</p> <p>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</p> <p>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</p>	<p>Cat. I</p>

<p style="text-align: center;">Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV</p> <p>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>	
<p>SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <u>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</u></p> <p>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</p> <p>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</p> <p>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.</p> <p>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>	<p>Cat. I</p>

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <p>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.</p> <p>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> <p style="text-align: right;">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> <p>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</p> <p>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> <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> <p>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).</p> <p>At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un- mowed grassland.</p> <p>The wetland is larger than $\frac{1}{10}$ ac (4350 ft²)</p> <p style="text-align: right;">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> <p>Long Beach Peninsula: Lands west of SR 103</p> <p>Grayland-Westport: Lands west of SR 105</p> <p>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</p> <p style="text-align: right;">Yes – Go to SC 6.1 No = not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV</p>	<p>Cat I</p> <p>Cat.</p> <p>II</p> <p>Cat.</p> <p>III</p> <p>Cat. IV</p>

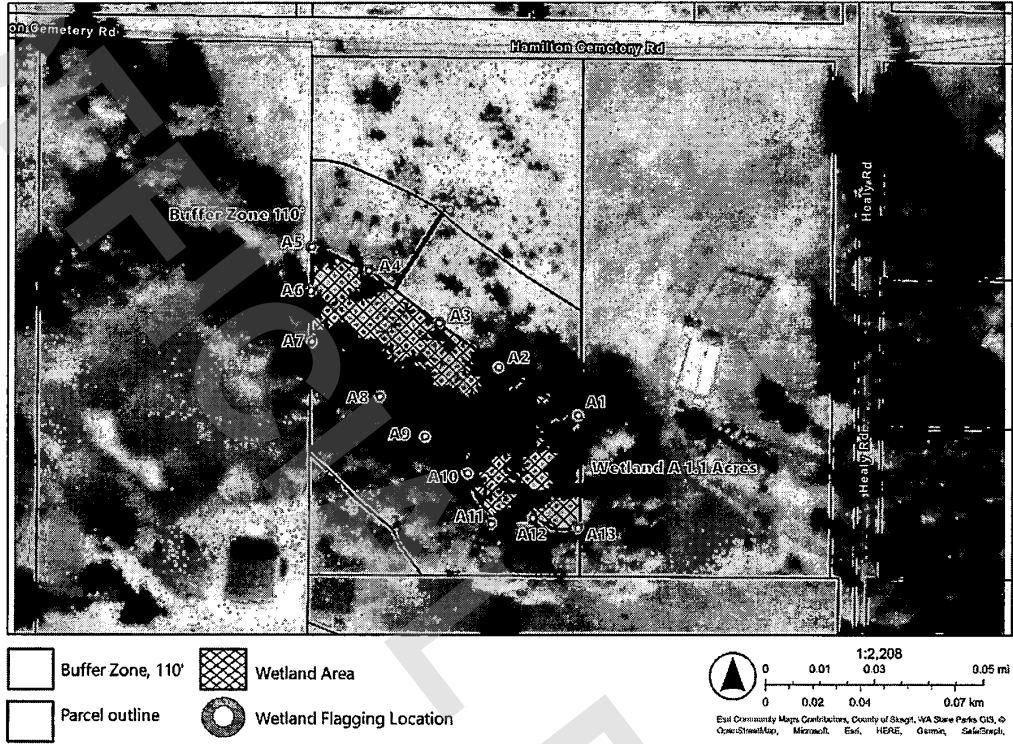
Category of wetland based on Special Characteristics

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

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Attachment C

Cook, Franklin 32966 Hamilton Cemetery Rd, Skagit County WA



Attachment D References

- Cowardin L., V. Carter, F. Golet, E. LaRoe, 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service. Environmental Laboratory. 1987 Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Mississippi, 100pp. + appendices.
- Klungland M.W. and M. McArthur. 1989 Soil Survey of Skagit County Area, WA. U.S.D.A. Soil Conservation Service, 372pp. + maps.
- Lichvar, Robert W., NWPL-National Wetland Plant List, State of Washington 2016 Wetland Plant List: USACE. Online: <http://wetland-plants.usace.army.mil/> printed May 2021.
- Munsell Color. 2009 revised (published 2019). Munsell Soil Color Charts. Munsell Color, Grand Rapids, MI.
- Pojar J. and A. MacKinnon, 1994 Plants of the Pacific Northwest Coast Washington, Oregon, British Columbia & Alaska. Lone Pine Publishing, Vancouver B.C., 528pp.
- U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region, ed. J.S. Wakely, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-13. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- National Wetland Inventory Online Mapper. U.S. Fish and Wildlife Service (Accessed November 2021)
- U.S. Soil Conservation Service. 1998 Skagit County Area Hydric Soils List. U.S. Department of Agriculture: nrcs.usda.gov. (Accessed November 2021)
- U.S. Department of Agriculture: Soil Conservation Service: Online Soil Survey (Accessed May 2021)
- US Department of Agriculture (USDA): NRCS, Field Indicators of Hydric Soils in the United States, Version 8.2, 2018.
- U.S. Geologic Survey, Open file report 2000-5, Geologic map of the Bellingham Quadrangle, Skagit County, Washington. Lapen, 2000.