



**CRITICAL AREA REPORT SUPPLEMENT  
AND  
BUFFER AVERAGING PLAN**

**FOR**

**MADRONA RIDGE**

*Wetland Resources, Inc. Project #21224*

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## 1.0 INTRODUCTION

*Wetland Resources, Inc.* (WRI) completed a site visit on June 11<sup>th</sup>, 2021, with Rebecca Rothwell of the Washington State Department of Ecology (Ecology) on the subject property location on tax parcels 001091002, 001092005, and 001092006, in the City of Port Townsend, WA. The purpose of this site visit was to familiarize WRI with the previously delineated wetland boundaries, assist Ecology staff, and verify wetland conditions.

This document is not intended to be a stand-alone critical area report, rather it is a supplement to the wetland delineations and reporting prepared by others. More specifically this report provides supplemental information to the Critical Area Determination Report prepared by Loggy Soil and Wetland Consulting for Montebanc Management, May 2021 (Loggy CAR). Included are discussions and ratings for three delineated but previously unrated off-site wetlands and a buffer averaging plan.



**Figure 1** - Aerial view of the subject property.





## **1.1 SITE DESCRIPTION**

Access to the subject property is via the existing partially improved right-of-way of Rainier Street, NE 143<sup>rd</sup> Pl. Further internal access to the site can be gained via a network of formal and informal pedestrian trails. An existing single-family residence and associated improvements are located in the northwest portion of the site. The remainder is undeveloped. Surrounding land use is comprised mostly of undeveloped parcels, but with a municipal water tower facility located just off-site to the northwest. Topography undulates but is generally a slight to moderate east aspect on the eastern half of the property and a slight to moderate west aspect on the western half. On-site vegetation is typically a mixed stand mature forest and generally, consists of: Douglas fir, red alder Pacific madrone, and big-leaf map in the overstory. The understory generally consists of: snowberry, Nootka rose, salal, Oregon grape, ocean spray, and swordfern.

Loggy Soil and Wetland Consulting identified four wetlands (A1, A2, A3, C, and D). The delineation methodology, results, and regulatory characteristics associated with these features are discussed within the Loggy CAR (attached). In addition, three other wetlands were observed by WRI and Ecology during the June site visit. Flags were observed for these features, and they have been rated as required by the City of Port Townsend.

## **2.0 WETLAND DETERMINATION**

Wetlands E (off-site), F, and G (off-site) were not discussed or rated within the Loggy report, therefore are discussed below. These wetlands were accurately flagged by others prior to the June 2021 site visit with Ecology and the boundaries have been surveyed. General data was collected during the site visit to provide sufficient information for an accurate rating.

## **2.1 REVIEW OF EXISTING INFORMATION**

Prior to conducting the site investigation, public resource information was reviewed to gather background information on the subject property and the surrounding area regarding wetlands, streams, and other critical areas. These sources included the USFWS National Wetlands Inventory (NWI), USDA/NRCS Web Soil Survey, and WDFW Priority Habitat and Species (PHS).

- The National Wetlands Inventory does not depict any wetlands or streams on or in the immediate vicinity of the subject property.
- NRCS maps soils in the vicinity of the subject property as Clallam gravelly sandy loam, 0 to 15 percent slopes.
- WDFW PHS does not depict any priority habitats on or in the immediate vicinity of the site.

## **2.2 BOUNDARY DETERMINATION FINDINGS**

### **2.2.1 Wetland E (off-site)**

HGM Class: Depressional

Cowardin Classification: Palustrine, Forested, seasonally flooded

DOE Rating: Category III

City of Port Townsend Standard Buffer: 150 feet

Wetland E is located approximately 46 feet off-site to the east of the subject property. This depressional is approximately 8,425 square feet in size and appears to be isolated. The southern and western boundary of Wetland E is clearly defined by existing pedestrian trails. Flags from a previous delineation were observed during the site visit. Based on on-site observations, vegetation in the wetland include: black cottonwood (*Populus balsamifera* (FACW), Pacific willow (*Salix lucida*, FACW), red-stem dogwood (*Cornus sericea*; FACW), and slough sedge (*Carex obnupta*, OBL), From 0 to 10 inches, soils underlying the area mapped as wetland are generally a very dark gray (2.5Y 3/1) and textured as silt loam. Soils from 10 to greater than 18 inches are generally a dark grayish brown (2.5Y 4/2), silty clay loam, and contained approximately 5 percent redox concentrations with 10YR 4/6 color. Soils were moist at the surface. Field observations indicate that the area mapped as wetland is ponded or saturated long enough during the growing season to develop anaerobic conditions in the upper part of the soils.

Wetland E received a total score of 17 on the 2014 DOE *Wetland Rating Form for Western Washington* with a score for habitat functions of 6 (moderate). In the City of Port Townsend, wetlands that receive scores between 16 and 19 points are classified as Category III wetlands. Category III wetlands with moderate habitat scores receive standard buffers of 150 feet.

### **2.2.2 Wetland F**

HGM Class: Depressional

Cowardin Classification: Palustrine, Forested, seasonally flooded

DOE Rating: Category III

City of Port Townsend Standard Buffer: 150 feet

Wetland F is located just on-site and on the eastern part of Tract E of the proposed plat. This small depressional wetland is approximately 2,112 square feet in size and appears to be isolated. The eastern boundary of Wetland F is bordered by existing pedestrian trails. Flags from a previous delineation were also observed during the site visit. Based on on-site observations, vegetation in the wetland include: black cottonwood (*Populus balsamifera* (FACW), red-stem dogwood (*Cornus sericea*; FACW), and slough sedge (*Carex obnupta*, OBL), From 0 to 8 inches, soils underlying the area mapped as wetland are generally a very dark gray (2.5Y 3/1) and textured as silt loam. Soils from 8 to greater than 18 inches are generally a dark grayish brown (2.5Y 4/2), silty clay loam, and contained approximately 3 percent redox concentrations with 10YR 4/6 color. Soils were moist at the surface. Field observations indicate that the area mapped as wetland is ponded or saturated long enough during the growing season to develop anaerobic conditions in the upper part of the soils.

Wetland F received a total score of 16 on the 2014 DOE *Wetland Rating Form for Western Washington* with a score for habitat functions of 6 (moderate). In the City of Port Townsend, wetlands that receive scores between 16 and 19 points are classified as Category III wetlands. Category III wetlands with moderate habitat scores receive standard buffers of 150 feet.

### **2.2.3 Wetland G**

HGM Class: Depressional

Cowardin Classification: Palustrine, Forested, seasonally flooded

DOE Rating: Category III

City of Port Townsend Standard Buffer: 150 feet

Wetland G is located off-site to the northeast and across the partially improved right of way of Rainier Street. This large depressional wetland is approximately 47,357 square feet in size and has no observable outlet. The boundary of Wetland G is clearly defined by the sharp transitions in vegetation types. Based on on-site observations, vegetation in the wetland include: black cottonwood (*Populus balsamifera*, FACW), pacific crabapple (*Malus fusca*, FACW), Pacific willow (*Salix lucida*, FACW) red alder (*Alnus rubra*, FAC), red-stem dogwood (*Cornus sericea*, FACW), slough sedge (*Carex obnupta*, OBL), and skunk cabbage (*Lysichiton americanus*, OBL). From 0 to 18 inches, soils underlying the area mapped as wetland are generally black (2.5Y 2.5/1) and textured as silt loam. These soils were saturated to the surface at the time of investigation. Field observations indicate that the area mapped as wetland is ponded or saturated long enough during the growing season to develop anaerobic conditions in the upper part of the soils.

Wetland G received a total score of 18 on the 2014 DOE *Wetland Rating Form for Western Washington* with a score for habitat functions of 7(moderate). In the City of Port Townsend, wetlands that receive scores between 16 and 19 points are classified as Category III wetlands. Category III wetlands with moderate habitat scores receive standard buffers of 150 feet.

## **3.0 PROJECT DESCRIPTION**

The applicant proposes to develop the subject property into 167 lots with associated infrastructure improvements. As part of this development activity, buffer averaging is proposed to accommodate stormwater detention facilities and a small number of lots. In addition, pedestrian trails will be placed within portions of the open space tracts including the buffer. This will be designed in an attempt to avoid impacts to trees and other sensitive on-site features. No other impacts or modifications are proposed to critical areas or their associated buffers.

### **3.1 BUFFER WIDTH AVERAGING**

The applicant is proposing to utilize buffer width averaging as identified in PTMC 19.05.110(G)(6). Width averaging shall be allowed only where the applicant demonstrates all of the following (compliance discussion in italics):

- a. That width averaging will not adversely impact the functions and values; and

The proposed buffer averaging areas are located on the outer portion of the standard buffer and will be the minimum necessary to accommodate the proposed activity. This will involve averaging the 150-foot buffer to a minimum width of 113 feet. The areas of proposed averaging are comprised of similar forest areas providing consistent functions and values. Given the minimum intrusion into the buffer, similar vegetation composition of the averaging areas, and minimum 1:1 buffer replacement, there will be no impacts to the functions and values of the wetlands or buffers.

- b. That the total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging;

The buffer averaging has been designed to provide a 1:1 buffer averaging ratio (reduction:addition) on a per wetland complex basis. Wetland complex is defined as areas where wetland buffers overlap such that they do not function independently. Figure 2 provides a detailed breakdown of the buffer averaging proposal for each wetland.

- c. In no instance shall the buffer width be reduced by more than 50 percent of the standard buffer or be less than 25 feet.

The maximum proposed buffer reduction for any of the wetlands is 25% associated with Wetland C3 where the minimum proposed width is 113 feet.

Wetland Complex	Buffer Averaging		
	Buffer Reduction (SF)	Buffer Addition (SF)	Net Gain (SF)
A1, A2, A3	8,288	8,288	0
C3	11,875	11,875	0
D, E, F	7,886	7,886	0
<b>Total Net Gain</b>			<b>2,058</b>

**Figure 2** - Madrona Ridge Buffer Averaging

### 3.2 STORMWATER DISCHARGES

All four stormwater ponds will have discharge points extending into the required buffers for adjacent wetland. PTMC 19.05.110(D)(6) allows stormwater management facilities to be located within the buffers provided the following requirements are met (compliance discussion in *italics*):

- a. Category I, II, III, and IV wetlands and buffers may be used for regional retention/detention facilities only when all applicable requirements of the EDS manual are met, the use will not adversely affect the rating or the factors used in rating the wetland, the proposal is in compliance with the management guidelines set forth in the stormwater management manual, and there are no significant adverse impacts to wetland resources.

*N/A - A regional Stormwater retention/detention facility is not proposed within any of the on-site wetlands or buffers*

- b. New developments cannot use existing wetlands for surface water discharge unless the wetlands are protected by upstream treatment facilities that demonstrate runoff, erosion, water quality, and sedimentation control.

*N/A – The Applicant is not proposing utilizing the existing wetlands for a direct surface water discharge.*

c. New surface water discharges to wetlands from detention facilities, presettlement ponds, or other surface water management structures may be allowed; if the discharge does not increase the rate of flow nor decrease the water quality of the wetland.

*N/A – The Applicant is not proposing utilizing the existing wetlands for a direct surface water discharge.*

d. Wetlands shall not be used for stormwater management purposes only for individual properties. Wetlands used for retention/detention facilities must serve as neighborhood or regional facilities.

*N/A – The Applicant is not proposing utilizing the existing wetlands for stormwater management purposes*

e. Use of wetland buffers for stormwater management facilities such as retention/detention facilities or energy dissipaters may be allowed only if the applicant demonstrates:

i. No practicable alternative exists; and

*The Preliminary stormwater site design evaluated the preferred alternative of infiltrating stormwater onsite. Geotechnical soils analysis of the site concluded that infiltration is infeasible due to high silt and fines content of the soils and seasonally high groundwater in some locations, particularly in the areas that site stormwater drains to. Consequently, stormwater control for the project site requires use of stormwater detention facilities rather than the preferred infiltration system. Due to the undulating topography of the site, four stormwater facilities are required to collect and detain water from each of the site's naturally occurring basins and, by necessity, are located adjacent to the onsite wetlands.*

ii. Facilities are limited to dispersion outfalls and bioswales located, to the extent practicable, in the outer 25 percent of wetland buffers; and

*Preliminary locations of stormwater discharge from these detention facilities are dictated by the elevation at which they are released. The natural topography of the site and the corresponding elevations of the bottom of the stormwater detention facilities drives the elevation, and thus location, of the discharges. The design elevations of the bottom of the preliminary stormwater facilities have been set as high as practicable in order to maximize distance between the discharges and the wetland feature while still meeting the City's stormwater management requirements for detention volume and minimum pipe slopes. Opportunity may exist during detailed engineering site design to further minimize the size of the outfall structures and/or raise the elevations and should be evaluated during that phase of project design. Therefore, given the site topography and the elevations of the proposed stormwater detention pond discharging to the outer 25 percent of the wetland buffer is not practicable.*

iii. The functions of the buffer or wetland are not adversely impacted.



*The proposed stormwater facilities and associated discharges are designed to maintain the hydroperiod of the wetland and therefore will not impact the overall hydrology. Buffer impacts will be addressed by a combination of additional buffer for both permanent and temporary buffer impacts. By maintaining the hydrology to the wetlands and provided mitigation for the minimal buffer impacts, the functions of the buffer and wetland will not be adversely impacted.*

As part of the proposed stormwater discharges, a total of 315 square feet of buffer will be permanently impacted and 3,287 square feet of buffer will be temporarily impacted. The total of all buffer impacts associated with the stormwater discharge is 3,602 square feet. As restoration for temporary impacts, the temporary impact areas will be seeded with the recommended native shrub seed mixture. In addition a total of 5,546 square feet of additional buffer will be provided for both temporary and permanent impacts resulting in a surplus of 1,944 square feet of buffer and a 1.54:1 additional buffer to impact ratio.

**Native Shrub Seed Mixture\***

<b>Common Name</b>	<b>Latin Name</b>	<b>% of mix</b>
Woods rose	<i>Rosa woodsii</i>	20
Ocean spray	<i>Holodiscus discolor</i>	20
Red elderberry	<i>Sambucus racemosa</i>	20
Oregon grape	<i>Mahonia nervosa</i>	20
Douglas spirea	<i>Spiraea douglasii</i>	20

\*Seed mix available at direct seed sales - <http://www.directseedsales.com/region1.html>

**3.3 WILDLIFE ASSESSMENT**

The on-site wetlands and surrounding area provide features that are beneficial to wildlife, including resources such as food, water, thermal cover, and hiding areas in close proximity. The subject property is surrounded by a combination of native vegetation, undeveloped parcels, and water utility. Both upland and wetland areas have multi-strata forested structures, with special habitat features such as forested open space and snags/logs. Given the level of habitat complexity, the subject site provides a moderate movement corridor and a variety of niches available to local wildlife.

No mammalian species were detected during our on-site investigations in 2021, though several species are expected to occur within the area, including: black-tail deer (*Odocoileus columbianus*), gray squirrel (*Sciurus* spp.), Douglas squirrel (*Tamiasciurus douglasii*), coyote (*Canis latrans*), and raccoon (*Procyon lotor*). Avian activity was not strongly detected, although birdsong was heard during the site investigation. Given the habitat available in the surrounding wetland complex, it is expected that the following avian species use the area: American Crow (*Corvus brachyrhynchos*), American Robin (*Turdus migratorius*), Steller’s Jay (*Cyanocitta stelleri*), Black-capped Chickadee (*Poecile atricapilla*), Golden-crowned Kinglet (*Regulus satrapa*), Ruby-crowned Kinglet (*Regulus calendula*), Pacific Wren (*Troglodytes pacificus*), Winter Wren (*Troglodytes troglodytes*), Dark-eyed Junco (*Junco hyemalis*), Song Sparrow (*Melospiza melodia*), House Finch (*Carpodacus mexicanus*), Bushtit (*Psaltiriparus minimus*),

European Starling (*Sturnus vulgaris*), Northern Flicker (*Colaptes auratus*), and Spotted Towhee (*Pipilo maculatus*). Amphibian species that may utilize the project vicinity include pacific tree frog (*Hyla regilla*), northwestern salamander (*Ambystoma gracile*), and rough-skinned newt (*Taricha granulosa*).

#### **4.0 CONCLUSION**

This proposed development activity has been specifically designed to avoid direct impacts to on-site wetlands. Minor intrusions into the buffer using buffer averaging are proposed that meet the requirements of PTMC 19.05.110(G)(6) and result in a net increase in overall on-site buffer area of 2,058 square feet of buffer. Additional minor intrusions into the buffer from stormwater discharges will also occur. These impacts will be fully mitigated through restoration of the temporary impacts associated with the pipes and additional buffer associated with the level spreader trenches. Overall, with the minor impacts and associated mitigation, the project will comply with the City of Port Townsend's requirement of achieving no net loss to wetland functions and values.

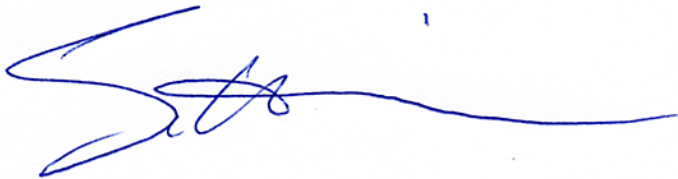
#### **5.0 USE OF THIS REPORT**

This Critical Area Report Supplement and Buffer Averaging Plan is supplied to MontBanc Management LLC as a means of determining on-site critical area conditions. This report is based largely on readily observable conditions and, to a lesser extent, on readily ascertainable conditions. No attempt has been made to determine hidden or concealed conditions.

The laws applicable to wetlands are subject to varying interpretations and may be changed at any time by the courts or legislative bodies. This report is intended to provide information deemed relevant in the applicant's attempt to comply with the laws now in effect.

The work for this report has conformed to the standard of care employed by wetland ecologists. No other representation or warranty is made concerning the work or this report and any implied representation or warranty is disclaimed.

*Wetland Resources, Inc.*



Scott Brainard  
Principal Ecologist, PWS

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**ATTACHMENT A**  
DEPARTMENT OF ECOLOGY WETLAND RATING FORMS

Wetland name or number E

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): Madrona Ridge Wetland E Date of site visit: 6/11/21

Rated by SB Trained by Ecology?  Yes  No Date of training 10/16

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 \_\_\_\_\_

**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	
<i>Circle the appropriate ratings</i>				
Site Potential	H <input type="checkbox"/> M <input checked="" type="checkbox"/> L <input type="checkbox"/>	H <input type="checkbox"/> M <input checked="" type="checkbox"/> L <input type="checkbox"/>	H <input type="checkbox"/> M <input checked="" type="checkbox"/> L <input type="checkbox"/>	
Landscape Potential	H <input type="checkbox"/> M <input type="checkbox"/> L <input checked="" type="checkbox"/>	H <input type="checkbox"/> M <input type="checkbox"/> L <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> H <input type="checkbox"/> M <input type="checkbox"/> L	
Value	<input checked="" type="checkbox"/> H <input type="checkbox"/> M <input type="checkbox"/> L	H <input type="checkbox"/> M <input type="checkbox"/> L <input checked="" type="checkbox"/>	H <input type="checkbox"/> M <input checked="" type="checkbox"/> L <input type="checkbox"/>	<b>TOTAL</b>
<b>Score Based on Ratings</b>	<b>6</b>	<b>4</b>	<b>7</b>	<b>17</b>

**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	<input checked="" type="checkbox"/>



Wetland name or number E

## Maps and figures required to answer questions correctly for Western Washington

### Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	1
Hydroperiods	D 1.4, H 1.2	1
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	1
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	1
Map of the contributing basin	D 4.3, D 5.3	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	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	4

### 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 <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> 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	

Wetland name or number E

## 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 E**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	<input type="checkbox"/>	Riverine
Slope + Depressional	<input type="checkbox"/>	Depressional
Slope + Lake Fringe	<input type="checkbox"/>	Lake Fringe
Depressional + Riverine along stream within boundary of depression	<input type="checkbox"/>	Depressional
Depressional + Lake Fringe	<input type="checkbox"/>	Depressional
Riverine + Lake Fringe	<input type="checkbox"/>	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	<input type="checkbox"/>	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 E

<b>DEPRESSIONAL AND FLATS WETLANDS</b>		
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>		
<b>D 1.0. Does the site have the potential to improve water quality?</b>		
D 1.1. <u>Characteristics of surface water outflows from the wetland:</u>		
<input checked="" type="checkbox"/> Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3		<b>3</b>
<input type="checkbox"/> Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2		
<input type="checkbox"/> Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1		
<input type="checkbox"/> 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 <input type="checkbox"/> No = 0		<b>0</b>
D 1.3. <u>Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):</u>		
<input type="checkbox"/> Wetland has persistent, ungrazed, plants > 95% of area points = 5		<b>3</b>
<input checked="" type="checkbox"/> Wetland has persistent, ungrazed, plants > ½ of area points = 3		
<input type="checkbox"/> Wetland has persistent, ungrazed plants > 1/10 of area points = 1		
<input type="checkbox"/> Wetland has persistent, ungrazed plants < 1/10 of area points = 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>		
<input type="checkbox"/> Area seasonally ponded is > ½ total area of wetland points = 4		<b>2</b>
<input checked="" type="checkbox"/> Area seasonally ponded is > ¼ total area of wetland points = 2		
<input type="checkbox"/> Area seasonally ponded is < ¼ total area of wetland points = 0		
<b>Total for D 1</b>	Add the points in the boxes above	<b>8</b>

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

<b>D 2.0. Does the landscape have the potential to support the water quality function of the site?</b>		
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 <input type="checkbox"/> No = 0	<b>0</b>
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 <input type="checkbox"/> No = 0	<b>0</b>
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 <input type="checkbox"/> No = 0	<b>0</b>
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 <input type="checkbox"/> No = 0	<b>0</b>
<b>Total for D 2</b>	Add the points in the boxes above	<b>0</b>

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

<b>D 3.0. Is the water quality improvement provided by the site valuable to society?</b>		
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 <input type="checkbox"/> No = 0	<b>0</b>
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	<input type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	<b>1</b>
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)?	<input type="checkbox"/> Yes = 2 <input type="checkbox"/> No = 0	<b>2</b>
<b>Total for D 3</b>	Add the points in the boxes above	<b>3</b>

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

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Wetland name or number E**DEPRESSIONAL AND FLATS WETLANDS****Hydrologic Functions** - Indicators that the site functions to reduce flooding and stream degradation

<b>D 4.0. Does the site have the potential to reduce flooding and erosion?</b>		
<b>D 4.1. Characteristics of surface water outflows from the wetland:</b>		
<input checked="" type="checkbox"/> Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	<b>4</b>
<input type="checkbox"/> Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2	
<input type="checkbox"/> Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1	
<input type="checkbox"/> Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0	
<b>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.</b>		
<input type="checkbox"/> Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	<b>0</b>
<input type="checkbox"/> Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
<input type="checkbox"/> Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
<input type="checkbox"/> The wetland is a "headwater" wetland	points = 3	
<input type="checkbox"/> Wetland is flat but has small depressions on the surface that trap water	points = 1	
<input checked="" type="checkbox"/> Marks of ponding less than 0.5 ft (6 in)	points = 0	
<b>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.</b>		
<input type="checkbox"/> The area of the basin is less than 10 times the area of the unit	points = 5	<b>3</b>
<input checked="" type="checkbox"/> The area of the basin is 10 to 100 times the area of the unit	points = 3	
<input type="checkbox"/> The area of the basin is more than 100 times the area of the unit	points = 0	
<input type="checkbox"/> Entire wetland is in the Flats class	points = 5	
<b>Total for D 4</b>	<b>Add the points in the boxes above</b>	<b>7</b>

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

Record the rating on the first page

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

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

Record the rating on the first page

<b>D 6.0. Are the hydrologic functions provided by the site valuable to society?</b>		
<b>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.</b> 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):		
<input type="checkbox"/> • Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	<b>0</b>
<input type="checkbox"/> • Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
<input type="checkbox"/> Flooding from groundwater is an issue in the sub-basin.	points = 1	
<input type="checkbox"/> 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	
<input checked="" type="checkbox"/> There are no problems with flooding downstream of the wetland.	points = 0	
<b>D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</b>		
	Yes = 2 <input type="checkbox"/> No = <input type="text" value="0"/>	<b>0</b>
<b>Total for D 6</b>	<b>Add the points in the boxes above</b>	<b>0</b>

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

Record the rating on the first page



Wetland name or number E**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   | <b>1</b> |
| <input type="checkbox"/> Emergent  | 3 structures: points = 2   |          |
| <input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover)   | <span style="border: 1px solid black; padding: 2px;">2 structures: points = 1</span> |          |
| <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 checked="" 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   | <b>1</b> |
| <input checked="" type="checkbox"/> Seasonally flooded or inundated                          | 3 types present: points = 2   |          |
| <input type="checkbox"/> Occasionally flooded or inundated                                   | <span style="border: 1px solid black; padding: 2px;">2 types present: points = 1</span> |          |
| <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"/> <b>Lake Fringe wetland</b>  | <b>2 points</b>   |          |
| <input type="checkbox"/> <b>Freshwater tidal wetland</b>                                     | <b>2 points</b>   |          |

H 1.3. Richness of plant species

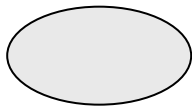
Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>.

*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*

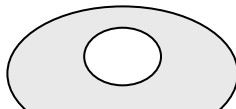
- |  |  |          |
|--|--|----------|
| If you counted: > 19 species   | points = 2   | <b>1</b> |
| <span style="border: 1px solid black; padding: 2px;">5 - 19 species</span> | <span style="border: 1px solid black; padding: 2px;">points = 1</span> |          |
| < 5 species  | points = 0   |          |

H 1.4. Interspersion of habitats

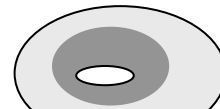
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



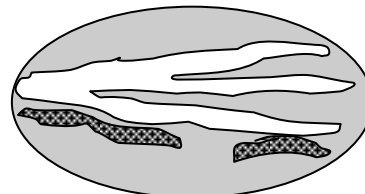
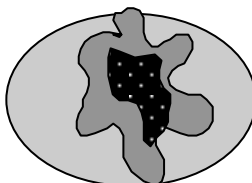
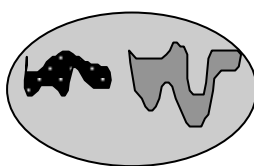
None = 0 points

Low = 1 point

Moderate = 2 points



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

**1**

Wetland name or number E

<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 (&gt; 4 in diameter and 6 ft long).</p> <p><input checked="" type="checkbox"/> Standing snags (dbh &gt; 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> 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 (&gt; 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>		<b>3</b>
Total for H 1	Add the points in the boxes above	<b>7</b>

**Rating of Site Potential** If score is: 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: % undisturbed habitat <u>35</u> + [(% moderate and low intensity land uses)/2] <u>3</u> = <u>38</u> %</p> <p>If total accessible habitat is:</p> <p><input checked="" type="checkbox"/> &gt; 1/3 (33.3%) of 1 km Polygon points = 3</p> <p><input type="checkbox"/> 20-33% of 1 km Polygon points = 2</p> <p><input type="checkbox"/> 10-19% of 1 km Polygon points = 1</p> <p><input type="checkbox"/> &lt; 10% of 1 km Polygon points = 0</p>		<b>3</b>
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % undisturbed habitat <u>43</u> + [(% moderate and low intensity land uses)/2] <u>6</u> = <u>49</u> %</p> <p><input type="checkbox"/> Undisturbed habitat &gt; 50% of Polygon points = 3</p> <p><input type="checkbox"/> Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p><input checked="" type="checkbox"/> Undisturbed habitat 10-50% and &gt; 3 patches points = 1</p> <p><input type="checkbox"/> Undisturbed habitat &lt; 10% of 1 km Polygon points = 0</p>		<b>1</b>
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p><input type="checkbox"/> &gt; 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p><input checked="" type="checkbox"/> ≤ 50% of 1 km Polygon is high intensity points = 0</p>		<b>0</b>
Total for H 2	Add the points in the boxes above	<b>4</b>

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

Record the rating on the first page

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>		
<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><input checked="" type="checkbox"/> Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1</p> <p><input type="checkbox"/> Site does not meet any of the criteria above points = 0</p>		<b>1</b>

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

Record the rating on the first page

Wetland name or number E

## 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.

Wetland name or number E**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>	
<b>SC 1.0. Estuarine wetlands</b> Does the wetland meet the following criteria for Estuarine wetlands? <input type="checkbox"/> The dominant water regime is tidal, <input type="checkbox"/> Vegetated, and <input type="checkbox"/> With a salinity greater than 0.5 ppt Yes – Go to <b>SC 1.1</b> <b>No = Not an estuarine wetland</b>	
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 = <b>Category I</b> No - Go to <b>SC 1.2</b>	<b>Cat. I</b>
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? <input type="checkbox"/> 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) <input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. <input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = <b>Category I</b> No = <b>Category II</b>	<b>Cat. I</b>  <b>Cat. II</b>
<b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b> 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 <b>SC 2.2</b> <b>No – Go to SC 2.3</b> SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = <b>Category I</b> <b>No = Not a WHCV</b> SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a> Yes – <b>Contact WNHP/WDNR and go to SC 2.4</b> No = <b>Not a WHCV</b> 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 = <b>Category I</b> No = <b>Not a WHCV</b>	<b>Cat. I</b>
<b>SC 3.0. Bogs</b> 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 <b>SC 3.3</b> <b>No – Go to SC 3.2</b> 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 <b>SC 3.3</b> <b>No = Is not a bog</b> 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 = <b>Is a Category I bog</b> No – Go to <b>SC 3.4</b> <b>NOTE:</b> 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 = <b>Is a Category I bog</b> No = <b>Is not a bog</b>	<b>Cat. I</b>

Wetland name or number E

<p><b>SC 4.0. Forested Wetlands</b></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? <b><i>If you answer YES you will still need to rate the wetland based on its functions.</i></b></p> <p><input type="checkbox"/> <b>Old-growth forests</b> (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><input type="checkbox"/> <b>Mature forests</b> (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 = <b>Category I</b>    <b>No = Not a forested wetland for this section</b></p>	<b>Cat. I</b>
<p><b>SC 5.0. Wetlands in Coastal Lagoons</b></p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <p><input type="checkbox"/> 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><input type="checkbox"/> The lagoon in which the wetland is located contains ponded water that is saline or brackish (&gt; 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 <b>SC 5.1</b>    <b>No = Not a wetland in a coastal lagoon</b></p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <p><input type="checkbox"/> 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><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.</p> <p><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft<sup>2</sup>)</p> <p style="text-align: right;">Yes = <b>Category I</b>    No = <b>Category II</b></p>	<b>Cat. I</b>  <b>Cat. II</b>
<p><b>SC 6.0. Interdunal Wetlands</b></p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <b><i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></b></p> <p>In practical terms that means the following geographic areas:</p> <p><input type="checkbox"/> Long Beach Peninsula: Lands west of SR 103</p> <p><input type="checkbox"/> Grayland-Westport: Lands west of SR 105</p> <p><input type="checkbox"/> Ocean Shores-Copalis: Lands west of SR 115 and SR 109</p> <p style="text-align: right;">Yes – Go to <b>SC 6.1</b>    <b>No = not an interdunal wetland for rating</b></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 = <b>Category I</b>    No – Go to <b>SC 6.2</b></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 = <b>Category II</b>    No – Go to <b>SC 6.3</b></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 = <b>Category III</b>    No = <b>Category IV</b></p>	<b>Cat I</b>  <b>Cat. II</b>  <b>Cat. III</b>  <b>Cat. IV</b>
<p><b>Category of wetland based on Special Characteristics</b></p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<b>N/A</b>



Wetland name or number \_\_\_\_\_

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MADRONA RIDGE - 1601 RAINIER STREET  
 WETLAND RATING FIGURE 1- WETLAND E

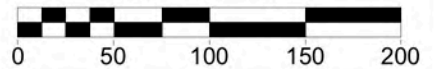


**LEGEND**

-  SCRUB-SHRUB
-  FORESTED VEGETATION
-  SATURATED ONLY
-  SEASONALLY FLOODED
-  150' FROM WL BOUNDARY



Scale 1" = 100'



*Wetland Resources, Inc.*  
 Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance  
 9505 19th Avenue S.E. Suite 106 Everett, Washington 98208  
 Phone: (425) 337-3174  
 Fax: (425) 337-3045  
 Email: mailbox@wetlandresources.com

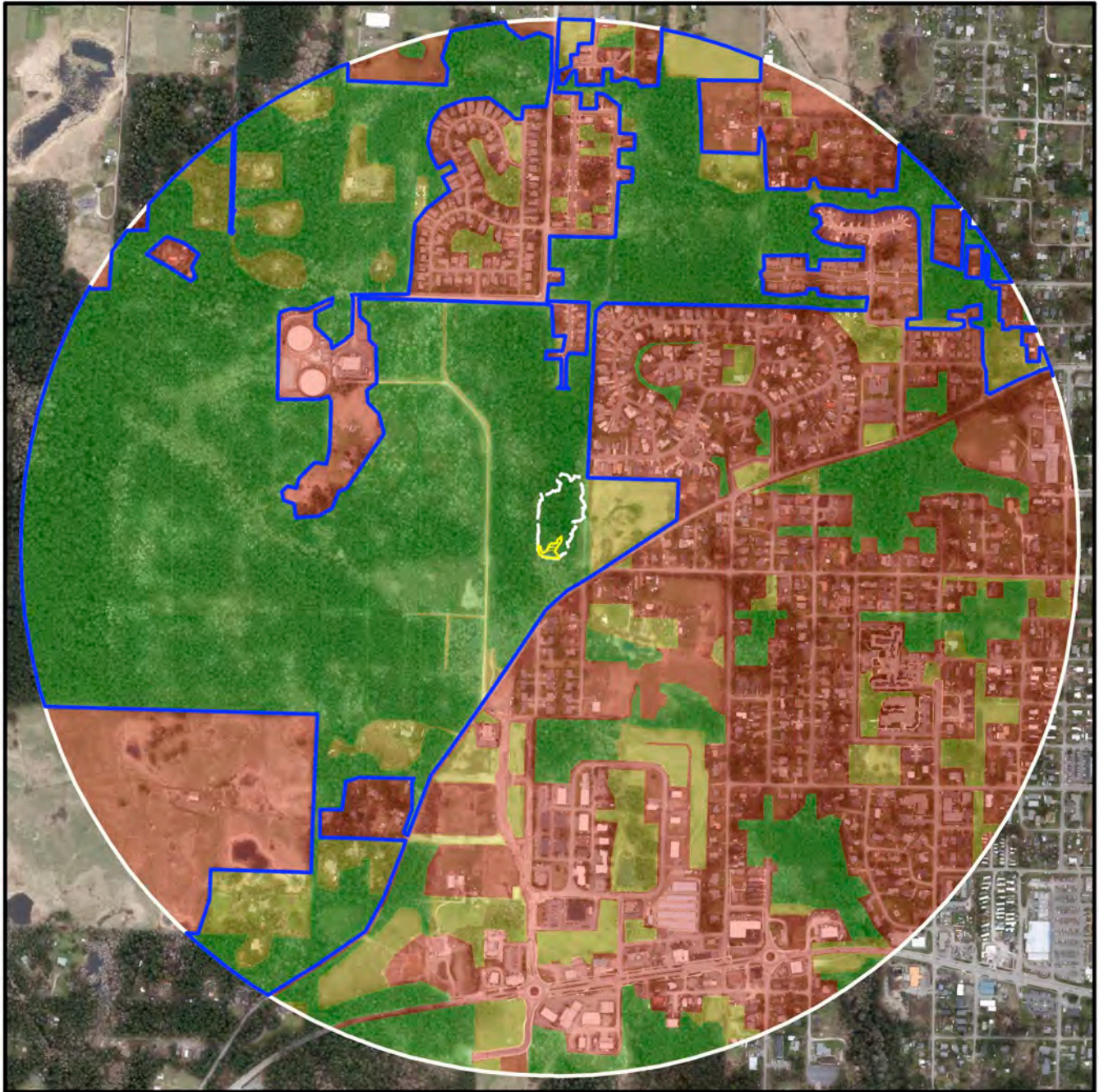
**WETLAND RATING  
 Wetland E**

MontBanc Management LLC  
 Attn: Chip McBroom  
 6230 Hollywood Blvd  
 Sarasota, FL 34231







Figure E-1  
 WRI Job # 21224  
 Rated by: SB, AW



MADRONA RIDGE - 1601 RAINIER STREET  
 WETLAND RATING FIGURE 2- WETLAND E

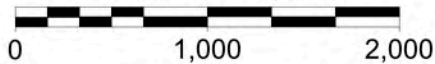


**LEGEND**

- |  |                        |   |                                      |
|--|------------------------|---|--------------------------------------|
|  | RELATIVELY UNDISTURBED |  | ACCESSIBLE HABITAT                   |
|  | LOW/MOD. INTENSITY     |  | WETLAND                              |
|  | HIGH INTENSITY         |  | 1 KM FROM WETLAND CONTRIBUTING BASIN |



Scale 1" = 1,000'



**CONTRIBUTING BASIN  
 AREA RELATIVE TO  
 WETLAND UNIT IS 13:1**

*Wetland Resources, Inc.*  
 Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance  
 9505 19th Avenue S.E. Suite 106 Everett, Washington 98208  
 Phone: (425) 337-3174  
 Fax: (425) 337-3045  
 Email: mailbox@wetlandresources.com

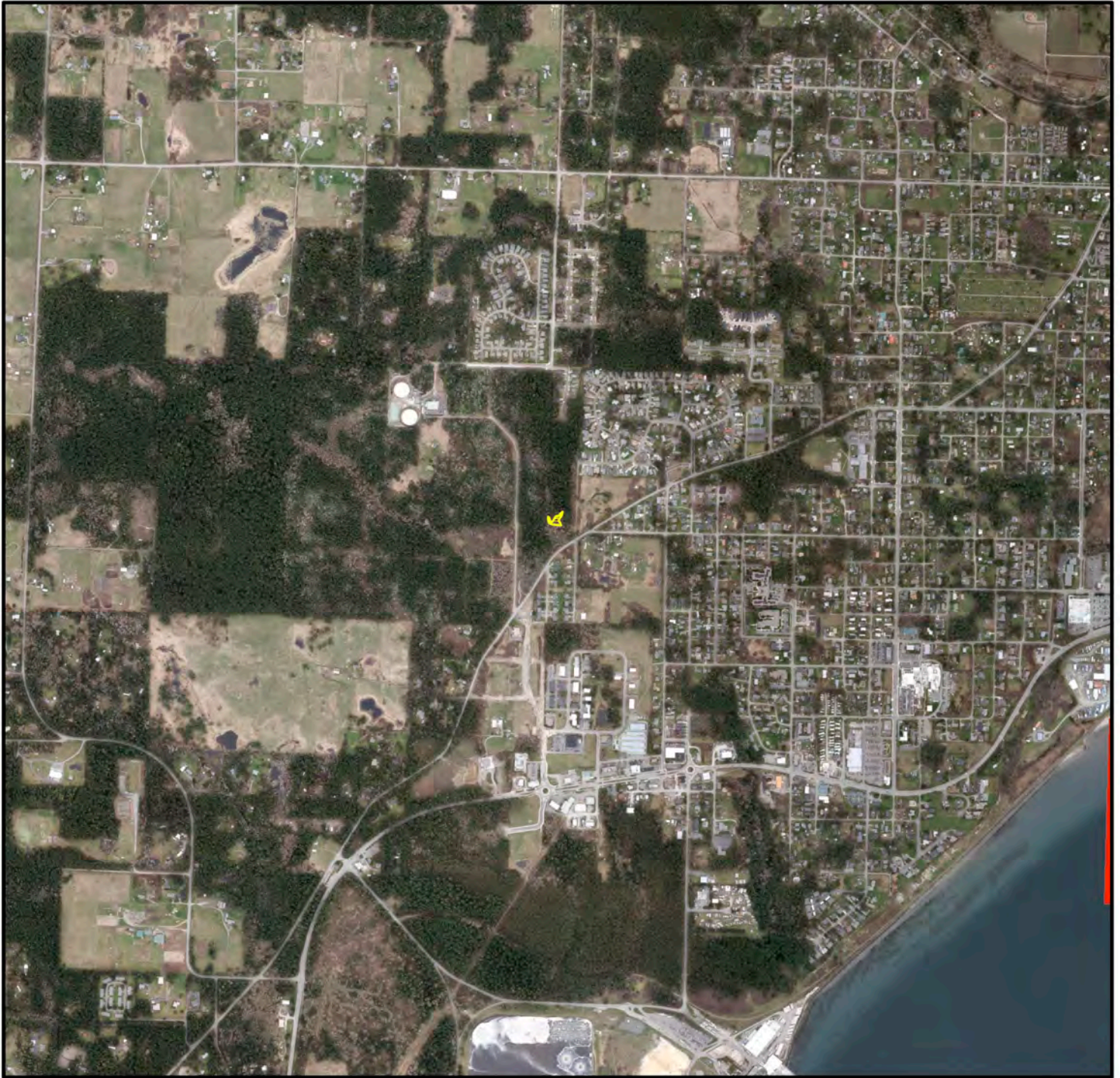
**WETLAND RATING  
 Wetland E**

MontBanc Management LLC  
 Attn: Chip McBroom  
 6230 Hollywood Blvd  
 Sarasota, FL 34231

Figure E-2  
 WRI Job # 21224  
 Rated by: SB, AW



MADRONA RIDGE - 1601 RAINIER STREET  
WETLAND RATING FIGURE 3- WETLAND E



**LEGEND**



WETLAND



AQUATIC RESOURCES  
ON THE 303(d) LIST



Scale 1" = 1,500'



*Wetland Resources, Inc.*  
Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance  
9505 19th Avenue S.E. Suite 106 Everett, Washington 98208  
Phone: (425) 337-3174  
Fax: (425) 337-3045  
Email: mailbox@wetlandresources.com

**WETLAND RATING**  
**Wetland E**

MontBanc Management LLC  
Attn: Chip McBroom  
6230 Hollywood Blvd  
Sarasota, FL 34231  
Figure E-3  
WRI Job # 21224  
Rated by: SB, AW

Wetland name or number F

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): Madrona Ridge Wetland F Date of site visit: 6/11/21

Rated by SB Trained by Ecology?  Yes  No Date of training 10/16

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

**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	
<i>Circle the appropriate ratings</i>				
Site Potential	H <input type="checkbox"/> <input checked="" type="checkbox"/> L	H <input type="checkbox"/> <input checked="" type="checkbox"/> L	H <input type="checkbox"/> M <input checked="" type="checkbox"/> L	
Landscape Potential	H <input type="checkbox"/> M <input checked="" type="checkbox"/> L	H <input type="checkbox"/> M <input checked="" type="checkbox"/> L	<input checked="" type="checkbox"/> H <input type="checkbox"/> M <input type="checkbox"/> L	
Value	<input checked="" type="checkbox"/> H <input type="checkbox"/> M <input type="checkbox"/> L	H <input type="checkbox"/> M <input checked="" type="checkbox"/> L	H <input type="checkbox"/> <input checked="" type="checkbox"/> L	<b>TOTAL</b>
<b>Score Based on Ratings</b>	<b>6</b>	<b>4</b>	<b>6</b>	<b>16</b>

**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	<input checked="" type="checkbox"/>

Wetland name or number F

## Maps and figures required to answer questions correctly for Western Washington

### Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	1
Hydroperiods	D 1.4, H 1.2	1
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	1
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	1
Map of the contributing basin	D 4.3, D 5.3	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	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	4

### 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 <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> 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	



Wetland name or number F

## 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 F**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	<input type="checkbox"/>	Riverine
Slope + Depressional	<input type="checkbox"/>	Depressional
Slope + Lake Fringe	<input type="checkbox"/>	Lake Fringe
Depressional + Riverine along stream within boundary of depression	<input type="checkbox"/>	Depressional
Depressional + Lake Fringe	<input type="checkbox"/>	Depressional
Riverine + Lake Fringe	<input type="checkbox"/>	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	<input type="checkbox"/>	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 F

<b>DEPRESSIONAL AND FLATS WETLANDS</b>		
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>		
<b>D 1.0. Does the site have the potential to improve water quality?</b>		
D 1.1. <b>Characteristics of surface water outflows from the wetland:</b>		
<input checked="" type="checkbox"/> Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3		<b>3</b>
<input type="checkbox"/> Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2		
<input type="checkbox"/> Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1		
<input type="checkbox"/> Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1		
D 1.2. <b>The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions).</b> Yes = 4 <input type="checkbox"/> No = 0		<b>0</b>
D 1.3. <b>Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):</b>		
<input type="checkbox"/> Wetland has persistent, ungrazed, plants > 95% of area points = 5		<b>3</b>
<input checked="" type="checkbox"/> Wetland has persistent, ungrazed, plants > ½ of area points = 3		
<input type="checkbox"/> Wetland has persistent, ungrazed plants > 1/10 of area points = 1		
<input type="checkbox"/> Wetland has persistent, ungrazed plants < 1/10 of area points = 0		
D 1.4. <b>Characteristics of seasonal ponding or inundation:</b> <i>This is the area that is ponded for at least 2 months. See description in manual.</i>		
<input checked="" type="checkbox"/> Area seasonally ponded is > ½ total area of wetland points = 4		<b>4</b>
<input type="checkbox"/> Area seasonally ponded is > ¼ total area of wetland points = 2		
<input type="checkbox"/> Area seasonally ponded is < ¼ total area of wetland points = 0		
<b>Total for D 1</b>	Add the points in the boxes above	<b>10</b>

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

<b>D 2.0. Does the landscape have the potential to support the water quality function of the site?</b>		
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 <input type="checkbox"/> No = 0	<b>0</b>
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 <input type="checkbox"/> No = 0	<b>0</b>
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 <input type="checkbox"/> No = 0	<b>0</b>
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 <input type="checkbox"/> No = 0	<b>0</b>
<b>Total for D 2</b>	Add the points in the boxes above	<b>0</b>

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

<b>D 3.0. Is the water quality improvement provided by the site valuable to society?</b>		
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 <input type="checkbox"/> No = 0	<b>0</b>
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	<input type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	<b>1</b>
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)?	<input type="checkbox"/> Yes = 2 <input type="checkbox"/> No = 0	<b>2</b>
<b>Total for D 3</b>	Add the points in the boxes above	<b>3</b>

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

--

Wetland name or number F**DEPRESSIONAL AND FLATS WETLANDS****Hydrologic Functions** - Indicators that the site functions to reduce flooding and stream degradation

<b>D 4.0. Does the site have the potential to reduce flooding and erosion?</b>		
<b>D 4.1. Characteristics of surface water outflows from the wetland:</b>		
<input checked="" type="checkbox"/> Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	<b>4</b>
<input type="checkbox"/> Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2	
<input type="checkbox"/> Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1	
<input type="checkbox"/> Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0	
<b>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.</b>		
<input type="checkbox"/> Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	<b>3</b>
<input type="checkbox"/> Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
<input checked="" type="checkbox"/> Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
<input type="checkbox"/> The wetland is a "headwater" wetland	points = 3	
<input type="checkbox"/> Wetland is flat but has small depressions on the surface that trap water	points = 1	
<input type="checkbox"/> Marks of ponding less than 0.5 ft (6 in)	points = 0	
<b>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.</b>		
<input type="checkbox"/> The area of the basin is less than 10 times the area of the unit	points = 5	<b>0</b>
<input type="checkbox"/> The area of the basin is 10 to 100 times the area of the unit	points = 3	
<input checked="" type="checkbox"/> The area of the basin is more than 100 times the area of the unit	points = 0	
<input type="checkbox"/> Entire wetland is in the Flats class	points = 5	
<b>Total for D 4</b>	<b>Add the points in the boxes above</b>	<b>7</b>

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

Record the rating on the first page

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

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

Record the rating on the first page

<b>D 6.0. Are the hydrologic functions provided by the site valuable to society?</b>		
<b>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.</b> 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):		
<input type="checkbox"/> • Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	<b>0</b>
<input type="checkbox"/> • Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
<input type="checkbox"/> Flooding from groundwater is an issue in the sub-basin.	points = 1	
<input type="checkbox"/> 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	
<input checked="" type="checkbox"/> There are no problems with flooding downstream of the wetland.	points = 0	
<b>D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</b>		
	Yes = 2 <input type="checkbox"/> No = <input type="text" value="0"/>	<b>0</b>
<b>Total for D 6</b>	<b>Add the points in the boxes above</b>	<b>0</b>

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

Record the rating on the first page

Wetland name or number F**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 | <b>0</b> |
| <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)   | <b>1 structure: points = 0</b>   |          |
| <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 | <b>0</b> |
| <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 type="checkbox"/> Saturated only  | <b>1 type present: points = 0</b>   |          |
| <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"/> <b>Lake Fringe wetland</b>  | <b>2 points</b>                     |          |
| <input type="checkbox"/> <b>Freshwater tidal wetland</b>                                     | <b>2 points</b>                     |          |

**H 1.3. Richness of plant species**

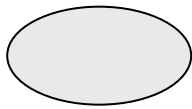
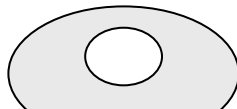
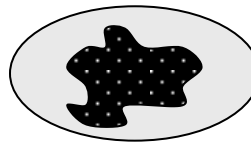
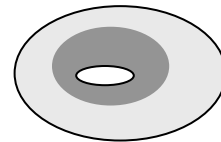
Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>.

*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*

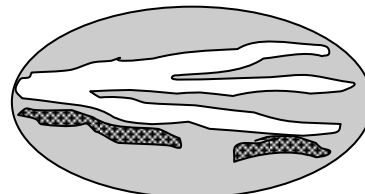
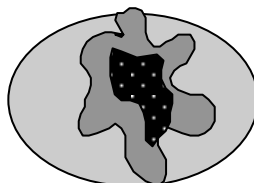
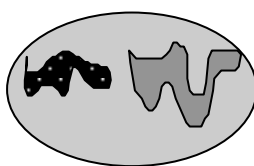
- |                              |                   |          |
|------------------------------|-------------------|----------|
| If you counted: > 19 species | points = 2        | <b>1</b> |
| <b>5 - 19 species</b>        | <b>points = 1</b> |          |
| < 5 species                  | points = 0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

**H 1.4. Interspersion of habitats**

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

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

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



Wetland name or number F

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) <b>and/or</b> 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> )		<b>1</b>
Total for H 1	Add the points in the boxes above	<b>2</b>

**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>38</u> + [(% moderate and low intensity land uses)/2] <u>3</u> = <u>41</u> % If total accessible habitat is:		
<input checked="" type="checkbox"/> > 1/3 (33.3%) of 1 km Polygon	points = 3	<b>3</b>
<input type="checkbox"/> 20-33% of 1 km Polygon	points = 2	
<input type="checkbox"/> 10-19% of 1 km Polygon	points = 1	
<input type="checkbox"/> < 10% of 1 km Polygon	points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate:</i> % undisturbed habitat <u>44</u> + [(% moderate and low intensity land uses)/2] <u>6</u> = <u>50</u> %		
<input checked="" type="checkbox"/> Undisturbed habitat > 50% of Polygon	points = 3	<b>3</b>
<input type="checkbox"/> Undisturbed habitat 10-50% and in 1-3 patches	points = 2	
<input type="checkbox"/> Undisturbed habitat 10-50% and > 3 patches	points = 1	
<input type="checkbox"/> Undisturbed habitat < 10% of 1 km Polygon	points = 0	
H 2.3. Land use intensity in 1 km Polygon: If		
<input type="checkbox"/> > 50% of 1 km Polygon is high intensity land use	points = (- 2)	<b>0</b>
<input checked="" type="checkbox"/> ≤ 50% of 1 km Polygon is high intensity	points = 0	
Total for H 2	Add the points in the boxes above	<b>6</b>

**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
<input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)		<b>1</b>
<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	
<input type="checkbox"/> 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*

Wetland name or number F

## 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.

Wetland name or number F**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>	
<b>SC 1.0. Estuarine wetlands</b> Does the wetland meet the following criteria for Estuarine wetlands? <input type="checkbox"/> The dominant water regime is tidal, <input type="checkbox"/> Vegetated, and <input type="checkbox"/> With a salinity greater than 0.5 ppt Yes –Go to <b>SC 1.1</b> <b>No= Not an estuarine wetland</b>	
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 = <b>Category I</b> No - Go to <b>SC 1.2</b>	<b>Cat. I</b>
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? <input type="checkbox"/> 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) <input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. <input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = <b>Category I</b> No = <b>Category II</b>	<b>Cat. I</b>  <b>Cat. II</b>
<b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b> 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 <b>SC 2.2</b> <b>No – Go to SC 2.3</b> SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = <b>Category I</b> <b>No = Not a WHCV</b> SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a> Yes – <b>Contact WNHP/WDNR and go to SC 2.4</b> No = <b>Not a WHCV</b> 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 = <b>Category I</b> No = <b>Not a WHCV</b>	<b>Cat. I</b>
<b>SC 3.0. Bogs</b> 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 <b>SC 3.3</b> <b>No – Go to SC 3.2</b> 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 <b>SC 3.3</b> <b>No = Is not a bog</b> 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 = <b>Is a Category I bog</b> No – Go to <b>SC 3.4</b> <b>NOTE:</b> 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 = <b>Is a Category I bog</b> No = <b>Is not a bog</b>	<b>Cat. I</b>

Wetland name or number F

<p><b>SC 4.0. Forested Wetlands</b></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? <b><i>If you answer YES you will still need to rate the wetland based on its functions.</i></b></p> <p><input type="checkbox"/> <b>Old-growth forests</b> (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><input type="checkbox"/> <b>Mature forests</b> (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 = <b>Category I</b>    <b>No = Not a forested wetland for this section</b></p>	<b>Cat. I</b>
<p><b>SC 5.0. Wetlands in Coastal Lagoons</b></p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <p><input type="checkbox"/> 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><input type="checkbox"/> The lagoon in which the wetland is located contains ponded water that is saline or brackish (&gt; 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 <b>SC 5.1</b>    <b>No = Not a wetland in a coastal lagoon</b></p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <p><input type="checkbox"/> 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><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.</p> <p><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft<sup>2</sup>)</p> <p style="text-align: right;">Yes = <b>Category I</b>    No = <b>Category II</b></p>	<b>Cat. I</b>  <b>Cat. II</b>
<p><b>SC 6.0. Interdunal Wetlands</b></p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <b><i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></b></p> <p>In practical terms that means the following geographic areas:</p> <p><input type="checkbox"/> Long Beach Peninsula: Lands west of SR 103</p> <p><input type="checkbox"/> Grayland-Westport: Lands west of SR 105</p> <p><input type="checkbox"/> Ocean Shores-Copalis: Lands west of SR 115 and SR 109</p> <p style="text-align: right;">Yes – Go to <b>SC 6.1</b>    <b>No = not an interdunal wetland for rating</b></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 = <b>Category I</b>    No – Go to <b>SC 6.2</b></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 = <b>Category II</b>    No – Go to <b>SC 6.3</b></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 = <b>Category III</b>    No = <b>Category IV</b></p>	<b>Cat I</b>  <b>Cat. II</b>  <b>Cat. III</b>  <b>Cat. IV</b>
<p><b>Category of wetland based on Special Characteristics</b></p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<b>N/A</b>

Wetland name or number \_\_\_\_\_




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MADRONA RIDGE - 1601 RAINIER STREET  
WETLAND RATING FIGURE 1- WETLAND F

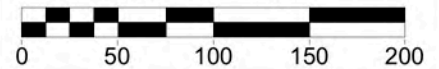


**LEGEND**

-  FORESTED VEGETATION
-  SEASONALLY FLOODED
-  150' FROM WL BOUNDARY



Scale 1" = 100'



*Wetland Resources, Inc.*  
Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance  
9505 19th Avenue S.E. Suite 106 Everett, Washington 98208  
Phone: (425) 337-3174  
Fax: (425) 337-3045  
Email: mailbox@wetlandresources.com

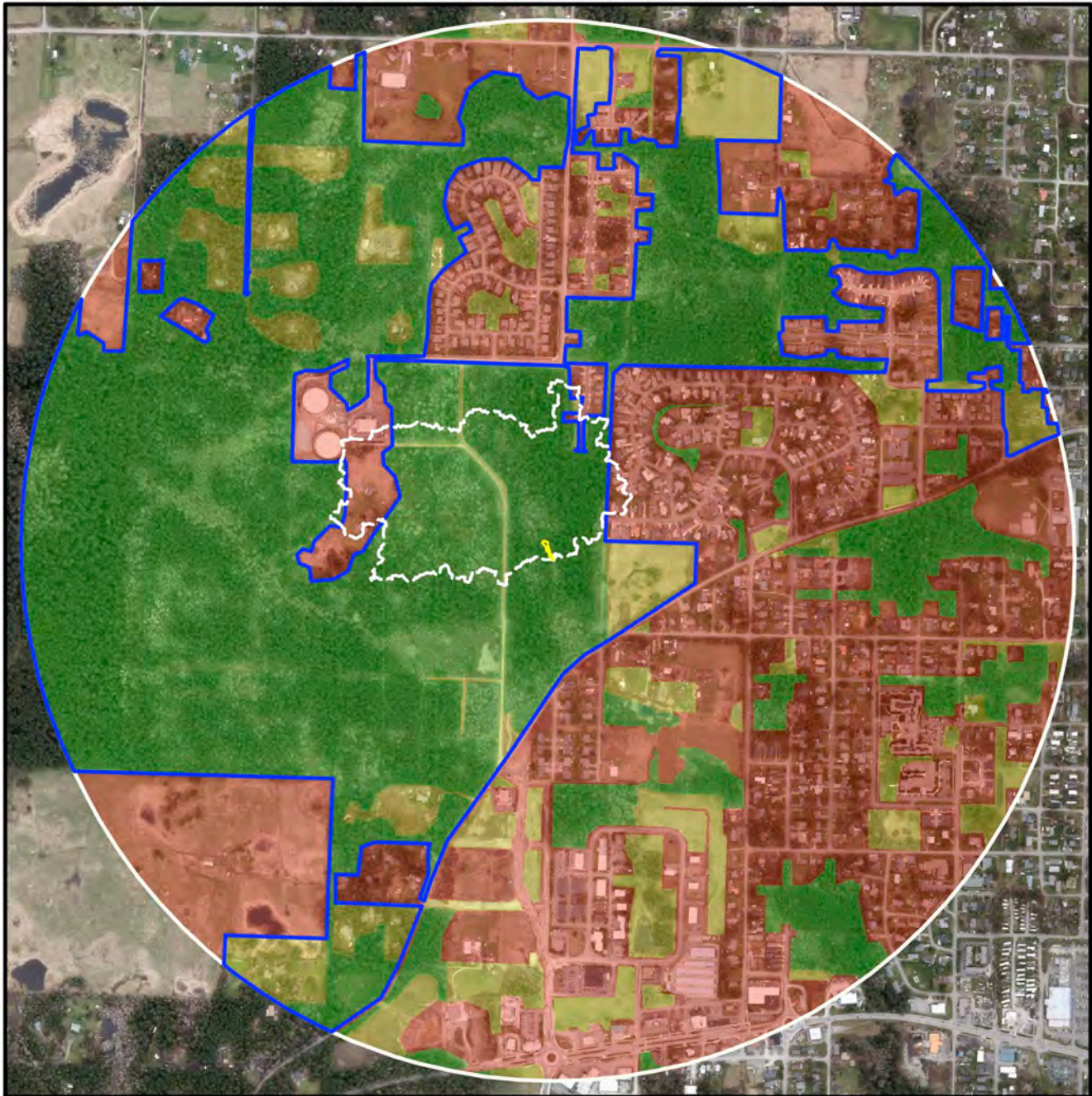
**WETLAND RATING**  
**Wetland F**

MontBanc Management LLC  
Attn: Chip McBroom  
6230 Hollywood Blvd  
Sarasota, FL 34231







Figure F-1  
WRI Job # 21224  
Rated by: SB, AW



MADRONA RIDGE - 1601 RAINIER STREET  
 WETLAND RATING FIGURE 2- WETLAND F

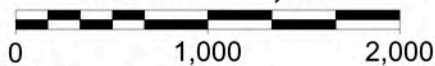


**LEGEND**

- |  |                        |   |                                      |
|--|------------------------|---|--------------------------------------|
|  | RELATIVELY UNDISTURBED |  | ACCESSIBLE HABITAT                   |
|  | LOW/MOD. INTENSITY     |  | WETLAND                              |
|  | HIGH INTENSITY         |  | 1 KM FROM WETLAND CONTRIBUTING BASIN |



Scale 1" = 1,000'



**CONTRIBUTING BASIN  
 AREA RELATIVE TO  
 WETLAND UNIT IS 704:1**

*Wetland Resources, Inc.*  
 Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance  
 9505 19th Avenue S.E. Suite 106 Everett, Washington 98208  
 Phone: (425) 337-3174  
 Fax: (425) 337-3045  
 Email: mailbox@wetlandresources.com

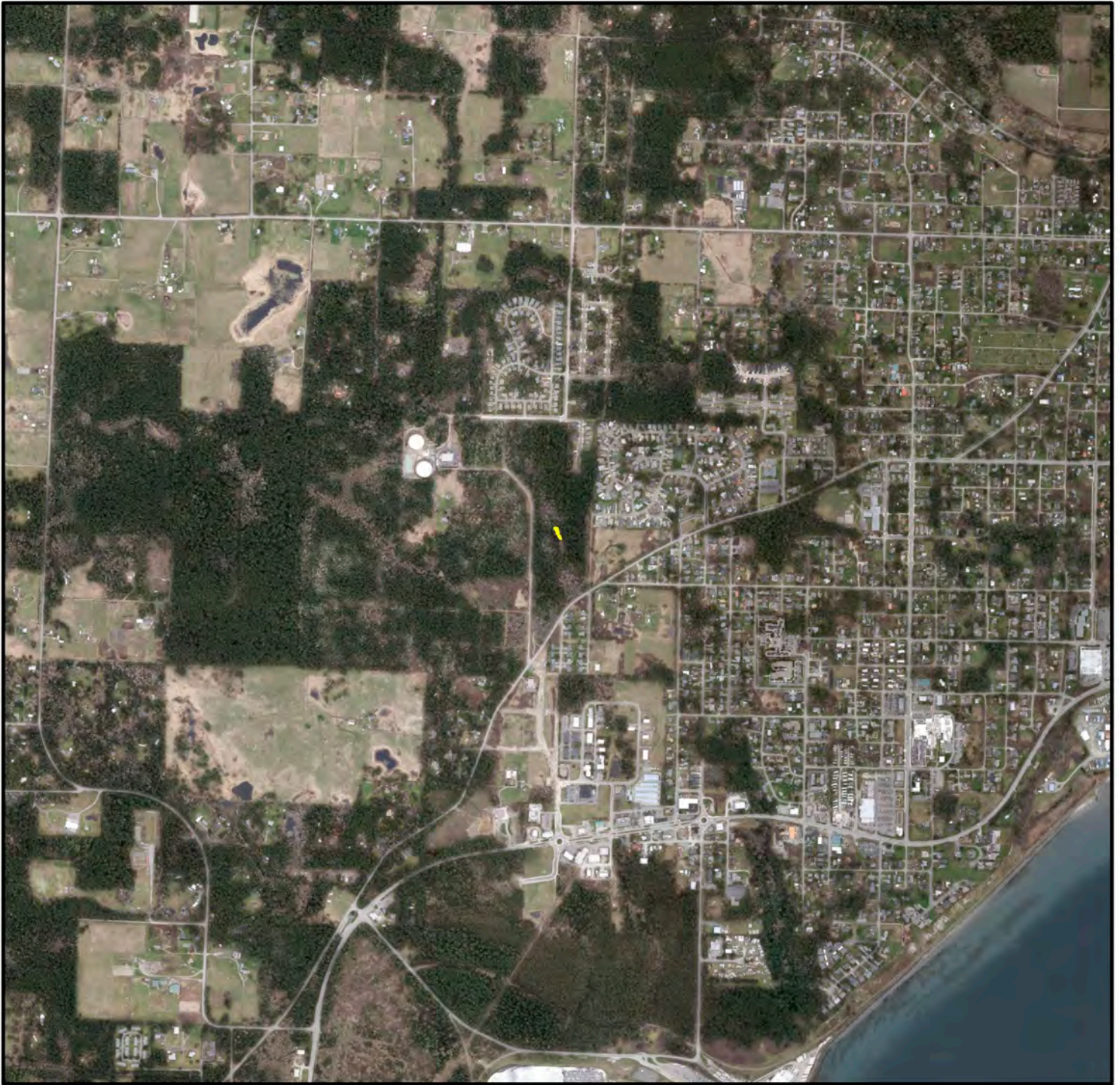
**WETLAND RATING  
 Wetland F**

MontBanc Management LLC  
 Attn: Chip McBroom  
 6230 Hollywood Blvd  
 Sarasota, FL 34231

Figure F-2  
 WRI Job # 21224  
 Rated by: SB, AW



MADRONA RIDGE - 1601 RAINIER STREET  
WETLAND RATING FIGURE 3- WETLAND F



**LEGEND**



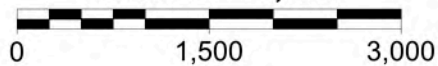
WETLAND



AQUATIC RESOURCES  
ON THE 303(d) LIST



Scale 1" = 1,500'



*Wetland Resources, Inc.*  
Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance  
9505 19th Avenue S.E. Suite 106 Everett, Washington 98208  
Phone: (425) 337-3174  
Fax: (425) 337-3045  
Email: mailbox@wetlandresources.com

**WETLAND RATING**  
**Wetland F**

MontBanc Management LLC  
Attn: Chip McBroom  
6230 Hollywood Blvd  
Sarasota, FL 34231  
Figure F-3  
WRI Job # 21224  
Rated by: SB, AW

Wetland name or number G

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): Madrona Ridge Wetland G Date of site visit: 6/11/21

Rated by SB Trained by Ecology?  Yes  No Date of training 10/16

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

**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	
<i>Circle the appropriate ratings</i>				
Site Potential	<input type="checkbox"/> H <input type="checkbox"/> M <input type="checkbox"/> L	H <input type="checkbox"/> M <input type="checkbox"/> L	H <input type="checkbox"/> M <input type="checkbox"/> L	
Landscape Potential	H <input type="checkbox"/> M <input type="checkbox"/> L	H <input type="checkbox"/> M <input type="checkbox"/> L	<input type="checkbox"/> H <input type="checkbox"/> M <input type="checkbox"/> L	
Value	<input type="checkbox"/> H <input type="checkbox"/> M <input type="checkbox"/> L	H <input type="checkbox"/> M <input type="checkbox"/> L	H <input type="checkbox"/> M <input type="checkbox"/> L	<b>TOTAL</b>
<b>Score Based on Ratings</b>	<b>7</b>	<b>4</b>	<b>7</b>	<b>18</b>

**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	<input checked="" type="checkbox"/>



Wetland name or number G

## Maps and figures required to answer questions correctly for Western Washington

### Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	1
Hydroperiods	D 1.4, H 1.2	1
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	1
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	1
Map of the contributing basin	D 4.3, D 5.3	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	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	4

### 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 <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> 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	

Wetland name or number G

## 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   G  **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	<input type="checkbox"/>	Riverine
Slope + Depressional	<input type="checkbox"/>	Depressional
Slope + Lake Fringe	<input type="checkbox"/>	Lake Fringe
Depressional + Riverine along stream within boundary of depression	<input type="checkbox"/>	Depressional
Depressional + Lake Fringe	<input type="checkbox"/>	Depressional
Riverine + Lake Fringe	<input type="checkbox"/>	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	<input type="checkbox"/>	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 G

<b>DEPRESSIONAL AND FLATS WETLANDS</b>		
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>		
<b>D 1.0. Does the site have the potential to improve water quality?</b>		
D 1.1. <b>Characteristics of surface water outflows from the wetland:</b>		
<input checked="" type="checkbox"/> Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3		<b>3</b>
<input type="checkbox"/> Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2		
<input type="checkbox"/> Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1		
<input type="checkbox"/> Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1		
D 1.2. <b>The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions).</b> Yes = 4 <input type="checkbox"/> No = 0		<b>0</b>
D 1.3. <b>Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):</b>		
<input checked="" type="checkbox"/> Wetland has persistent, ungrazed, plants > 95% of area points = 5		<b>5</b>
<input type="checkbox"/> Wetland has persistent, ungrazed, plants > ½ of area points = 3		
<input type="checkbox"/> Wetland has persistent, ungrazed plants > 1/10 of area points = 1		
<input type="checkbox"/> Wetland has persistent, ungrazed plants < 1/10 of area points = 0		
D 1.4. <b>Characteristics of seasonal ponding or inundation:</b> <i>This is the area that is ponded for at least 2 months. See description in manual.</i>		
<input checked="" type="checkbox"/> Area seasonally ponded is > ½ total area of wetland points = 4		<b>4</b>
<input type="checkbox"/> Area seasonally ponded is > ¼ total area of wetland points = 2		
<input type="checkbox"/> Area seasonally ponded is < ¼ total area of wetland points = 0		
<b>Total for D 1</b>	Add the points in the boxes above	<b>12</b>

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

<b>D 2.0. Does the landscape have the potential to support the water quality function of the site?</b>		
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 <input type="checkbox"/> No = 0	<b>0</b>
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 <input type="checkbox"/> No = 0	<b>0</b>
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 <input type="checkbox"/> No = 0	<b>0</b>
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 <input type="checkbox"/> No = 0	<b>0</b>
<b>Total for D 2</b>	Add the points in the boxes above	<b>0</b>

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

<b>D 3.0. Is the water quality improvement provided by the site valuable to society?</b>		
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 <input type="checkbox"/> No = 0	<b>0</b>
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	<input type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0	<b>1</b>
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)?	<input type="checkbox"/> Yes = 2 <input type="checkbox"/> No = 0	<b>2</b>
<b>Total for D 3</b>	Add the points in the boxes above	<b>3</b>

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

--



Wetland name or number G**DEPRESSIONAL AND FLATS WETLANDS****Hydrologic Functions** - Indicators that the site functions to reduce flooding and stream degradation

<b>D 4.0. Does the site have the potential to reduce flooding and erosion?</b>		
<b>D 4.1. Characteristics of surface water outflows from the wetland:</b>		
<input checked="" type="checkbox"/> Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	<b>4</b>
<input type="checkbox"/> Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2	
<input type="checkbox"/> Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1	
<input type="checkbox"/> Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0	
<b>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.</b>		
<input type="checkbox"/> Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	<b>3</b>
<input type="checkbox"/> Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
<input checked="" type="checkbox"/> Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
<input type="checkbox"/> The wetland is a "headwater" wetland	points = 3	
<input type="checkbox"/> Wetland is flat but has small depressions on the surface that trap water	points = 1	
<input type="checkbox"/> Marks of ponding less than 0.5 ft (6 in)	points = 0	
<b>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.</b>		
<input type="checkbox"/> The area of the basin is less than 10 times the area of the unit	points = 5	<b>3</b>
<input checked="" type="checkbox"/> The area of the basin is 10 to 100 times the area of the unit	points = 3	
<input type="checkbox"/> The area of the basin is more than 100 times the area of the unit	points = 0	
<input type="checkbox"/> Entire wetland is in the Flats class	points = 5	
<b>Total for D 4</b>	<b>Add the points in the boxes above</b>	<b>10</b>

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

Record the rating on the first page

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

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

Record the rating on the first page

<b>D 6.0. Are the hydrologic functions provided by the site valuable to society?</b>		
<b>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.</b> 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):		
<input type="checkbox"/> • Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	<b>0</b>
<input type="checkbox"/> • Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
<input type="checkbox"/> Flooding from groundwater is an issue in the sub-basin.	points = 1	
<input type="checkbox"/> 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	
<input checked="" type="checkbox"/> There are no problems with flooding downstream of the wetland.	points = 0	
<b>D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</b>		
	Yes = 2 <input type="checkbox"/> No = <input type="text" value="0"/>	<b>0</b>
<b>Total for D 6</b>	<b>Add the points in the boxes above</b>	<b>0</b>

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

Record the rating on the first page

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

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

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

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

**2**

H 1.2. Hydroperiods

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

- Permanently flooded or inundated 4 or more types present: points = 3  
 Seasonally flooded or inundated 3 types present: points = 2  
 Occasionally flooded or inundated **2 types present: points = 1**  
 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**

**1**

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>.

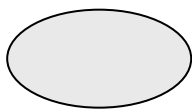
*Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*

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

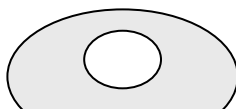
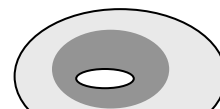
**1**

H 1.4. Interspersion of habitats

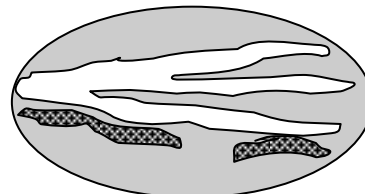
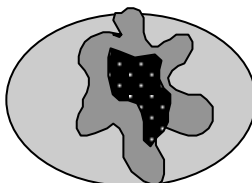
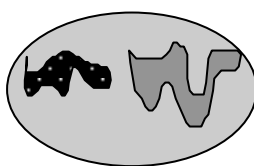
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



None = 0 points

**Low = 1 point****Moderate = 2 points**

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

**1**

Wetland name or number G

<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 (&gt; 4 in diameter and 6 ft long).</p> <p><input checked="" type="checkbox"/> Standing snags (dbh &gt; 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> 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 (&gt; 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>		<b>4</b>
Total for H 1	Add the points in the boxes above	<b>9</b>

**Rating of Site Potential** If score is: \_\_\_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: % undisturbed habitat ___ + [(% moderate and low intensity land uses)/2] ___ = <u>0</u> %</p> <p>If total accessible habitat is:</p> <p><input checked="" type="checkbox"/> &gt; 1/3 (33.3%) of 1 km Polygon points = 3</p> <p><input type="checkbox"/> 20-33% of 1 km Polygon points = 2</p> <p><input type="checkbox"/> 10-19% of 1 km Polygon points = 1</p> <p><input type="checkbox"/> &lt; 10% of 1 km Polygon points = 0</p>		<b>3</b>
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % undisturbed habitat ___ + [(% moderate and low intensity land uses)/2] ___ = <u>0</u> %</p> <p><input checked="" type="checkbox"/> Undisturbed habitat &gt; 50% of Polygon points = 3</p> <p><input type="checkbox"/> Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p><input type="checkbox"/> Undisturbed habitat 10-50% and &gt; 3 patches points = 1</p> <p><input type="checkbox"/> Undisturbed habitat &lt; 10% of 1 km Polygon points = 0</p>		<b>3</b>
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p><input type="checkbox"/> &gt; 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p><input checked="" type="checkbox"/> ≤ 50% of 1 km Polygon is high intensity points = 0</p>		<b>0</b>
Total for H 2	Add the points in the boxes above	<b>6</b>

**Rating of Landscape Potential** If score is:  4-6 = H \_\_\_1-3 = M \_\_\_< 1 = L

Record the rating on the first page

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>		
<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><input checked="" type="checkbox"/> Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1</p> <p><input type="checkbox"/> Site does not meet any of the criteria above points = 0</p>		<b>1</b>

**Rating of Value** If score is: \_\_\_2 = H  1 = M \_\_\_0 = L

Record the rating on the first page

Wetland name or number G

## 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.

Wetland name or number G**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>	
<b>SC 1.0. Estuarine wetlands</b> Does the wetland meet the following criteria for Estuarine wetlands? <input type="checkbox"/> The dominant water regime is tidal, <input type="checkbox"/> Vegetated, and <input type="checkbox"/> With a salinity greater than 0.5 ppt Yes –Go to <b>SC 1.1</b> <b>No= Not an estuarine wetland</b>	
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 = <b>Category I</b> No - Go to <b>SC 1.2</b>	<b>Cat. I</b>
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? <input type="checkbox"/> 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) <input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. <input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = <b>Category I</b> No = <b>Category II</b>	<b>Cat. I</b>  <b>Cat. II</b>
<b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b> 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 <b>SC 2.2</b> <b>No – Go to SC 2.3</b> SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = <b>Category I</b> <b>No = Not a WHCV</b> SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a> Yes – <b>Contact WNHP/WDNR and go to SC 2.4</b> No = <b>Not a WHCV</b> 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 = <b>Category I</b> No = <b>Not a WHCV</b>	<b>Cat. I</b>
<b>SC 3.0. Bogs</b> 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 <b>SC 3.3</b> <b>No – Go to SC 3.2</b> 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 <b>SC 3.3</b> <b>No = Is not a bog</b> 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 = <b>Is a Category I bog</b> No – Go to <b>SC 3.4</b> <b>NOTE:</b> 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 = <b>Is a Category I bog</b> No = <b>Is not a bog</b>	<b>Cat. I</b>

Wetland name or number G

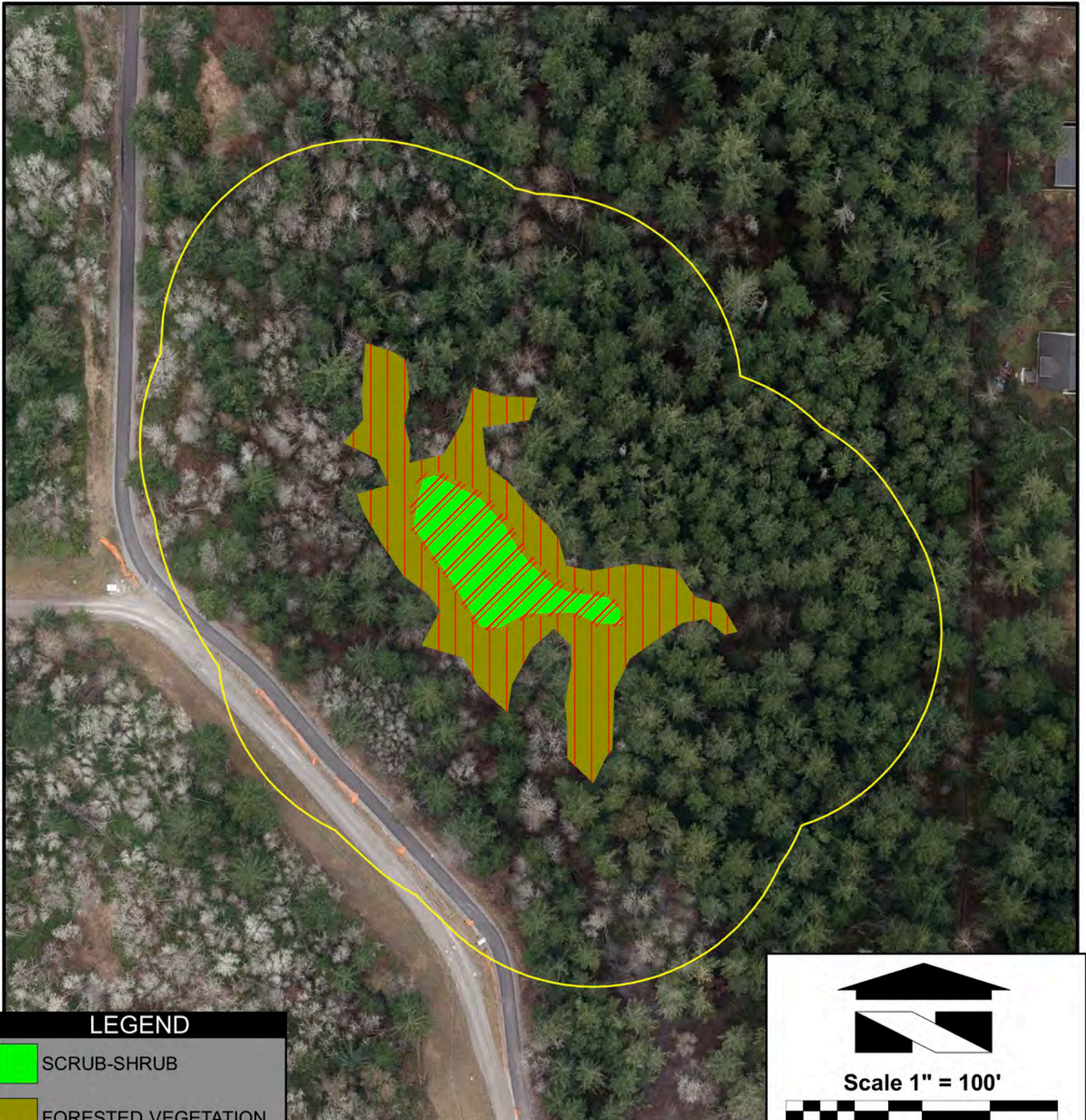
<p><b>SC 4.0. Forested Wetlands</b></p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <b><i>If you answer YES you will still need to rate the wetland based on its functions.</i></b></p> <p><input type="checkbox"/> <b>Old-growth forests</b> (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><input type="checkbox"/> <b>Mature forests</b> (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 = <b>Category I</b>    <b>No = Not a forested wetland for this section</b></p>	<b>Cat. I</b>
<p><b>SC 5.0. Wetlands in Coastal Lagoons</b></p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <p><input type="checkbox"/> 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><input type="checkbox"/> The lagoon in which the wetland is located contains ponded water that is saline or brackish (&gt; 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 <b>SC 5.1</b>    <b>No = Not a wetland in a coastal lagoon</b></p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <p><input type="checkbox"/> 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><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.</p> <p><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft<sup>2</sup>)</p> <p style="text-align: right;">Yes = <b>Category I</b>    No = <b>Category II</b></p>	<b>Cat. I</b>  <b>Cat. II</b>
<p><b>SC 6.0. Interdunal Wetlands</b></p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <b><i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></b></p> <p>In practical terms that means the following geographic areas:</p> <p><input type="checkbox"/> Long Beach Peninsula: Lands west of SR 103</p> <p><input type="checkbox"/> Grayland-Westport: Lands west of SR 105</p> <p><input type="checkbox"/> Ocean Shores-Copalis: Lands west of SR 115 and SR 109</p> <p style="text-align: right;">Yes – Go to <b>SC 6.1</b>    <b>No = not an interdunal wetland for rating</b></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 = <b>Category I</b>    No – Go to <b>SC 6.2</b></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 = <b>Category II</b>    No – Go to <b>SC 6.3</b></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 = <b>Category III</b>    No = <b>Category IV</b></p>	<b>Cat I</b>  <b>Cat. II</b>  <b>Cat. III</b>  <b>Cat. IV</b>
<p><b>Category of wetland based on Special Characteristics</b></p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<b>N/A</b>

Wetland name or number \_\_\_\_\_





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MADRONA RIDGE - 1601 RAINIER STREET  
WETLAND RATING FIGURE 1- WETLAND G

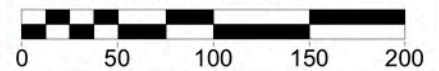


**LEGEND**

-  SCRUB-SHRUB
-  FORESTED VEGETATION
-  SATURATED ONLY
-  SEASONALLY FLOODED
-  150' FROM WL BOUNDARY



Scale 1" = 100'



*Wetland Resources, Inc.*  
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9505 19th Avenue S.E. Suite 106 Everett, Washington 98208  
Phone: (425) 337-3174  
Fax: (425) 337-3045  
Email: mailbox@wetlandresources.com

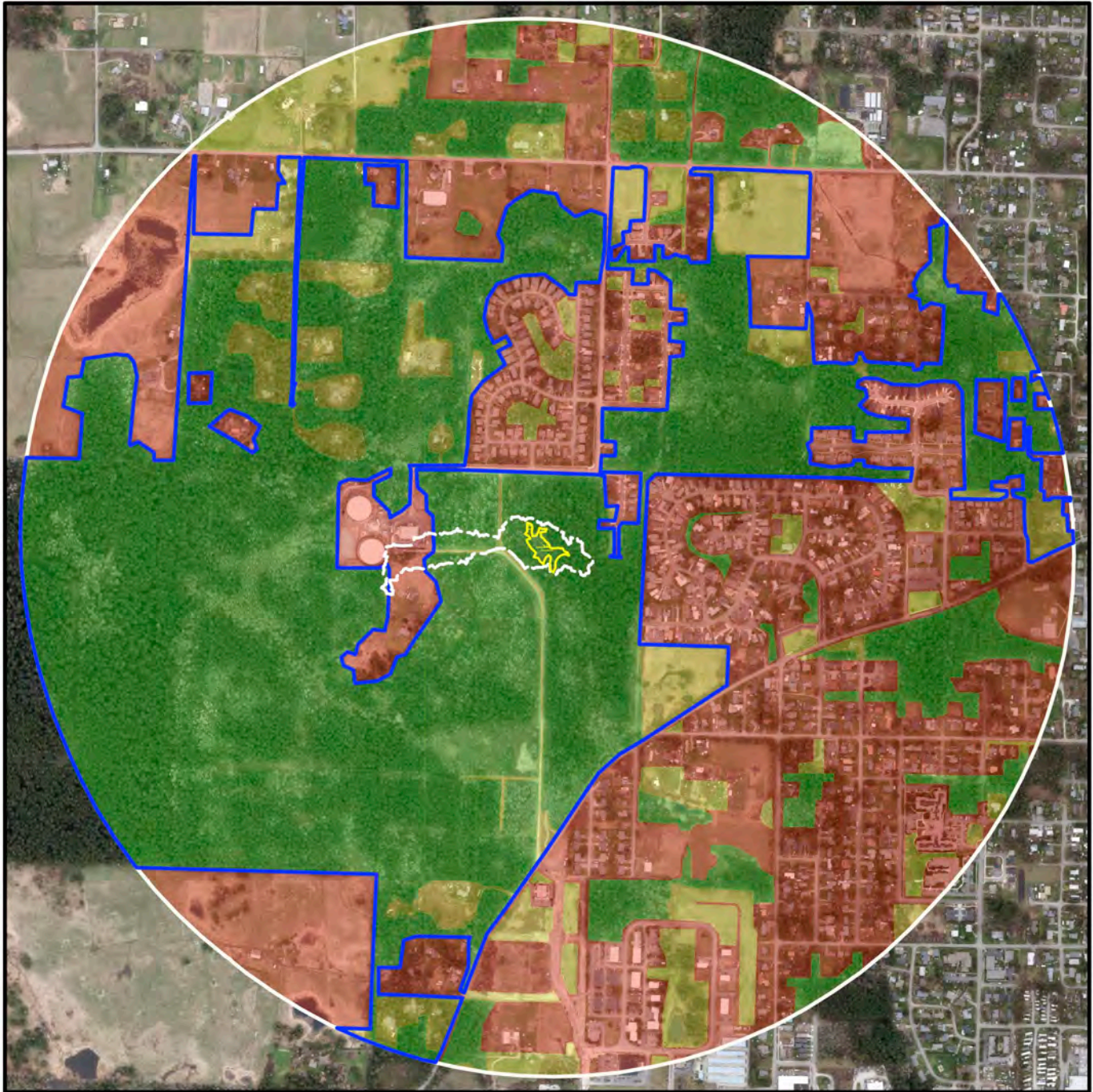
**WETLAND RATING**  
**Wetland G**

MontBanc Management LLC  
Attn: Chip McBroom  
6230 Hollywood Blvd  
Sarasota, FL 34231







Figure G-1  
WRI Job # 21224  
Rated by: SB, AW



MADRONA RIDGE - 1601 RAINIER STREET  
 WETLAND RATING FIGURE 2- WETLAND G

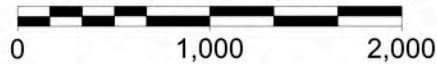


**LEGEND**

- |  |                        |   |                                      |
|--|------------------------|---|--------------------------------------|
|  | RELATIVELY UNDISTURBED |  | ACCESSIBLE HABITAT                   |
|  | LOW/MOD. INTENSITY     |  | WETLAND                              |
|  | HIGH INTENSITY         |  | 1 KM FROM WETLAND CONTRIBUTING BASIN |



Scale 1" = 1,000'



**CONTRIBUTING BASIN  
 AREA RELATIVE TO  
 WETLAND UNIT IS 9:1**

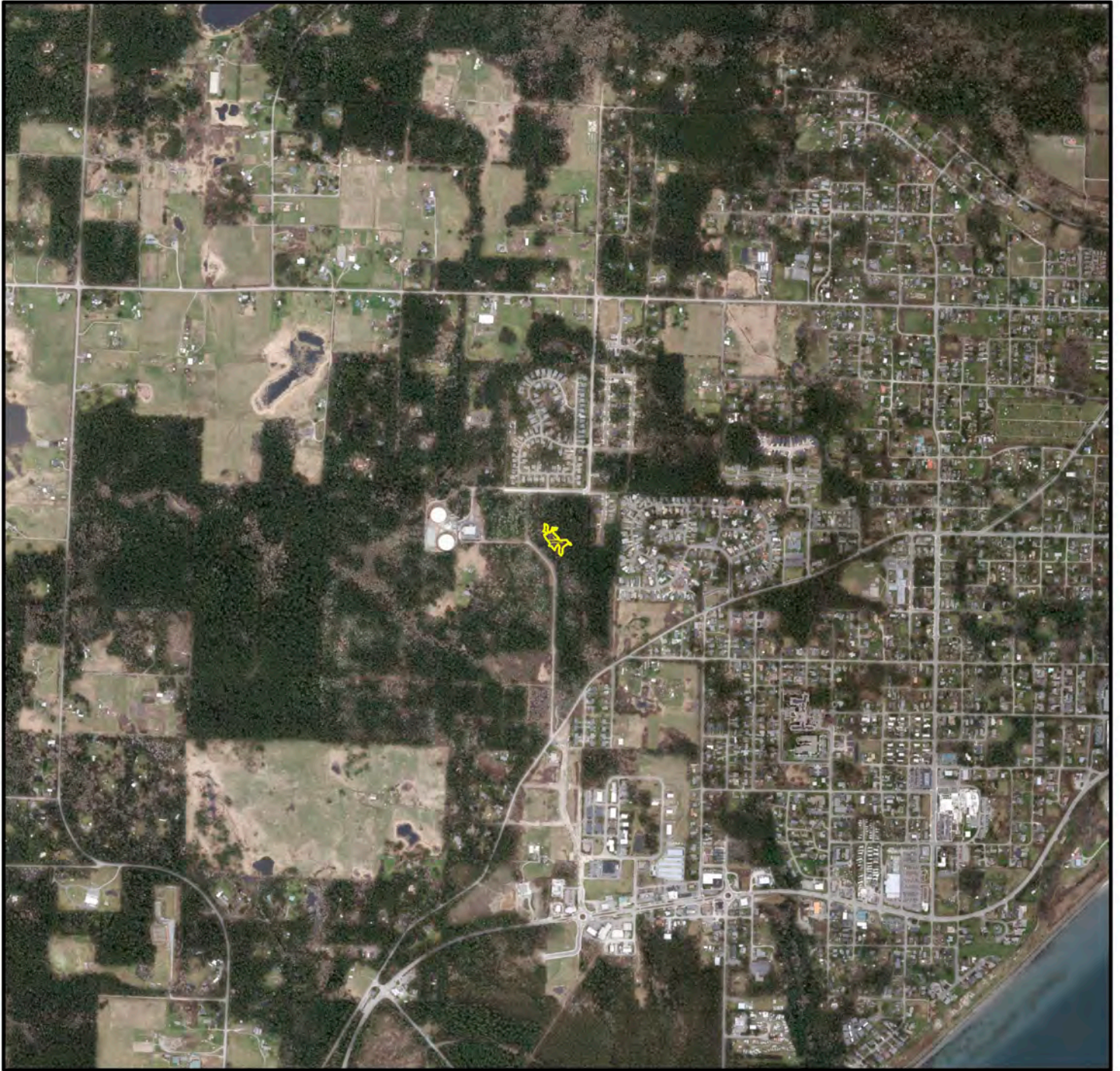
*Wetland Resources, Inc.*  
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 Email: mailbox@wetlandresources.com

**WETLAND RATING  
 Wetland G**

MontBanc Management LLC  
 Attn: Chip McBroom  
 6230 Hollywood Blvd  
 Sarasota, FL 34231  
 Figure G-2  
 WRI Job # 21224  
 Rated by: SB, AW



MADRONA RIDGE - 1601 RAINIER STREET  
WETLAND RATING FIGURE 3- WETLAND G



**LEGEND**



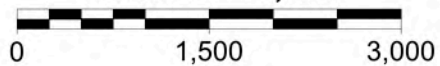
WETLAND



AQUATIC RESOURCES  
ON THE 303(d) LIST



Scale 1" = 1,500'



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**WETLAND RATING**  
**Wetland G**

MontBanc Management LLC  
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Sarasota, FL 34231  
Figure G-3  
WRI Job # 21224  
Rated by: SB, AW

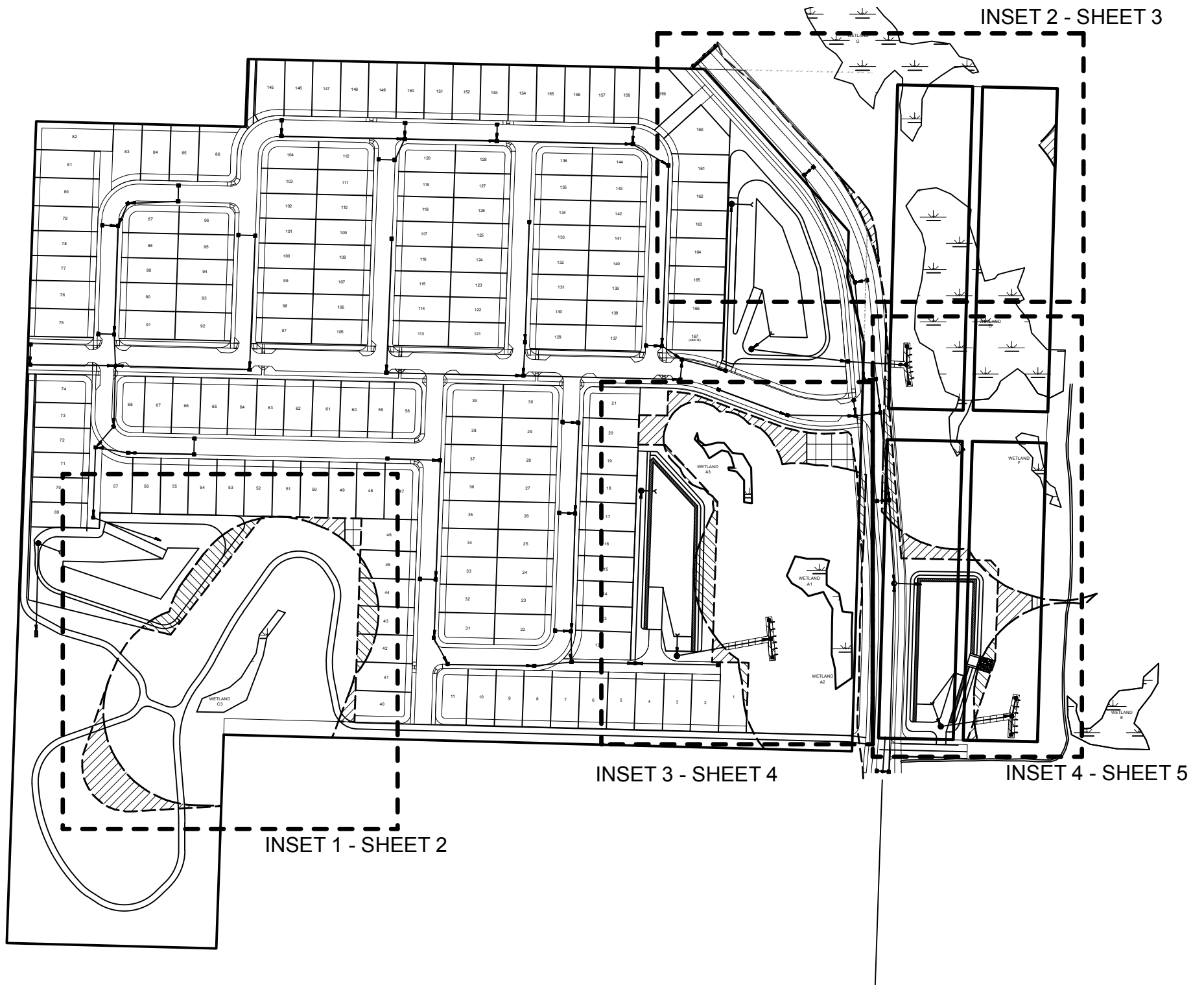
**ATTACHMENT B**  
CRITICAL AREA STUDY MAP



# CRITICAL AREA STUDY & BUFFER MITIGATION PLAN MAP OVERVIEW

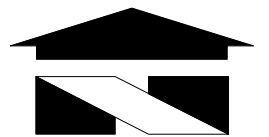
## MADRONA RIDGE - RAINIER STREET

PORTION OF SECTION 9, TOWNSHIP 30N, RANGE 1E, W.M.



### LEGEND

	WETLAND		PERMANENT BUFFER IMPACT
	BUFFER ADDITION		TEMPORARY BUFFER IMPACT
	BUFFER REDUCTION		BUFFER CREATION
	STANDARD BUFFER		FINAL BUFFER



Scale 1" = 200'



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 Email: mailbox@wetlandresources.com

Critical Area Study &  
 Buffer Mitigation Plan Map  
**Madrona Ridge**  
 Port Townsend  
 MonteBanc Management LLC  
 Attn: Chip McBroom  
 6230 Hollywood Blvd  
 Sarasota FL, 34231

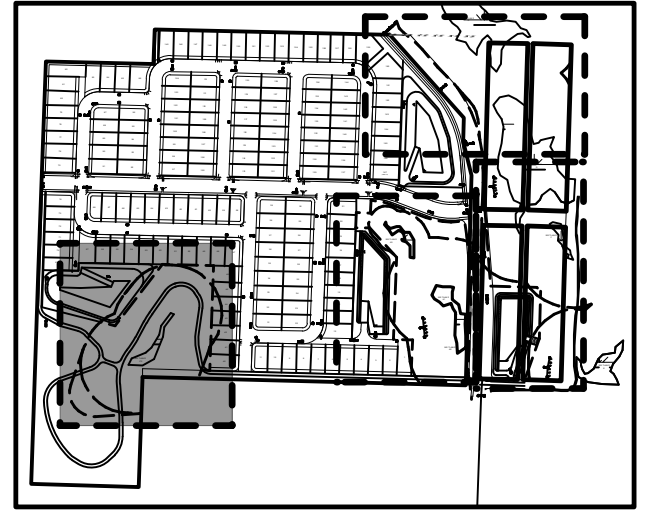
Sheet 1/5  
 WRI #: 21224  
 Drawn by: EC  
 Date: 12/23/2021

# CRITICAL AREA STUDY & BUFFER MITIGATION PLAN MAP (SHEET 2)

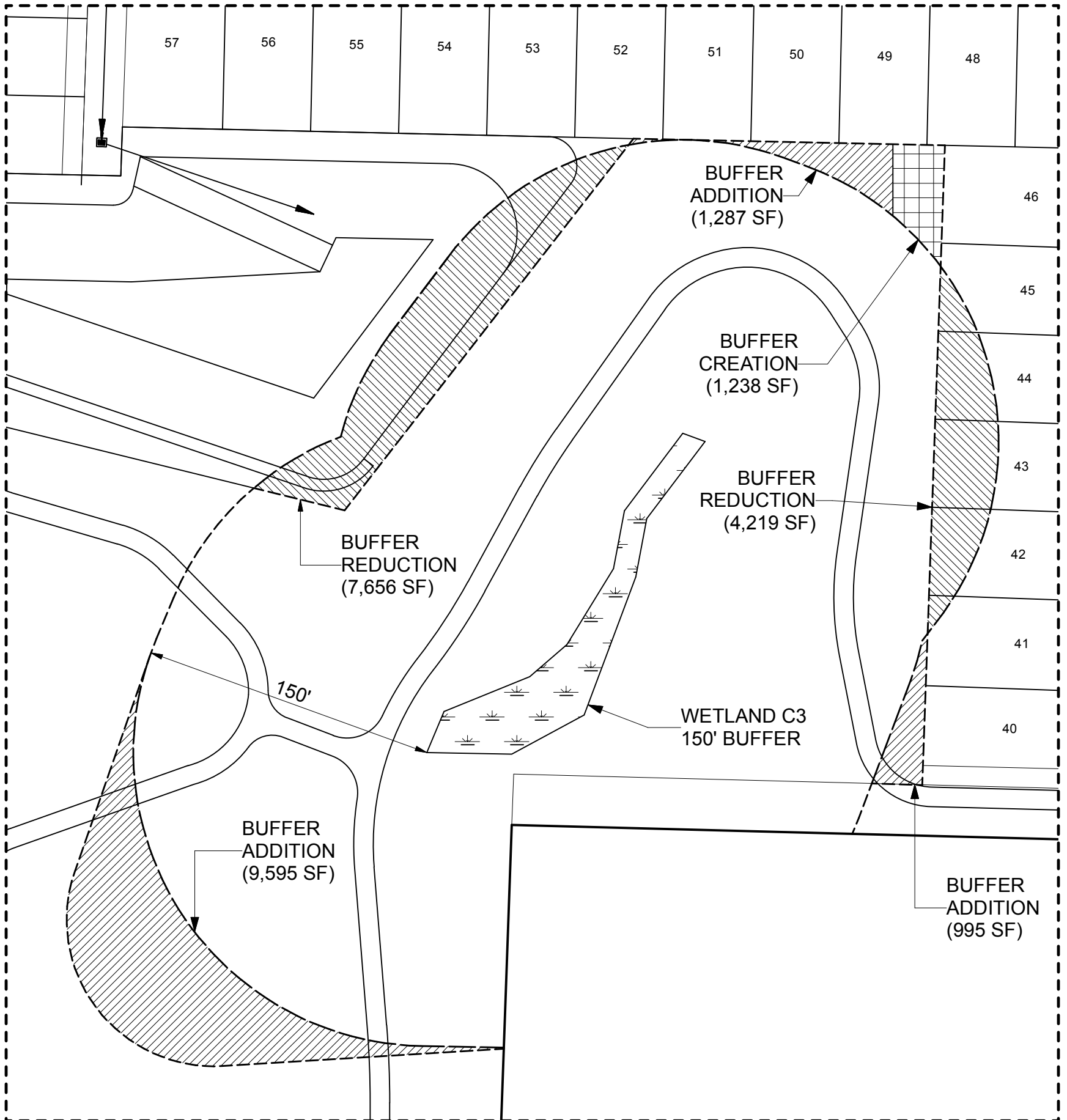
## MADRONA RIDGE - RAINIER STREET

PORTION OF SECTION 9, TOWNSHIP 30N, RANGE 1E, W.M.

INSET 1



INSET 1



### LEGEND

	WETLAND		PERMANENT BUFFER IMPACT
	BUFFER ADDITION		TEMPORARY BUFFER IMPACT
	BUFFER REDUCTION		BUFFER CREATION
	STANDARD BUFFER		FINAL BUFFER



Scale 1" = 60'



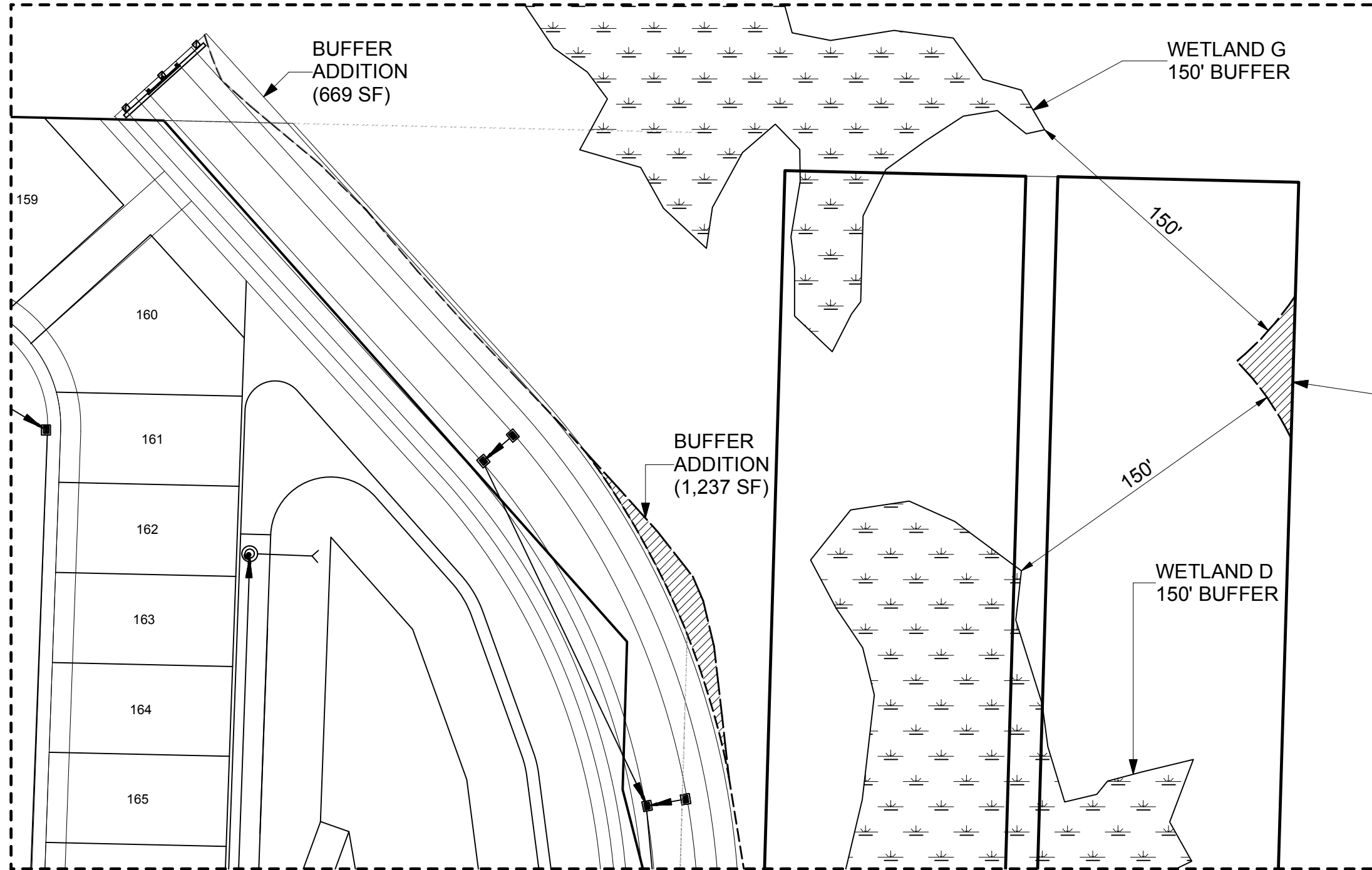
**Wetland Resources, Inc.**  
 Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance  
 9505 19th Avenue S.E. Suite 106 Everett, Washington 98208  
 Phone: (425) 337-3174  
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Critical Area Study & Buffer Mitigation Plan Map  
**Madrona Ridge**  
 Port Townsend  
 MonteBanc Management LLC  
 Attn: Chip McBroom  
 6230 Hollywood Blvd  
 Sarasota FL, 34231  
 Sheet 2/5  
 WRI #: 21224  
 Drawn by: EC  
 Date: 12/23/2021

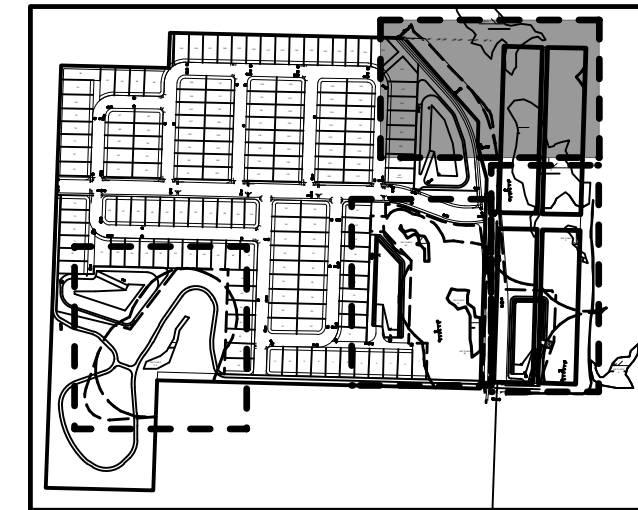
# CRITICAL AREA STUDY & BUFFER MITIGATION PLAN MAP (SHEET 3)

## MADRONA RIDGE - RAINIER STREET

PORTION OF SECTION 9, TOWNSHIP 30N, RANGE 1E, W.M.

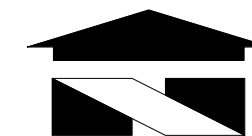


INSET 2

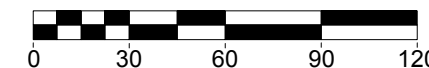


### LEGEND

	WETLAND		PERMANENT BUFFER IMPACT
	BUFFER ADDITION		TEMPORARY BUFFER IMPACT
	BUFFER REDUCTION		BUFFER CREATION
	STANDARD BUFFER		FINAL BUFFER



Scale 1" = 60'



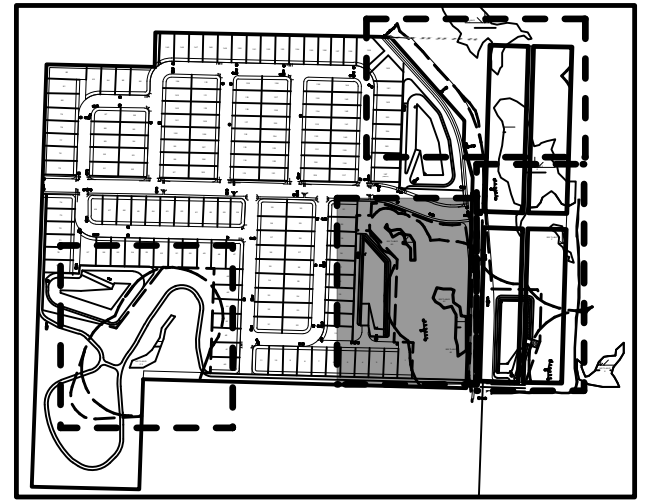
**Wetland Resources, Inc.**  
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Critical Area Study &  
 Buffer Mitigation Plan Map  
**Madrona Ridge**  
 Port Townsend  
 MonteBanc Management LLC  
 Attn: Chip McBroom  
 6230 Hollywood Blvd  
 Sarasota FL, 34231  
 Sheet 3/5  
 WRI #: 21224  
 Drawn by: EC  
 Date: 12/23/2021

# CRITICAL AREA STUDY & BUFFER MITIGATION PLAN MAP (SHEET 4)

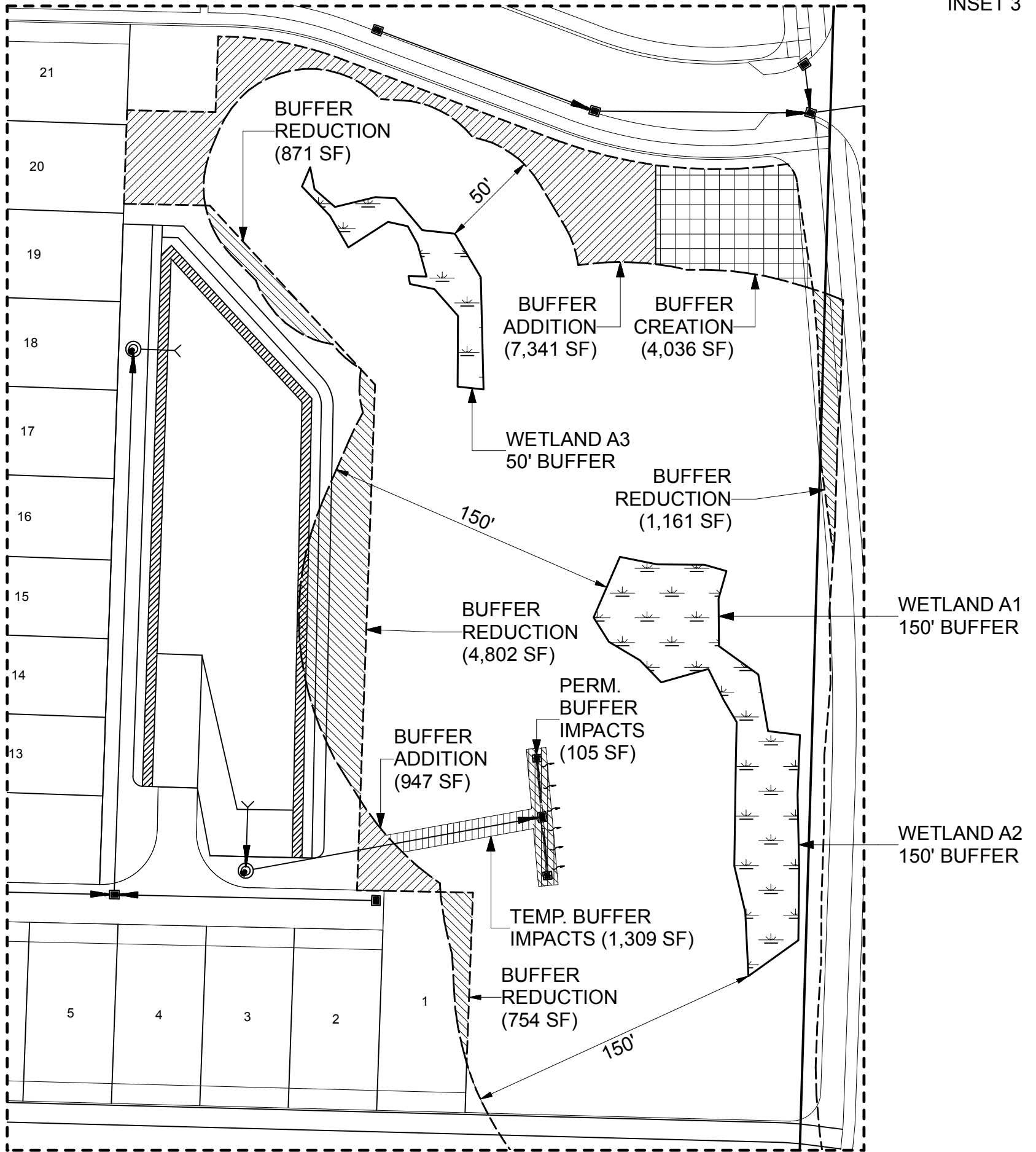
## MADRONA RIDGE - RAINIER STREET

PORTION OF SECTION 9, TOWNSHIP 30N, RANGE 1E, W.M.



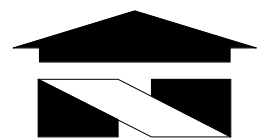
INSET 3

INSET 3

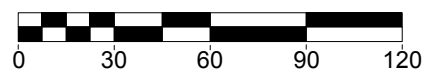


### LEGEND

	WETLAND		PERMANENT BUFFER IMPACT
	BUFFER ADDITION		TEMPORARY BUFFER IMPACT
	BUFFER REDUCTION		BUFFER CREATION
	STANDARD BUFFER		FINAL BUFFER



Scale 1" = 60'



**Wetland Resources, Inc.**  
 Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance  
 9505 19th Avenue S.E. Suite 106 Everett, Washington 98208  
 Phone: (425) 337-3174  
 Fax: (425) 337-3045  
 Email: mailbox@wetlandresources.com

Critical Area Study & Buffer Mitigation Plan Map  
**Madrona Ridge**  
 Port Townsend  
 MonteBanc Management LLC  
 Attn: Chip McBroom  
 6230 Hollywood Blvd  
 Sarasota FL, 34231  
 Sheet 4/5  
 WRI #: 21224  
 Drawn by: EC  
 Date: 12/23/2021

# CRITICAL AREA STUDY & BUFFER MITIGATION PLAN MAP (SHEET 5)

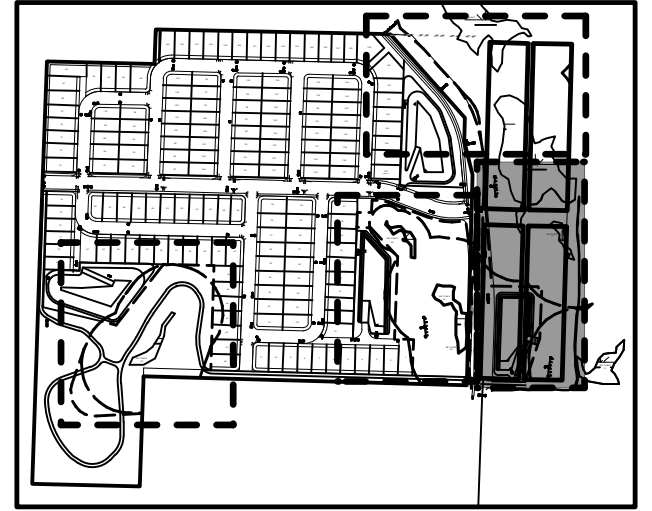
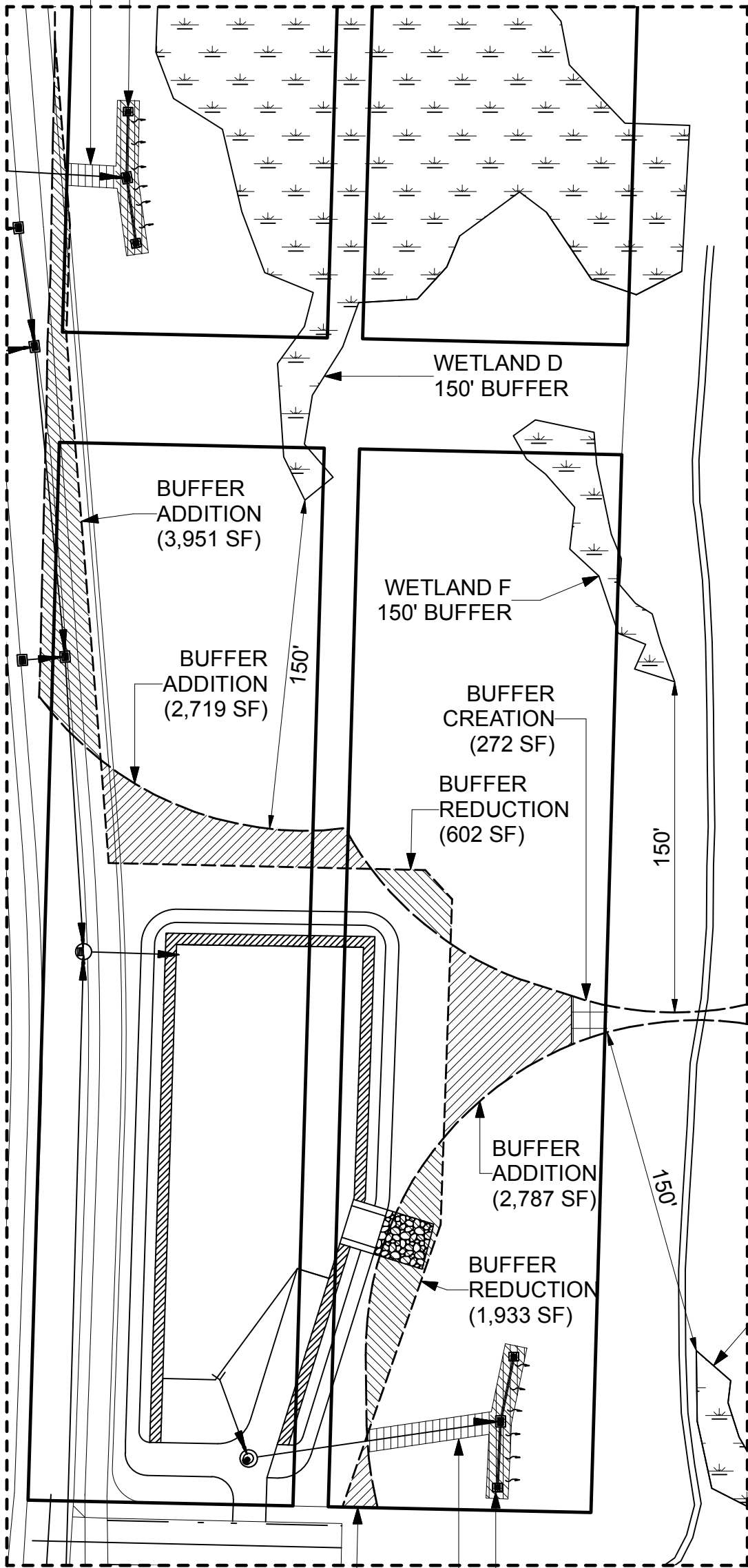
## MADRONA RIDGE - RAINIER STREET

PORTION OF SECTION 9, TOWNSHIP 30N, RANGE 1E, W.M.

TEMP.  
BUFFER  
IMPACTS  
(824 SF)

PERM.  
BUFFER  
IMPACTS  
(105 SF)

INSET 4



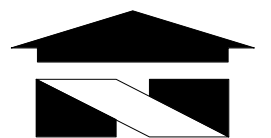
INSET 4

PERM. BUFFER  
IMPACTS (105 SF)

TEMP. BUFFER  
IMPACTS (1,154 SF)

### LEGEND

	WETLAND		PERMANENT BUFFER IMPACT
	BUFFER ADDITION		TEMPORARY BUFFER IMPACT
	BUFFER REDUCTION		BUFFER CREATION
	STANDARD BUFFER		FINAL BUFFER



Scale 1" = 60'



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 Sheet 5/5  
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 Drawn by: EC  
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**ATTACHMENT C**  
LOGGY CRITICAL AREA DETERMINATION



**CRITICAL AREA DETERMINATION:**

**PREPARED FOR:**

Montebanc Management  
6230 Hollywood Blvd.  
Sarasota, FL 34231-3006

**LALA PARCELS:**

001091002, 0010912005 & 001092006

**MARKEY PARCELS:**

973800201 & 973800301

**SITE LOCATION:**

Rainier Street North of Discover  
Road

**FOR SUBMITTAL TO:**

Port Townsend Department of  
Community Development

Documenting Critical Areas Subject  
to PTMC title 19 – Environmental Protection  
Section 19.05.110  
Critical Area 5 – Wetlands

**PREPARED BY:**

W David Loggy  
Loggy Sol and Wetland Consulting  
P.O. Box 2347  
Port Angeles, WA 98362

Cover photograph – Barred Owl

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**WETLAND CRITICAL AREA DETERMINATIONS**  
**FOR**  
**LALA AND MARKLEY PARCELS**

**CONSULTING COMPANY:** Loggy Soil and Wetland Consulting  
P.O. Box 2347  
Port Angeles, WA 98362

**LANDOWNERS**

Jeremy Lala  
1601 Rainier Street  
Port Townsend, WA 98365-9304

Sharon Markley  
6 Greensville Lane  
Longview, WA 98632-5392

**MAP LOCATION** Appendix I

**APPLICANT:** Montebanc Management  
6230 Hollywood Blvd.  
Sarasota, FL 34231-3006

**PROJECT** Critical Area determination of present or absent of wetlands  
for a new single-family residence land Plat.

**TAX PARCEL NUMBER(S):** Lala Parcels - 001091002, 001092005 and 001092006  
Markley Parcels - 973800201 & 973800301

**SITE LOCATION** All Parcels are found in Section 09, Township 30 North, Range 01 West,  
W.M., Jefferson County, Washington

Starting at the Discovery Lane and Rainier Drive traffic circle take Rainier  
Street north. The parcels lie on the side of Rainier Street starting 764 feet for  
the traffic circle (Exhibit 1).

**SIZE OF PARCEL**

Lala Parcels – 001091002 – 20.73 acres  
001092005 – 6.27 acres  
001092006 – 7.40 acres

Markley Parcels – 973800201 -5.62 acres  
973800301 – 5.24 acres

**INVESTIGATION PERIOD:** April thru May 2021



## PRE-EXISTING INVENTORIES:

The United States Fish and Wildlife (USFW) Nation Wide Inventory (NWI) does not identify any wetlands on the parcel. The Washington State Department of Ecology does not identify any Natural Heritage Featured or High Conservation Value Wetlands.

At least three (3) private wetland firms have identified wetlands on one or more of the parcels. Two individual wetlands have been identified and delineated on Parcel 001091002 (Alkai Consultants, LLC., August 2008). Two wetlands on Parcel 001092006 (Loggy Soil and Wetland Consulting, April 2021). One wetland occurring on both parcels 973800201 and 973800301 (Alkai Consultants, LLC., August 2008, Loggy Soil and Wetland Consulting, and Westech Company, March 2008)

## METHOD AND APPROACH

Usually, a two-Level Assessment is used to identify, wetlands. The first level of assessment includes review of existing information conducted to develop background knowledge of physical features, and to identify the potential for wetland occurrence on the parcel. The resource documents available for preliminary review of the site conditions can include data for government agencies. Data from other agencies included USDA Soil Conservation Service (SCS), "Soil Survey of Jefferson County Area Washington", 2015, Jefferson County and Google aerial photography and any adjacent wetland reports on file with city or county governments.

The second level of assessment includes on-site investigation. On-site investigation includes establishing site plots on the wetlands. The plots describe the presence of wetland vegetation, soil and hydrology data describing it as a wetland. Field data and other pertinent area data is used to classify the wetland(s) as to category of importance with approved Washington State Rating System<sup>1</sup>. The next part includes marking the boundary of the wetland area so that it can be surveyed to plot its location correctly on a map.

## WETLAND AND NON-WETLAND HABITATS

### NON-WETLAND SITE

**Vegetation** - One upland area was sampled. Sample Plot 1 describes the undisturbed forested sites on the parcel. The data sheet can be viewed in Appendix II. The forested site consists of an over story of red alder (*Alnus rubra*), big-leaf maple (*Acer macrophyllum*) Douglas fir (*Pseudotsuga menziesii*) and Western hemlock (*Tsuga heterophylla*). Shrubby understory at the sample point is dominated by salal (*Gaultheria shallon*). Herbaceous understory vegetation includes mostly *Agrostis* species.

<sup>1</sup> Department of Ecology State of Washington. Washington State Wetland Rating System, For Western Washington, 2014 Update: October 2014 – Effective January 22015 Publication no. 14-06-029.



**Soils** - The soils are moderately deep well drained soil with slow runoff and rapid infiltration. and consist of a 4-inch thick very dark grayish brown sandy loam surface on top of greater than 8 inches dark yellowish brown loamy sand.

**Hydrology** – At time of soils sampling the was greater than 12 inches so the site did not meet wetland hydrology.

The three wetlands (A1-A3) delineated by Loggy Soils and Wetland Consulting occurred on Parcel 001092006. On-site investigation determined and verified all three wetlands are shallow depressional wetlands. The wetlands contain all three indicators of wetland vegetation, soils, and hydrology to meet the requirement to be wetlands.<sup>2</sup> The hydric soil was classified using Filed Indicators of Hydric Soils in the United States, Version 8.1, 2017.

One sample site was taken to describe the vegetation, soil, and hydrologic features of Wetlands A1 and A3 while two plots were described in Wetland A2. One plot was done to describe the vegetation, soils, and hydrologic features on the non-wetland area on the project site. The wetlands and plot sites are presented in Appendix 1. The plot data is presented in Appendix II. The wetlands' classification rating data is presented in Appendix III.

## WETLANDS

### **Wetlands A1-A3**

Wetlands A1 -A3 are in shallow depressions. Wetland A1 and A2 are along the west boundary of the present location of Rainier Street. Wetland A3 is located on a gently slope to the north west of Wetlands A1 and A2 (Map Exhibit, Appendix I). Plot data can be viewed in Appendix II. Ratings for the wetlands are presented in Table I.

**Vegetation** – Wetland A2 and A3 supports herbaceous plant cover of creeping buttercup and grass plant. The two edges of wetlands are well defined by thick under growth of salal (*Gaultheria shallon*) and common snow (*Symphoricarpos albus*) and sword fern (*Polystichum munitum*). Wetland A2 has intrusions of Nootka Rose (*Rosa nutkana*). Upland trees around the wetlands include red alder (*Alnus Rubra*), Western hemlock (*Tsuga heterophylla*), Douglas fir (*psseudotsuga menziesii*). Bigleaf maple (*Acer macrophyllum*) and Pacific Madrone (*Arbutus Madrone*). C

**Soils** - The soils at sample Plots 1, 2 and 3 have dark colors greater than 10 inches with common redoximorphic soil features starting at depths greater than 14 inches. The soils are loamy sand or sand loams throughout the soil's depth. The soils overlay glacial till. The soil on Plot 4, wetland 3, is shallow over glacial till with redoximorphic features starting before 10 inches in depth and are less than 16 inches to glacial till. The soil texture on plot 4 are same as the other 3 plots but are gravellier.

**Hydrology** – Parts of the wetland becomes seasonally inundated in the winter and spring but dry out during the summer. Portions of the wetland areas not seasonally inundated are seasonally saturated. All three wetland had saturated or inundated.

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<sup>2</sup> Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0), May 2010.

### **Wetland C3**

In June 2007, C3 Habitat Corporation delineated and classified wetlands on the project area<sup>3</sup>. Three wetlands were identified with 2 of the wetlands not being large enough to be regulated. The largest wetland was identified and surveyed. The wetland is in the southwest corner of the of project area and is shown on the conceptual site plan (Exhibit II). The wetland in the report is titled Wetland C3. The review of the site indicates the wetland is still present and the wetland criteria are still present.

**Vegetation** – Dominate vegetation a dense tree cover consisting of Scouler's willow (*Salix scouleriana*) and dominant shrub cover of Douglas spiraea (*Spiraea douglasii*). The dominant herbaceous understory consists of soft rush (*Juncus effusus*). Plot data can be viewed in footnoted report. The vegetative cover meets the criteria for wetland vegetation.

**Soils** – The soil consisted of 4 inches of 4 inches of very dark grayish brown sandy loam over 8 inches of depleted (grayish brown) dense sandy clay loam. The soils meet the hydric (wetland) soil A11-Depleted Below Dark Surface criteria.

**Hydrology** – The present of wetland hydrology was made Drainage patterns, positive FAC-neutral ratio, and seasonal hydrology.

**Wetland D** – Wetland D cover two (2) parcels consisting of four (4) lots that are between the east side right-of-way (ROW) of Rainier Street and utilities ROW that also serves as a walking trail. The wetland continues onto parcel to the north. The wetland is probably the most delineated and wetland in all of Port Townsend. A least four wetland delineating companies have classified and delineated this wetland.

The wetland has been rated as both a Category II or III depending on the wetland specialist and company. Three of the ratings were done Washington State's 2014 Rating System. The most resent rating done by Westech Company rated the wetland as a Category III Wetland using the Washington State revised 2014 rating system. I rated the wetland myself using the revised 2014 rating system and concur with Westech that the wetland is a Category III wetland.

### **WETLAND RATING**

Wetlands A1- A3 were rated using the updated 2014 Washington Wetland Rating System. Wetland C3 was rated using the existing field data and supplemented with the up dated rating system. An addendum wetland rating was done using the updated 2014 Washington State Wetland Rating System to ensure the wetland C3 is still a Category. The addendum was done due to inconsistencies found in the 2004 rating of the wetland. Only those figures needed to update new information are presented in the addendum. The classification rating sheets for Wetlands A1-A3 and well as the addendum for Wetland C3 can be reviewed in Appendix III.

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<sup>3</sup> C3 Habitat Corporation, NE 3530 Old Belfair Hwy #56, Belfair, Washington 98528



EXHIBIT II – LOCATION OF WETLAND C3

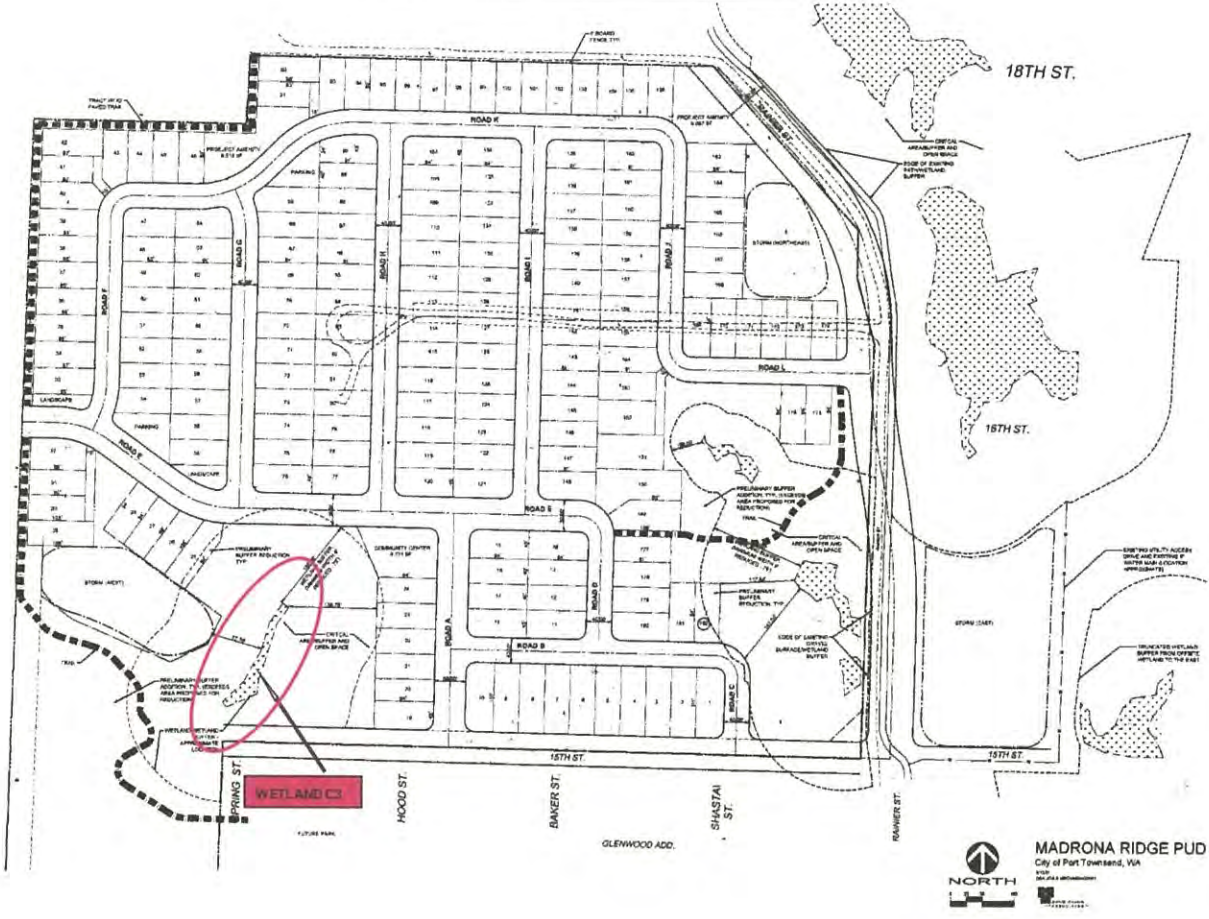


Table 1

Compiled Wetland Rating Information on Parcel 001091006

Wetland Name	Total Wetland Acres	Wetland Extends Off the Project Site? (Y/N)	WETLAND RATING FUNCTION SCORES				Total Functions Score	MGM Class, etc.	Wetland Category	Wetland Buffer Width
			FUNCTION	WATER QUALITY	HYDROLOGIC	HABITAT				
A1-A2		No	Site Potential	H	M	M				
			Landscape Potential	M	M	H				
			Value	L		M				
				6	5	7	18	1*	III	150'
A2		No	Site Potential	M	M	M				
			Landscape Potential	L	L	H				
			Value	L	L	M				
				4	4	7	15	1*	IV	50'
C3		No	Site Potential	M	M	M				
			Landscape Potential	M	L	H				
			Value	L	L	M				
				5	4	7	16	1*	III	150'
D	2.5	Yes	Site Potential	M	M					
			Landscape Potential	M	M					
			Value	L	M					
				5	6	7	18	1*	III	150'
<b>HGM Wetland Classes</b> 1. Depression, 2. Slope, 3. Fat, 4. Riverine, 5. Salt Water Tidal Fringe, 6. Coastal Lagoon, 7. Forest, 8. Estuarine, 9. Bogs, 10. Interdual Coastal and 11. High Conservation Value										

## **WETLAND BUFFERS**

Protection buffers will be established for each wetland as per directed in PTMC 19.05.110 (G) (2) (a). Buffer width for each of the wetlands are listed in Table 1.

Wetland D's buffer extends over the utility's corridor and trail, and onto other developable lots and Rainier Street. Under PTMC 19.05.110 (G) (7) buffers may be waived by the director for some circumstances. The buffer extending over the utility's corridor and trail, and onto other developable lots meet circumstances allowing a waiver.

The wetland buffer on the lots meets the requirement in 19.05.110 (G) (7) (b). That is the parcel lies landward of an existing legally established roadway (Rainier Street) and the utility corridor and trail. Although the train is not paved it is a heavily use trail by people of Port Townsend. With the development of Madrona Ridge Development, the existing trails and undeveloped trail along the utility corridor effectively eliminates the function and value derived from the required buffer width.



**APPENDIX I**

**MAP OF LOCATION OF WETLANDS A1-A3**

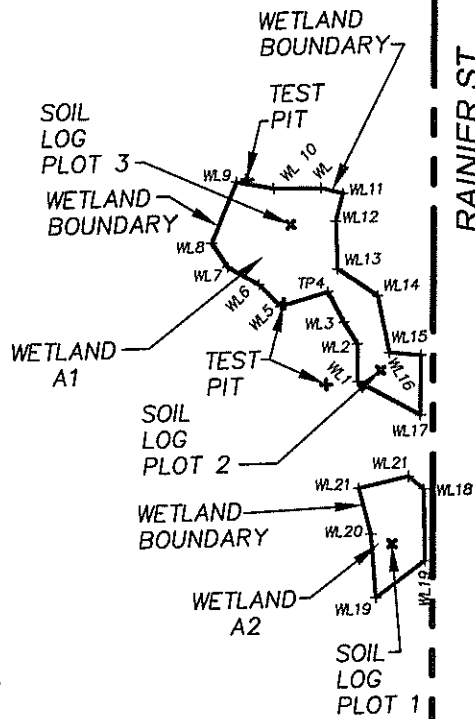
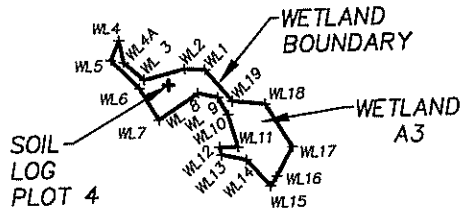
**EXHIBIT MAP  
SHOWING WETLAND BOUNDARY**

WITHIN A.P.N. 001-092-006  
WITHIN THE NORTH 1/2, SECTION 9, T. 30 N., R. 1 W., W.M.  
JEFFERSON COUNTY, WASHINGTON

A.P.N. 001-092-005

30' PRIVATE ACCESS  
AND UTILITY EASE.  
PER A.F.N. 449206

A.P.N. 001-092-006



26' PUBLIC ACCESS  
AND UTILITY EASEMENT  
PER A.F.N. 596561

16TH ST.

RAINIER ST.

BLOCK 3  
MOTORLINE ADD.  
VOL. 2 OF PLATS, PG. 10

15TH ST.

BLOCK 2

SHASTAI ST.

BLOCK 1  
GLENWOOD ADD.  
VOL. 1 OF PLATS,  
PAGE 62

Scale 1" = 100'



LOGGY SOIL AND WETLAND  
CONSULTING

534 GOA WAY \* PORT ANGELES, WA \* 98362  
PHONE: (360) 457-3920

TITLE:

EXHIBIT MAP  
SHOWING WETLAND BOUNDARY  
WITHIN A.P.N. 001-092-006

SHEET:

1 OF 1

**APPENDIX II**

**FIELD DATA FORMS**

**WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Regions 48.119**

Project/Site: 001092006 Madrona Ridge Plot 5 Non-Wetland	City/County: Port Townsends	Sampling Date March 23, 2021
Applicant/Owner: Jeremy Elgin Lala	State: WA	Sampling Point: Plot 5 Non-Wetland
Investigator(s): W. David Loggy, Loggy Soil & Wetland Consulting	Section, 9. Township 30N, Range:1W	
Landform (hillslope) Terrace	Local relief (concave, convex, none): Convex	Slope (%) 10
Subregion (LRR): A	Lat: 48.1109 N	Long: -122.81
Soil Map Unit Name: Clallam gravelly sandy loam (see any correction in Soil Section)		NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Are vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> 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: <b>Soil has been disturbed in past that appears to be by a burn.</b>	

**VEGETATION – Use scientific names of plants**

<b>Trees Stratum</b> (Plot size:30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. Pseudotsuga menziesii	40	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC:	(A) 4
2. Alnus rubra	30	Yes	FAC	Total; Number of dominant Species Across All Strata:	(B) 6
3. Arbutus menziesii	10	Yes	FACU	Percent of Dominant Species That Are OBL, FCW, or FAC:	(A/B) 66
4.					
5.					
80% = Total Cover				<b>Prevalence Index worksheet:</b>	
<b>Sapling/Shrub Stratum</b> (Plot size: 10' Radius)				Total % Cover of: <u>        </u> Multiply by:	
1. Gaultheria shallon	40	Yes	FACU	OBL species	X 1 =
2. Rosa nutkana	10	Yes	FAC	FACW species	X 2 =
3. Salix scouleriana	10	No	FAC	FAC species	X 3 =
4.				FACU species	X 4 =
5.				UPL Species	X 5 =
6.				Column totals	(A)                      (B)
7.				Prevalence index = B/A =	
60% = Total Cover				<b>Hydrophytic Vegetation Indicators:</b>	
<b>Herb Stratum</b> (Plot size: 1.64' Radius)				<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 <sup>1</sup> <input type="checkbox"/> 4. Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5. Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
1. Agrostis species	10	Yes	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2.					
3.					
4.					
5.					
6.					
7.					
100% = Total Cover					
<b>Woody Vine Stratum</b> (Plot size: 10' Radius)					
1.					
2.					
= Total Cover					
% Bare Ground in Herb Stratum					
Remarks:					

**SOIL**

Sampling Point: Plot 5 Non-Wetland

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

Depth (inches)	Matrix		Redox Features				Textures	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/2	100					LS	
4-12	10YR 4/5	100					LS	

<sup>1</sup>Type: C=Concentrations, D=Depletion. RM=Reduced Matrix. CXS=Covered or Coated Sand Grains. <sup>2</sup>Location: Pl=Pore lining, RC=Root Channel, M=Matrix

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

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Other (Explain in Remarks <sup>3</sup>)

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

**Restrictive Layer (if present):**

Type:

Depth (inches):

Hydric Soil Present? Yes  No

Remarks: The soils are more gravelly loamy sand. Are deeper than Clallam and have brighter value and chroma colors.

**HYDROLOGY**

**Wetland Hydrology Indicators**

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated concave Surface (B8)

- Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in tilled Soils (C6)
- Stunted or Stressed Plants (D1') (LRR A)
- Other (Explain in remarks)

Secondary Indicators (2 or more required)

- Water Stained Leaves (B9) (MRLA 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): >12"

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: There were areas of shallow inundation within the wetland area on April 8.

**WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Regions 48.119**

Project/Site: 001092006 Madrona Ridge Plot, Wetland A1		City/County: Port Townsends	Sampling Date MAR 23, 2021
Applicant/Owner: Jeremy Elgin Lala		State: WA	Sampling Point: Plot 1 Wetland A1
Investigator(s): W. David Loggy, Loggy Soil & Wetland Consulting		Section, 9. Township 30N, Range: 1W	
Landform (hillslope) - depression		Local relief (concave, convex, none): Concave	Slope (%) 4
Subregion (LRR): A	Lat: 48° 06' 08" N	Long: -122° 48' 24" W	Datum:
Soil Map Unit Name: Clallam gravelly sandy loam (see any correction in Soil Section)			NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)			
Are vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Are vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> 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: <b>Soil has been disturbed in past that appears to be by a burn.</b>	

**VEGETATION – Use scientific names of plants**

<b>Trees Stratum</b> (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. Alnus rubra	40	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: (A) 5	
2. Salix scouleriana	15	Yes	FAC	Total; Number of dominant Species Across All Strata: (B) 6	
3.				Percent of Dominant Species That Are OBL, FCW, or FAC: (A/B) 84	
4.					
5.					
55% = Total Cover				<b>Prevalence Index worksheet:</b>	
<b>Sapling/Shrub Stratum</b> (Plot size: 10' Radius)				Total % Cover of: Multiply by:	
1. Rosa nutkana	40	Yes	FAC	OBL species	X 1 =
2. Rubus procerus	20	Yes	FACU	FACW species	X 2 =
3. Rubus spectabilis	20	No	FAC	FAC species	X 3 =
4. Symphoricarpos albus	10	No	FACU	FACU species	X 4 =
5.				UPL Species	X 5 =
6.				Column totals	(A) (B)
7.				Prevalence index = B/A =	
90% = Total Cover				<b>Hydrophytic Vegetation Indicators:</b>	
<b>Herb Stratum</b> (Plot size: 1.64' Radius)				<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 <sup>1</sup> <input type="checkbox"/> 4. Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5. Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
1. Juncus effusus	10	Yes	FACW		
2. Ranunculus repens	10	Yes	FACW		
3.					
4.					
5.					
6.					
7.					
100% = Total Cover					
<b>Woody Vine Stratum</b> (Plot size: 10' Radius)					
1.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
2.					
= Total Cover					
% Bare Ground in Herb Stratum				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:					



**SOIL**

Sampling Point: Plot 1, Wetland A1

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

Depth (inches)	Matrix		Redox Features				Textures	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/2	100					LS	
8-16	10YR 4/1	100	10YR 4/5	20	C	M	LS	
16-20	10YR 4/2		10YR 4/5	20	C	M	LS	

<sup>1</sup>Type: C=Concentrations, D=Depletion. RM=Reduced Matrix. CXS=Covered or Coated Sand Grains. <sup>2</sup>Location: Pl=Pore lining, RC=Root Channel, M=Matrix

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (SS) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks <sup>3</sup> ) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**    Yes     No

Remarks: Soils are more gravelly loamy sand than gravelly sandy loams.

**HYDROLOGY**

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

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

Surface Water Present?    Yes     No     Depth (inches): \_\_\_\_\_

Water Table Present?    Yes     No     Depth (inches): 0" surface.

Saturation Present? (includes capillary fringe)    Yes     No     Depth (inches): 0" surface

**Wetland Hydrology Present?**    Yes     No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Regions 48.119**

Project/Site: 001092006 Madrona Ridge Plot 4 Wetland A3		City/County: Port Townsends	Sampling Date April 7
Applicant/Owner: Jeremy Elgin Lala		State: WA	Sampling Point: Plot 4 Wetland A3
Investigator(s): W. David Loggy, Loggy Soil & Wetland Consulting		Section, 9. Township 30N, Range:1W	
Landform (hillslope) Terrace		Local relief (concave, convex, none): Concave	Slope (%) 4
Subregion (LRR): A	Lat: 48.119 N	Long: -122.8069	Datum:
Soil Map Unit Name: Clallam gravelly sandy loam (see any correction in Soil Section)			NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)			
Are vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Are vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> 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: <b>Soil has been disturbed in past that appears to be by a burn.</b>	

**VEGETATION – Use scientific names of plants**

<b>Trees Stratum</b> (Plot size:30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. Alnus rubra	30	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: (A) 3	
2. Pseudotsuga menziesii	20	Yes	FACU	Total; Number of dominant Species Across All Strata: (B) 5	
3.				Percent of Dominant Species That Are OBL, FCW, or FAC: (A/B) 60	
4.					
5.					
20%= Total Cover				<b>Prevalence Index worksheet:</b>	
<b>Sapling/Shrub Stratum</b> (Plot size: 10' Radius)				Total % Cover of: Multiply by:	
1. Symphoricarpos albus	10	Yes	FACU	OBL species	X 1 =
2.				FACW species	X 2 =
3.				FAC species	X 3 =
4.				FACU species	X 4 =
5.				UPL Species	X 5 =
6.				Column totals	(A) (B)
7.				Prevalence index = B/A =	
10% =Total Cover				<b>Hydrophytic Vegetation Indicators:</b>	
<b>Herb Stratum</b> (Plot size: 1.64' Radius)				<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 <sup>1</sup> <input type="checkbox"/> 4. Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5. Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
1. Poaceae mostly Agrostis species	80	Yes	FAC		
2. Ranunculus repens	20	Yes	FACW		
3.					
4.					
5.					
6.					
7.					
100% =Total Cover					
<b>Woody Vine Stratum</b> (Plot size: 10' Radius)					
1.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
2.					
=Total Cover					
% Bare Ground in Herb Stratum				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:					

**SOIL**

Sampling Point: Plot 4 Wetland A3

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

Depth (inches)	Matrix		Redox Features				Textures	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/3	100					LS	
4-11	10YR 3/3	80	7.5YR 4/4	20	C	M	LS	
11-12	10YR 2/1	100					LS	Charcoal Layer
12-16	10YR 5/2	100					LFS	

<sup>1</sup>Type: C=Concentrations, D=Depletion. RM=Reduced Matrix. CXS=Covered or Coated Sand Grains. <sup>2</sup>Location: Pl=Pore lining, RC=Root Channel, M=Matrix

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

- 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 (SS)
- 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 Soils<sup>3</sup>:**

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Other (Explain in Remarks <sup>3</sup>)

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

**Restrictive Layer (if present):**

Type:

Depth (inches):

Hydric Soil Present? Yes  No

Remarks: Soils are more loamy sand in texture and deeper than the Clallam Series.

**HYDROLOGY**

**Wetland Hydrology Indicators**

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated concave Surface (B8)

- Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in tilled Soils (C6)
- Stunted or Stressed Plants (D1') (LRR A)
- Other (Explain in remarks)

Secondary Indicators (2 or more required)

- Water Stained Leaves (B9) (MRLA 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" surface.

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): 0" surface

Wetland Hydrology Present? Yes  No

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

Remarks: There were areas of shallow inundation within the wetland area on April 8.

**APPENDIX III**  
**WETLAND RATING DATA SHEETS**  
**WETLAND FIGURES FOR RATING SHEETS**  
**WETLAND A1-A3**  
**WETLAND C3**

**APPENDIX III**

**WETLAND RATING DATA SHEETS  
WETLAND FIGURES FOR RATING SHEETS**

**WETLAND A1-A3  
WETLAND C3  
WETLAND D**



Wetland name or number A1 & A2 001092006

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): A1 & A2 001092006 Date of site visit: 7 april 2021  
 Rated by W. David loggy Trained by Ecology? Yes  No  Date of training 11/8-9/20, 2017  
 HGM Class used for rating DEPRESSION 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 Jefferson County & Google Photos, USFW, DRN & WF&W maps

**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			
<i>Circle the appropriate ratings</i>										
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	<b>TOTAL</b>
<b>Score Based on Ratings</b>	6			5			7			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	N/A



## Maps and figures required to answer questions correctly for Western Washington

### Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	SEE NOTE
Hydroperiods	D 1.4, H 1.2	SEE NOTE
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	A
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	B
Map of the contributing basin	D 4.3, D 5.3	C
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	D
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	E
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	N/A

### Riverine Wetlands

NOTE: HERBACEOUS AND SHRUB WETLAND AREA COULD NOT BE SHOWN BECAUSE OF DENSE TREES COVER OVER THE WETLAND.

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 <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> 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 A1 & A2 001092006

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 A1 & A2 001092006

**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	<b>3</b>
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		<b>0</b>
D 1.3. <u>Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):</u> 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	<b>5</b>
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	<b>4</b>
Total for D 1	Add the points in the boxes above	<b>11</b>

**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	<b>0</b>
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	<b>1</b>
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	<b>0</b>
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	<b>0</b>
Total for D 2	Add the points in the boxes above	<b>1</b>

**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	<b>0</b>
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	<b>0</b>
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	<b>0</b>
Total for D 3	Add the points in the boxes above	<b>0</b>

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



<b>DEPRESSIONAL AND FLATS WETLANDS</b>		
<b>Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation</b>		
<b>D 4.0. Does the site have the potential to reduce flooding and erosion?</b>		
<b>D 4.1. Characteristics of surface water outflows from the wetland:</b>		
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	<b>4</b>
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	
<b>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.</b>		
Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	<b>3</b>
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	
<b>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.</b>		
The area of the basin is less than 10 times the area of the unit	points = 5	<b>3</b>
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	
<b>Total for D 4</b>	Add the points in the boxes above	<b>10</b>
<b>Rating of Site Potential</b> If score is: <u>   </u> 12-16 = H <u>   </u> X 6-11 = M <u>   </u> 0-5 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		
<b>D 5.0. Does the landscape have the potential to support hydrologic functions of the site?</b>		
<b>D 5.1. Does the wetland receive stormwater discharges?</b>	Yes = 1 No = 0	<b>0</b>
<b>D 5.2. Is &gt;10% of the area within 150 ft of the wetland in land uses that generate excess runoff?</b>	Yes = 1 No = 0	<b>1</b>
<b>D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at &gt;1 residence/ac, urban, commercial, agriculture, etc.)?</b>	Yes = 1 No = 0	<b>0</b>
<b>Total for D 5</b>	Add the points in the boxes above	<b>1</b>
<b>Rating of Landscape Potential</b> If score is: <u>   </u> 3 = H <u>   </u> X 1 or 2 = M <u>   </u> 0 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		
<b>D 6.0. Are the hydrologic functions provided by the site valuable to society?</b>		
<b>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.</b>		
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):		
<input type="checkbox"/> Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	<b>0</b>
<input type="checkbox"/> 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	
<b>D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</b>		
	Yes = 2 No = 0	<b>0</b>
<b>Total for D 6</b>	Add the points in the boxes above	<b>0</b>
<b>Rating of Value</b> If score is: <u>   </u> 2-4 = H <u>   </u> 1 = M <u>   </u> X 0 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		



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

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. *Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*

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

H 1.4. Interspersion of habitats

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



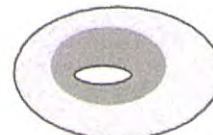
None = 0 points



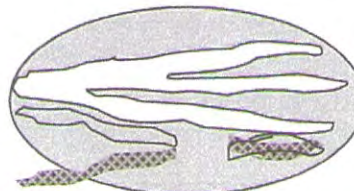
Low = 1 point



Moderate = 2 points



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



2



Wetland name or number A1 & A2 001092006

<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 (&gt; 4 in diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (dbh &gt; 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> 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 (&gt; 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>		2
Total for H 1	Add the points in the boxes above	8

**Rating of Site Potential** If score is: 15-18 = H X 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><i>Calculate:</i> % undisturbed habitat <u>38</u> + [(% moderate and low intensity land uses)/2] <u>4</u> = <u>42</u> %</p> <p>If total accessible habitat is:</p> <p>&gt; 1/3 (33.3%) of 1 km Polygon <span style="float: right;">points = 3</span></p> <p>20-33% of 1 km Polygon <span style="float: right;">points = 2</span></p> <p>10-19% of 1 km Polygon <span style="float: right;">points = 1</span></p> <p>&lt; 10% of 1 km Polygon <span style="float: right;">points = 0</span></p>			3
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>44</u> + [(% moderate and low intensity land uses)/2] <u>4</u> = <u>48</u> %</p> <p>Undisturbed habitat &gt; 50% of Polygon <span style="float: right;">points = 3</span></p> <p>Undisturbed habitat 10-50% and in 1-3 patches <span style="float: right;">points = 2</span></p> <p>Undisturbed habitat 10-50% and &gt; 3 patches <span style="float: right;">points = 1</span></p> <p>Undisturbed habitat &lt; 10% of 1 km Polygon <span style="float: right;">points = 0</span></p>			2
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>&gt; 50% of 1 km Polygon is high intensity land use <span style="float: right;">points = (- 2)</span></p> <p>≤ 50% of 1 km Polygon is high intensity <span style="float: right;">points = 0</span></p>			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*

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>			
<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: <span style="float: right;">points = 2</span></p> <p><input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</p> <p><input checked="" type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p><input checked="" type="checkbox"/> It is mapped as a location for an individual WDFW priority species</p> <p><input checked="" type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p><input checked="" 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 <span style="float: right;">points = 1</span></p> <p>Site does not meet any of the criteria above <span style="float: right;">points = 0</span></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.
- 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>	
<b>SC 1.0. Estuarine wetlands</b> Does the wetland meet the following criteria for Estuarine wetlands? <input type="checkbox"/> The dominant water regime is tidal, <input type="checkbox"/> Vegetated, and <input type="checkbox"/> With a salinity greater than 0.5 ppt Yes –Go to <b>SC 1.1</b> <b>No= Not an estuarine wetland</b>	
<b>SC 1.1.</b> 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 = <b>Category I</b> No - Go to <b>SC 1.2</b>	<b>Cat. I</b>
<b>SC 1.2.</b> Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> 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. <input checked="" type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = <b>Category I</b> No = <b>Category II</b>	<b>Cat. I</b>  <b>Cat. II</b>
<b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b> <b>SC 2.1.</b> Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to <b>SC 2.2</b> <b>No – Go to SC 2.3</b> <b>SC 2.2.</b> Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = <b>Category I</b> <b>No = Not a WHCV</b> <b>SC 2.3.</b> Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a> Yes – <b>Contact WNHP/WDNR and go to SC 2.4</b> <b>No = Not a WHCV</b> <b>SC 2.4.</b> Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = <b>Category I</b> <b>No = Not a WHCV</b>	<b>Cat. I</b>
<b>SC 3.0. Bogs</b> 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> <b>SC 3.1.</b> 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 <b>SC 3.3</b> <b>No – Go to SC 3.2</b> <b>SC 3.2.</b> 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 <b>SC 3.3</b> <b>No = Is not a bog</b> <b>SC 3.3.</b> 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 = <b>Is a Category I bog</b> No – Go to <b>SC 3.4</b> <b>NOTE:</b> 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. <b>SC 3.4.</b> 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 = <b>Is a Category I bog</b> No = <b>Is not a bog</b>	<b>Cat. I</b>







Wetland name or number A3 001092006

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): A3 001092006 Date of site visit: 23-25 March 2021  
 W. David Loggy  
 Rated by Loggy Soil & Wetland Consulting Trained by Ecology? Yes  No Date of training 11/8-9/20, 2017  
 HGM Class used for rating DEPRESSION 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 Jefferson County & Google Photos, USFW, DRN & WF&W maps

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

### 1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
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	<b>TOTAL</b>
<b>Score Based on Ratings</b>	4	4	7	15

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

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

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

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



Wetland name or number A3 001092006

## 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	SEE NOTE
Hydroperiods	D 1.4, H 1.2	SEE NOTE
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	A
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	B
Map of the contributing basin	D 4.3, D 5.3	C
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	D
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	E
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	N/A

### Riverine Wetlands

NOTE: HERBACEOUS AND SHRUB WETLAND AREA COULD NOT BE SHOWN BECAUSE OF DENSE TREES COVER OVER THE WETLAND.

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 <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> 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 A3 001092006

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 A3 001092006

### **DEPRESSIONAL AND FLATS WETLANDS**

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

<b>D 1.0. Does the site have the potential to improve water quality?</b>		
<b>D 1.1. Characteristics of surface water outflows from the wetland:</b> Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). <span style="float: right;">points = 3</span>  Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. <span style="float: right;">points = 2</span>  Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing <span style="float: right;">points = 1</span> Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. <span style="float: right;">points = 1</span>	<b>3</b>	
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		
<b>0</b>		
<b>D 1.3. Characteristics and distribution of persistent plants</b> (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area <span style="float: right;">points = 5</span> Wetland has persistent, ungrazed, plants > ½ of area <span style="float: right;">points = 3</span> Wetland has persistent, ungrazed plants > 1/10 of area <span style="float: right;">points = 1</span> Wetland has persistent, ungrazed plants < 1/10 of area <span style="float: right;">points = 0</span>	<b>5</b>	
<b>D 1.4. Characteristics of seasonal ponding or inundation:</b> <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 <span style="float: right;">points = 4</span> Area seasonally ponded is > ¼ total area of wetland <span style="float: right;">points = 2</span> Area seasonally ponded is < ¼ total area of wetland <span style="float: right;">points = 0</span>	<b>2</b>	
<b>Total for D 1</b>		<b>10</b>

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

<b>D 2.0. Does the landscape have the potential to support the water quality function of the site?</b>		
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	<b>0</b>
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	<b>0</b>
D 2.3. Are there septic systems within 250 ft of the wetland? <b>approved but not activated</b>	Yes = 1 No = 0	<b>0</b>
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	<b>0</b>
<b>Total for D 2</b>		<b>0</b>

**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

<b>D 3.0. Is the water quality improvement provided by the site valuable to society?</b>		
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	<b>0</b>
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	<b>0</b>
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	<b>0</b>
<b>Total for D 3</b>		<b>0</b>

**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 A3 001092006 6

<b>DEPRESSIONAL AND FLATS WETLANDS</b>		
<b>Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation</b>		
<b>D 4.0. Does the site have the potential to reduce flooding and erosion?</b>		
<b>D 4.1. Characteristics of surface water outflows from the wetland:</b>		
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	<b>4</b>
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	
<b>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.</b>		
Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	<b>3</b>
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	
<b>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.</b>		
The area of the basin is less than 10 times the area of the unit	points = 5	<b>3</b>
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	
<b>Total for D 4</b>	<b>Add the points in the boxes above</b>	<b>10</b>
<b>Rating of Site Potential</b> If score is: <u>   </u> 12-16 = H <u>   </u> X 6-11 = M <u>   </u> 0-5 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		
<b>D 5.0. Does the landscape have the potential to support hydrologic functions of the site?</b>		
<b>D 5.1. Does the wetland receive stormwater discharges?</b>	Yes = 1 No = 0	<b>0</b>
<b>D 5.2. Is &gt;10% of the area within 150 ft of the wetland in land uses that generate excess runoff?</b>	Yes = 1 No = 0	<b>0</b>
<b>D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at &gt;1 residence/ac, urban, commercial, agriculture, etc.)?</b>	Yes = 1 No = 0	<b>0</b>
<b>Total for D 5</b>	<b>Add the points in the boxes above</b>	<b>0</b>
<b>Rating of Landscape Potential</b> If score is: <u>   </u> 3 = H <u>   </u> 1 or 2 = M <u>   </u> X 0 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		
<b>D 6.0. Are the hydrologic functions provided by the site valuable to society?</b>		
<b>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.</b>		
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):		
<input type="checkbox"/> Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	<b>0</b>
<input type="checkbox"/> 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	
<b>D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</b>		
	Yes = 2 No = 0	<b>0</b>
<b>Total for D 6</b>	<b>Add the points in the boxes above</b>	<b>0</b>
<b>Rating of Value</b> If score is: <u>   </u> 2-4 = H <u>   </u> 1 = M <u>   </u> X 0 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		



**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 | <b>4</b> |
| <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          |          |
| <i>If the unit has a Forested class, check if:</i>   |                                  |          |
| <input checked="" 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 | <b>2</b> |
| <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   | <b>2 points</b>                     |          |
| <input type="checkbox"/> Freshwater tidal wetland  | <b>2 points</b>                     |          |

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. *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*

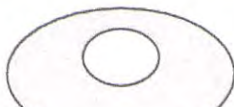
- |                              |            |          |
|------------------------------|------------|----------|
| If you counted: > 19 species | points = 2 | <b>1</b> |
| 5 - 19 species               | points = 1 |          |
| < 5 species                  | points = 0 |          |

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

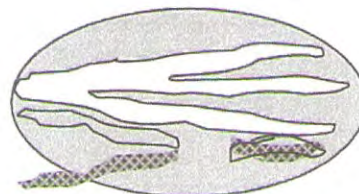
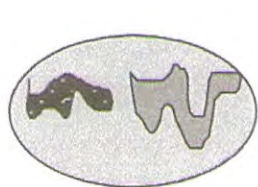


Moderate = 2 points



**2**

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

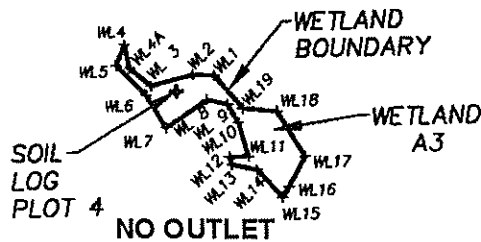


**EXHIBIT MAP  
SHOWING WETLAND BOUNDARY**

WITHIN A.P.N. 001-092-006  
WITHIN THE NORTH 1/2, SECTION 9, T. 30 N., R. 1 W., W.M.  
JEFFERSON COUNTY, WASHINGTON

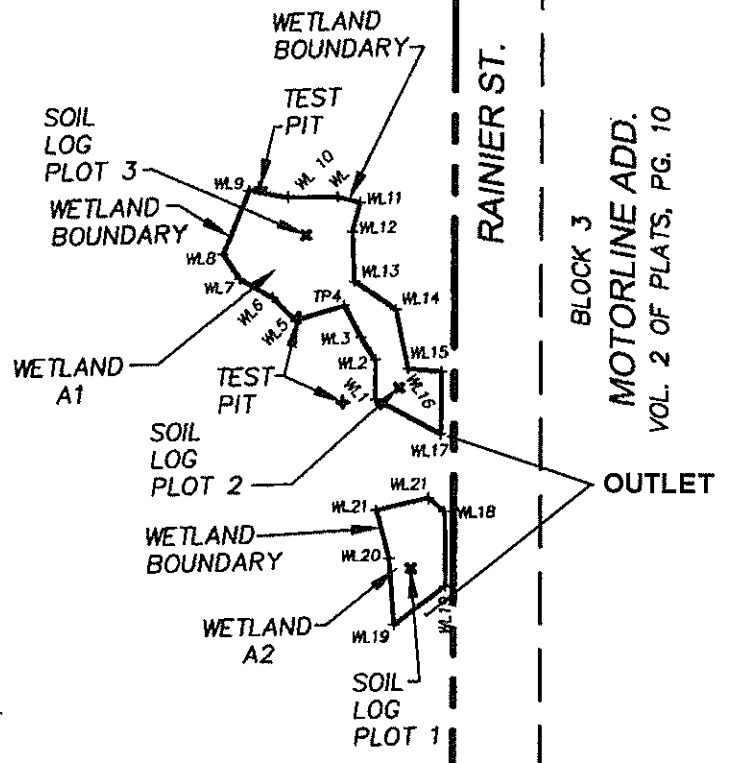
A.P.N. 001-092-005

30' PRIVATE ACCESS  
AND UTILITY EASE.  
PER A.F.N. 449206



16TH ST.

A.P.N. 001-092-006



RAINIER ST.

BLOCK 3  
MOTORLINE ADD.  
VOL. 2 OF PLATS, PG. 10

26' PUBLIC ACCESS  
AND UTILITY EASEMENT  
PER A.F.N. 596561

15TH ST.

BLOCK 2

BLOCK 1  
GLENWOOD ADD.  
VOL. 1 OF PLATS,  
PAGE 62

SHASTAI  
ST.

Scale 1" = 100'



FIGURE - A

SHEET: 1 of 1	<b>LOGGY SOIL AND WETLAND CONSULTING</b>
	534 GOA WAY * PORT ANGELES, WA * 98362 PHONE: (360) 457-3920

TITLE: <b>EXHIBIT MAP SHOWING WETLAND BOUNDARY WITHIN A.P.N. 001-092-006</b>
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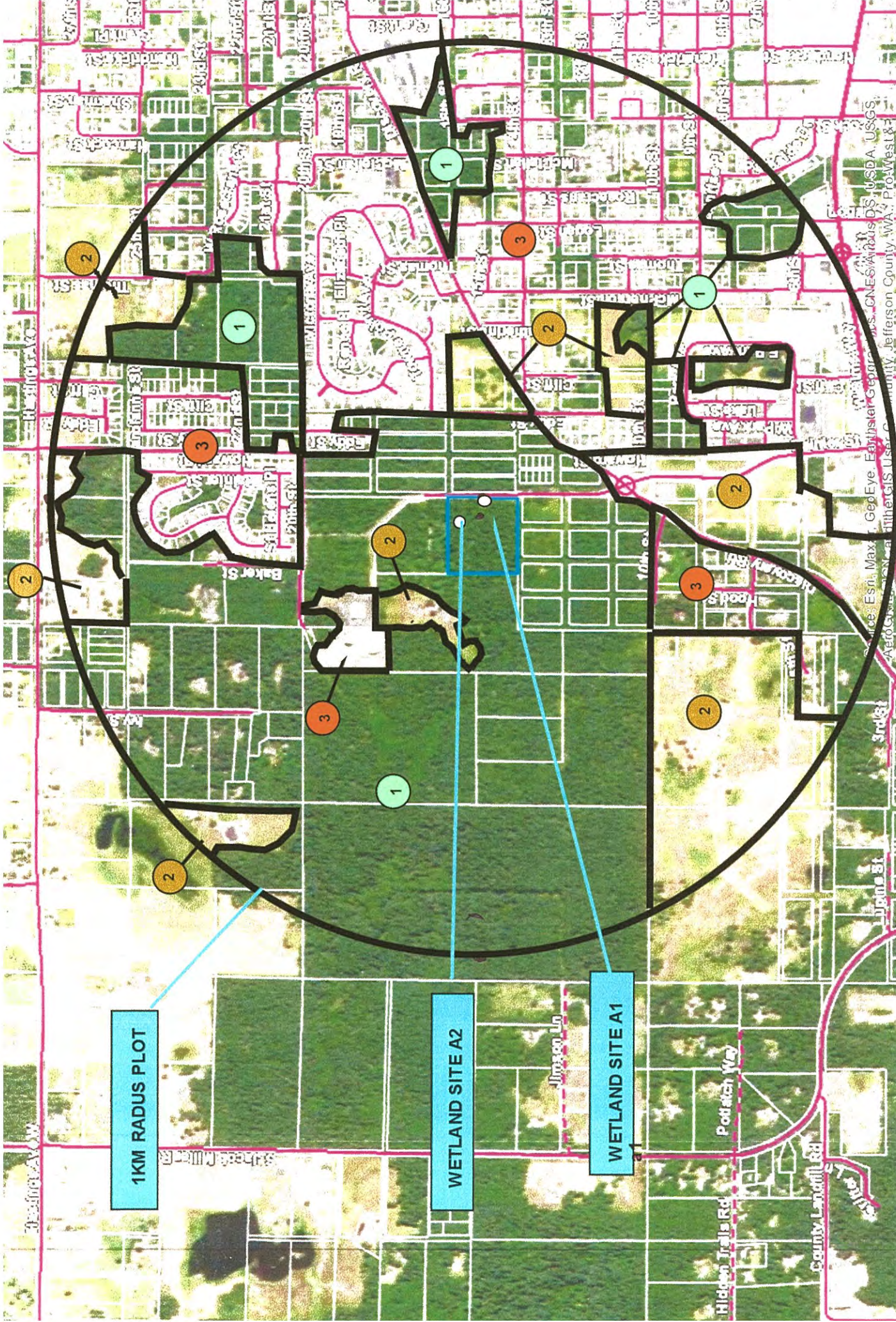


FIGURE - D  
 LANDSCAPE POTENTIAL TO IMPACT HABITAT FUNCTIONS OF WETLAND SITE

LEGEND

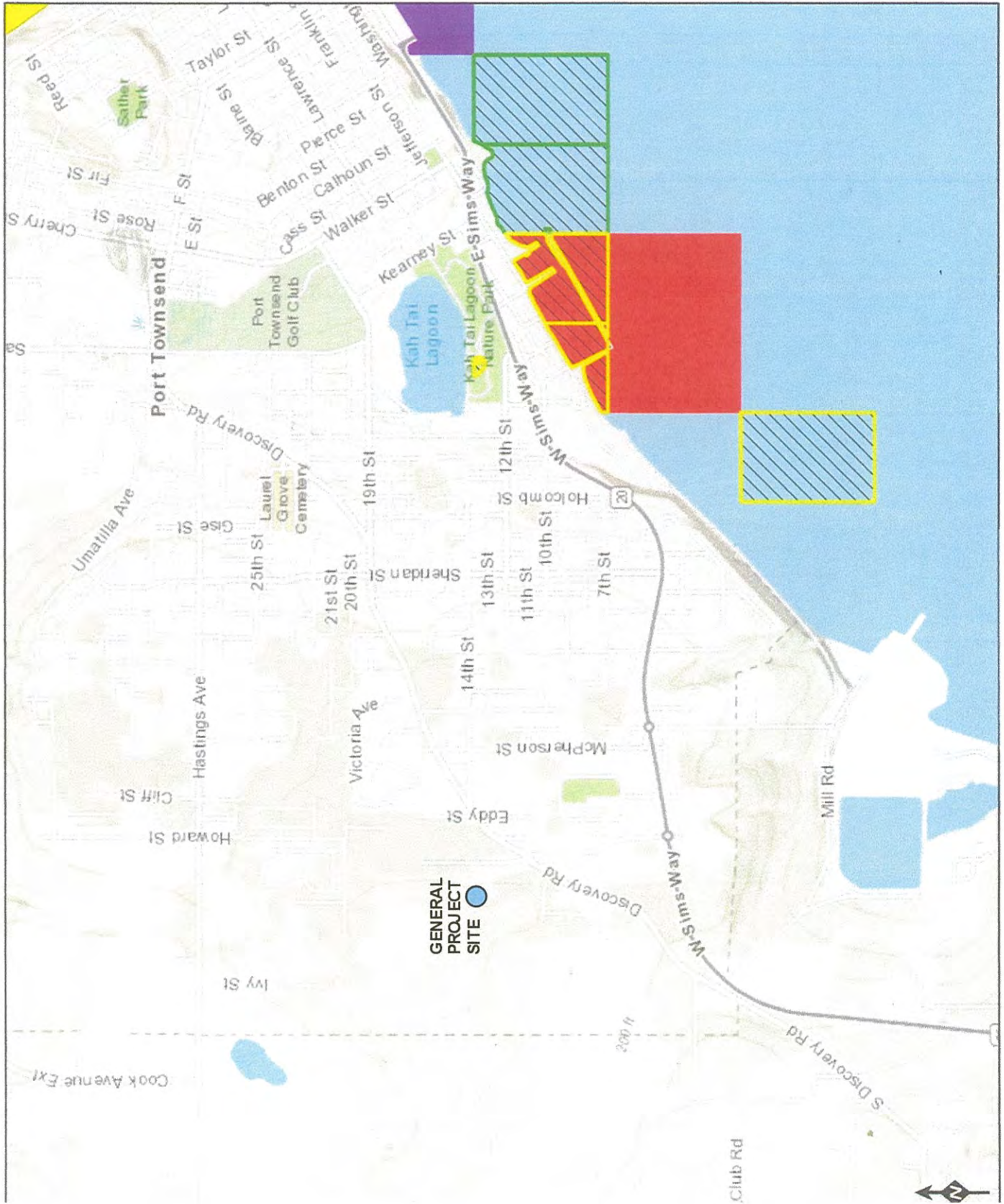
- 1. RELATIVE UNDISTURBED IMPACTS
- 2. MODERATE AND LOW INTENSITY IMPACTS
- 3. HIGH INTENSITY IMPACTS

data are provided on an "AS-IS" basis, without any type of warranty, expressed or implied, including but not limited to any warranty of their performance.



# Category 5 - 303d Map

## FIGURE E



- Assessed Water/Sediment**
- Water**
- Category 5 - 303d
  - Category 4C
  - Category 4B
  - Category 4A
  - Category 2
  - Category 1
- Sediment**
- Category 5 - 303d
  - Category 4C
  - Category 4B
  - Category 4A
  - Category 2
  - Category 1

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





Wetland name or number C3 001092006

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): C3 001092006 Date of site visit: 24 May 2021  
 W. David Loggy  
 Rated by Loggy Soil & Wetland Consulting Trained by Ecology? Yes  No Date of training 11/8-9/20, 2017  
 HGM Class used for rating DEPRESSION 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 Jefferson County & Google Photos, USFW, DRN & WF&W maps

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

### 1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality		Hydrologic		Habitat		
<i>Circle the appropriate ratings</i>							
Site Potential	H	<input checked="" type="radio"/> M	L	H	<input checked="" type="radio"/> M	L	
Landscape Potential	H	<input checked="" type="radio"/> M	L	H	M	<input checked="" type="radio"/> L	<input checked="" type="radio"/> H
Value	H	M	<input checked="" type="radio"/> L	H	M	<input checked="" type="radio"/> L	<input checked="" type="radio"/> M
Score Based on Ratings	5		4		7		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	N/A



Wetland name or number A2 001092006

## 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	A
Hydroperiods	D 1.4, H 1.2	A
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	A
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	A
Map of the contributing basin	D 4.3, D 5.3	A
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	D
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	E
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	N/A

### Riverine Wetlands

NOTE: HERBACEOUS AND SHRUB WETLAND AREA COULD NOT BE SHOWN BECAUSE OF DENSE TREES COVER OVER THE WETLAND.  
Rating was done check two other rating of wetland

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 <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> 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 A2 001092006

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 C3 001092006

<b>DEPRESSIONAL AND FLATS WETLANDS</b>		
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>		
<b>D 1.0. Does the site have the potential to improve water quality?</b>		
<b>D 1.1. Characteristics of surface water outflows from the wetland:</b>		
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).	points = 3	<b>2</b>
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	
<b>D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions).</b> Yes = 4 No = 0		<b>4</b>
<b>D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):</b>		
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	<b>5</b>
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	
<b>D 1.4. Characteristics of seasonal ponding or inundation:</b>		
<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	<b>0</b>
Area seasonally ponded is > ¼ total area of wetland	points = 2	
Area seasonally ponded is < ¼ total area of wetland	points = 0	
<b>Total for D 1</b>	<b>Add the points in the boxes above</b>	<b>9</b>

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

<b>D 2.0. Does the landscape have the potential to support the water quality function of the site?</b>		
<b>D 2.1. Does the wetland unit receive stormwater discharges?</b>	Yes = 1 No = 0	<b>0</b>
<b>D 2.2. Is &gt; 10% of the area within 150 ft of the wetland in land uses that generate pollutants?</b>	Yes = 1 No = 0	<b>0</b>
<b>D 2.3. Are there septic systems within 250 ft of the wetland?</b>	Yes = 1 No = 0	<b>0</b>
<b>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?</b>		<b>1</b>
Source <u>  Grazing  </u>	Yes = 1 No = 0	
<b>Total for D 2</b>	<b>Add the points in the boxes above</b>	<b>1</b>

**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*

<b>D 3.0. Is the water quality improvement provided by the site valuable to society?</b>		
<b>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?</b>	Yes = 1 No = 0	<b>0</b>
<b>D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?</b>	Yes = 1 No = 0	<b>0</b>
<b>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)?</b>	Yes = 2 No = 0	<b>0</b>
<b>Total for D 3</b>	<b>Add the points in the boxes above</b>	<b>0</b>

**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 C3 001092006 6

<b>DEPRESSIONAL AND FLATS WETLANDS</b>		
<b>Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation</b>		
<b>D 4.0. Does the site have the potential to reduce flooding and erosion?</b>		
<b>D 4.1. Characteristics of surface water outflows from the wetland:</b>		
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	2
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	
<b>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.</b>		
Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	3
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
The wetland is a "headwater" wetland	points = 3	
Wetland is flat but has small depressions on the surface that trap water	points = 1	
Marks of ponding less than 0.5 ft (6 in)	points = 0	
<b>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.</b>		
The area of the basin is less than 10 times the area of the unit	points = 5	3
The area of the basin is 10 to 100 times the area of the unit	points = 3	
The area of the basin is more than 100 times the area of the unit	points = 0	
Entire wetland is in the Flats class	points = 5	
<b>Total for D 4</b>	<b>Add the points in the boxes above</b>	<b>8</b>
<b>Rating of Site Potential</b> If score is: <u>   </u> 12-16 = H <u>  X  </u> 6-11 = M <u>   </u> 0-5 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		
<b>D 5.0. Does the landscape have the potential to support hydrologic functions of the site?</b>		
<b>D 5.1. Does the wetland receive stormwater discharges?</b>	Yes = 1 No = 0	0
<b>D 5.2. Is &gt;10% of the area within 150 ft of the wetland in land uses that generate excess runoff?</b>	Yes = 1 No = 0	0
<b>D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at &gt;1 residence/ac, urban, commercial, agriculture, etc.)?</b>	Yes = 1 No = 0	0
<b>Total for D 5</b>	<b>Add the points in the boxes above</b>	<b>0</b>
<b>Rating of Landscape Potential</b> If score is: <u>   </u> 3 = H <u>   </u> 1 or 2 = M <u>  X  </u> 0 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		
<b>D 6.0. Are the hydrologic functions provided by the site valuable to society?</b>		
<b>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.</b>		
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):		
<input type="checkbox"/> Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	0
<input type="checkbox"/> 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	
<b>D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</b>		
	Yes = 2 No = 0	0
<b>Total for D 6</b>	<b>Add the points in the boxes above</b>	<b>0</b>
<b>Rating of Value</b> If score is: <u>   </u> 2-4 = H <u>   </u> 1 = M <u>  X  </u> 0 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		



**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 | 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          |   |
| <i>If the unit has a Forested class, check if:</i>   |                                  |   |
| <input checked="" 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 type="checkbox"/> Saturated only   | 1 type present: points = 0          |   |
| <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland  |                                     |   |
| <input checked="" type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland |                                     |   |
| <input type="checkbox"/> Lake Fringe wetland  | <b>2 points</b>                     |   |
| <input type="checkbox"/> Freshwater tidal wetland   | <b>2 points</b>                     |   |

H 1.3. Richness of plant species

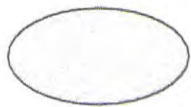
Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>.

*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*

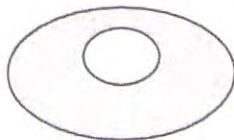
- |                              |            |   |
|------------------------------|------------|---|
| If you counted: > 19 species | points = 2 | 1 |
| 5 - 19 species               | points = 1 |   |
| < 5 species                  | points = 0 |   |

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.*



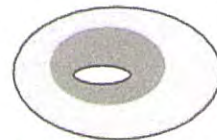
None = 0 points



Low = 1 point

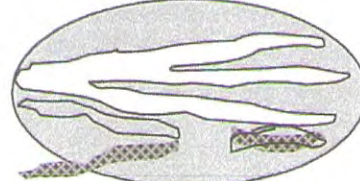
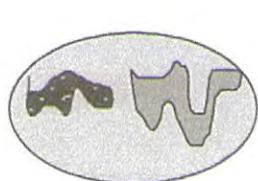


Moderate = 2 points



2

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





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<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 (&gt; 4 in diameter and 6 ft long).</p> <p><input checked="" type="checkbox"/> Standing snags (dbh &gt; 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> 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 (&gt; 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>		2
Total for H 1	Add the points in the boxes above	8

**Rating of Site Potential** If score is: 15-18 = H X 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><i>Calculate:</i> % undisturbed habitat <u>38</u> + [(% moderate and low intensity land uses)/2] <u>4</u> = <u>42</u> %</p> <p>If total accessible habitat is:</p> <p>&gt; 1/3 (33.3%) of 1 km Polygon <span style="float: right;">points = 3</span></p> <p>20-33% of 1 km Polygon <span style="float: right;">points = 2</span></p> <p>10-19% of 1 km Polygon <span style="float: right;">points = 1</span></p> <p>&lt; 10% of 1 km Polygon <span style="float: right;">points = 0</span></p>			3
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>75</u> + [(% moderate and low intensity land uses)/2] <u>7</u> = <u>82</u> %</p> <p>Undisturbed habitat &gt; 50% of Polygon <span style="float: right;">points = 3</span></p> <p>Undisturbed habitat 10-50% and in 1-3 patches <span style="float: right;">points = 2</span></p> <p>Undisturbed habitat 10-50% and &gt; 3 patches <span style="float: right;">points = 1</span></p> <p>Undisturbed habitat &lt; 10% of 1 km Polygon <span style="float: right;">points = 0</span></p>			2
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>&gt; 50% of 1 km Polygon is high intensity land use <span style="float: right;">points = (- 2)</span></p> <p>≤ 50% of 1 km Polygon is high intensity <span style="float: right;">points = 0</span></p>			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*

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>			
<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: <span style="float: right;">points = 2</span></p> <p><input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</p> <p><input checked="" type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p><input checked="" type="checkbox"/> It is mapped as a location for an individual WDFW priority species</p> <p><input checked="" type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p><input checked="" 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 <span style="float: right;">points = 1</span></p> <p>Site does not meet any of the criteria above <span style="float: right;">points = 0</span></p>			1

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



Wetland name or number C3 001092006

## 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.



Wetland name or number C3\_001092006

**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>	
<p><b>SC 1.0. Estuarine wetlands</b></p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal,</p> <p><input type="checkbox"/> Vegetated, and</p> <p><input type="checkbox"/> With a salinity greater than 0.5 ppt</p> <p style="text-align: right;">Yes –Go to <b>SC 1.1</b>      <b>No= Not an estuarine wetland</b></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 = <b>Category I</b>      No - Go to <b>SC 1.2</b></p>	<b>Cat. I</b>
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</p> <p><input checked="" type="checkbox"/> 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)</p> <p><input checked="" type="checkbox"/> 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.</p> <p><input checked="" type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p> <p style="text-align: right;">Yes = <b>Category I</b>      No = <b>Category II</b></p>	<b>Cat. I</b>  <b>Cat. II</b>
<p><b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b></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 <b>SC 2.2</b>      <b>No – Go to SC 2.3</b></p> <p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?      Yes = <b>Category I</b>      <b>No = Not a WHCV</b></p> <p>SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a> Yes – <b>Contact WNHP/WDNR and go to SC 2.4</b>      <b>No = Not a WHCV</b></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 = <b>Category I</b>      <b>No = Not a WHCV</b></p>	<b>Cat. I</b>
<p><b>SC 3.0. Bogs</b></p> <p>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></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 <b>SC 3.3</b>      <b>No – Go to SC 3.2</b></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 <b>SC 3.3</b>      <b>No = Is not a bog</b></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 = <b>Is a Category I bog</b>      No – Go to <b>SC 3.4</b></p> <p><b>NOTE:</b> 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 (&gt; 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 = <b>Is a Category I bog</b>      No = <b>Is not a bog</b></p>	<b>Cat. I</b>







Wetland name or number A3 001092006

<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 (&gt; 4 in diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (dbh &gt; 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> 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 (&gt; 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>		2
Total for H 1	Add the points in the boxes above	8

**Rating of Site Potential** If score is: 15-18 = H X 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><i>Calculate:</i> % undisturbed habitat <u>38</u> + [(% moderate and low intensity land uses)/2] <u>4</u> = <u>42</u> %</p> <p>If total accessible habitat is:</p> <p>&gt; 1/3 (33.3%) of 1 km Polygon <span style="float: right;">points = 3</span></p> <p>20-33% of 1 km Polygon <span style="float: right;">points = 2</span></p> <p>10-19% of 1 km Polygon <span style="float: right;">points = 1</span></p> <p>&lt; 10% of 1 km Polygon <span style="float: right;">points = 0</span></p>		3
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>75</u> + [(% moderate and low intensity land uses)/2] <u>7</u> = <u>82</u> %</p> <p>Undisturbed habitat &gt; 50% of Polygon <span style="float: right;">points = 3</span></p> <p>Undisturbed habitat 10-50% and in 1-3 patches <span style="float: right;">points = 2</span></p> <p>Undisturbed habitat 10-50% and &gt; 3 patches <span style="float: right;">points = 1</span></p> <p>Undisturbed habitat &lt; 10% of 1 km Polygon <span style="float: right;">points = 0</span></p>		2
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>&gt; 50% of 1 km Polygon is high intensity land use <span style="float: right;">points = (- 2)</span></p> <p>≤ 50% of 1 km Polygon is high intensity <span style="float: right;">points = 0</span></p>		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*

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>		
<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: <span style="float: right;">points = 2</span></p> <p><input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</p> <p><input checked="" type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p><input checked="" type="checkbox"/> It is mapped as a location for an individual WDFW priority species</p> <p><input checked="" type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p><input checked="" 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 <span style="float: right;">points = 1</span></p> <p>Site does not meet any of the criteria above <span style="float: right;">points = 0</span></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.
- 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>	
<b>SC 1.0. Estuarine wetlands</b> Does the wetland meet the following criteria for Estuarine wetlands? <input type="checkbox"/> The dominant water regime is tidal, <input type="checkbox"/> Vegetated, and <input type="checkbox"/> With a salinity greater than 0.5 ppt Yes –Go to <b>SC 1.1</b> <b>No= Not an estuarine wetland</b>	
<b>SC 1.1.</b> 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 = <b>Category I</b> No - Go to <b>SC 1.2</b>	<b>Cat. I</b>
<b>SC 1.2.</b> Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> 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. <input checked="" type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = <b>Category I</b> No = <b>Category II</b>	<b>Cat. I</b>  <b>Cat. II</b>
<b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b> <b>SC 2.1.</b> Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes –Go to <b>SC 2.2</b> <b>No – Go to SC 2.3</b> <b>SC 2.2.</b> Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = <b>Category I</b> <b>No = Not a WHCV</b> <b>SC 2.3.</b> Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a> Yes – <b>Contact WNHP/WDNR and go to SC 2.4</b> <b>No = Not a WHCV</b> <b>SC 2.4.</b> Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = <b>Category I</b> <b>No = Not a WHCV</b>	<b>Cat. I</b>
<b>SC 3.0. Bogs</b> 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> <b>SC 3.1.</b> 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 <b>SC 3.3</b> <b>No – Go to SC 3.2</b> <b>SC 3.2.</b> 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 <b>SC 3.3</b> <b>No = Is not a bog</b> <b>SC 3.3.</b> 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 = <b>Is a Category I bog</b> No – Go to <b>SC 3.4</b> <b>NOTE:</b> 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. <b>SC 3.4.</b> 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 = <b>Is a Category I bog</b> No = <b>Is not a bog</b>	<b>Cat. I</b>



<p><b>SC 4.0. Forested Wetlands</b></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? If you answer YES you will still need to rate the wetland based on its functions.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Old-growth forests</b> (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.</li> <li><input type="checkbox"/> <b>Mature forests</b> (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).</li> </ul> <p style="text-align: right;">Yes = <b>Category I</b>    No = <b>Not a forested wetland for this section</b></p>	<p>Cat. I</p>
<p><b>SC 5.0. Wetlands in Coastal Lagoons</b></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"> <li><input type="checkbox"/> 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</li> <li><input type="checkbox"/> The lagoon in which the wetland is located contains ponded water that is saline or brackish (&gt; 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>)</li> </ul> <p style="text-align: right;">Yes – Go to <b>SC 5.1</b>    No = <b>Not a wetland in a coastal lagoon</b></p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 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).</li> <li><input type="checkbox"/> 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.</li> <li><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft<sup>2</sup>)</li> </ul> <p style="text-align: right;">Yes = <b>Category I</b>    No = <b>Category II</b></p>	<p>Cat. I</p> <p>Cat. II</p>
<p><b>SC 6.0. Interdunal Wetlands</b></p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If you answer yes you will still need to rate the wetland based on its habitat functions.</p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Long Beach Peninsula: Lands west of SR 103</li> <li><input type="checkbox"/> Grayland-Westport: Lands west of SR 105</li> <li><input type="checkbox"/> Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li> </ul> <p style="text-align: right;">Yes – Go to <b>SC 6.1</b>    No = <b>not an interdunal wetland for rating</b></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)?  <span style="float: right;">Yes = <b>Category I</b>    No – Go to <b>SC 6.2</b></span></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?  <span style="float: right;">Yes = <b>Category II</b>    No – Go to <b>SC 6.3</b></span></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?  <span style="float: right;">Yes = <b>Category III</b>    No = <b>Category IV</b></span></p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>Cat. IV</p>
<p><b>Category of wetland based on Special Characteristics</b>                  If you answered No for all types, enter "Not Applicable" on Summary Form</p>	



Wetland name or number A1 & A2 001092006

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): A1 & A2 001092006 Date of site visit: 7 april 2021  
 W. David loggy  
 Rated by Loggy Soil & Wetland Consulting Trained by Ecology? Yes  No Date of training 11/8-9/20, 2017  
 HGM Class used for rating DEPRESSION 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 Jefferson County & Google Photos, USFW, DRN & WF&W maps

**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	
<i>Circle the appropriate ratings</i>				
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	<b>TOTAL</b>
<b>Score Based on Ratings</b>	6	5	7	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

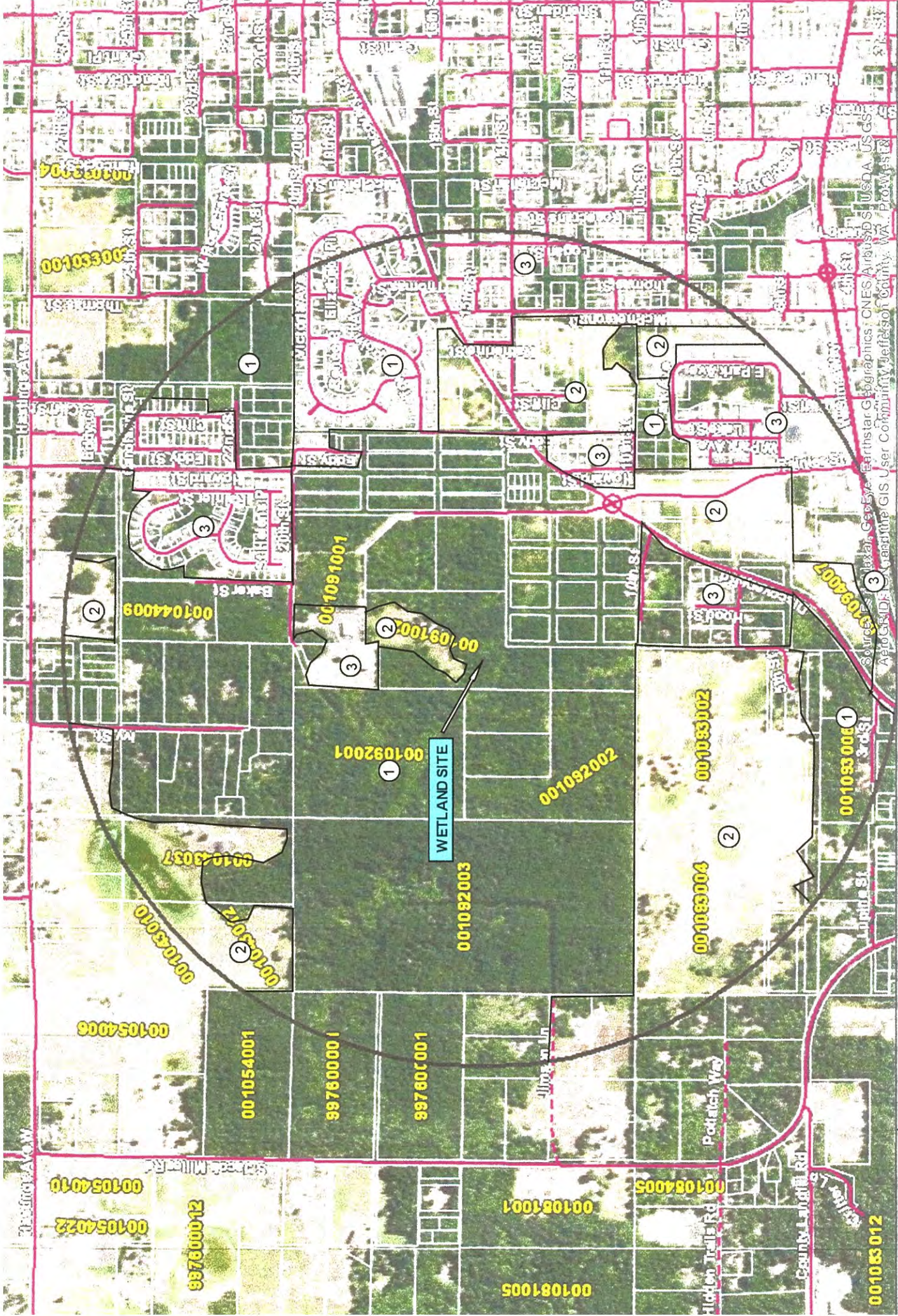
### 2. Category based on SPECIAL CHARACTERISTICS of wetland

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	N/A









Jefferson County, WA  
FIGURE D

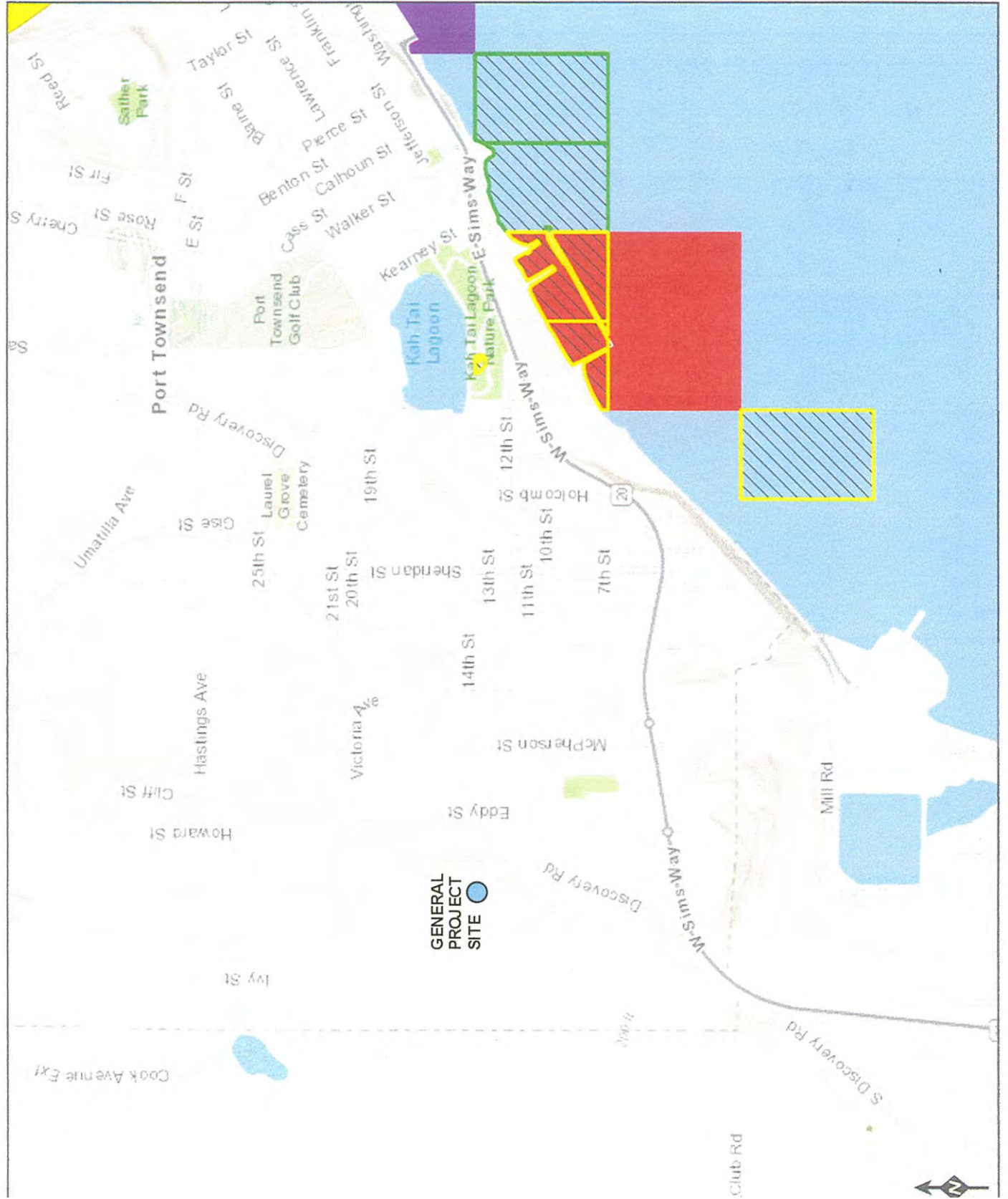
- ① UNDISTURBED HABITAT.
- ② MODERATELY ACCESSIBLE HABITAT
- ③ HIGHLY DISTURBED SITES

... data are provided on S-1S" basis, without any of any type, issued or implied, including at limited to any warranty their performance,



# Category 5 - 303d Map

## FIGURE E



- Assessed Water/Sediment**
- Water**
- Category 5 - 303d
  - Category 4C
  - Category 4B
  - Category 4A
  - Category 2
  - Category 1

- Sediment**
- Category 5 - 303d
  - Category 4C
  - Category 4B
  - Category 4A
  - Category 2
  - Category 1

Wetland name or number Wetland D

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland D Date of site visit: 24 May 2021  
 Rated by W. David Loggy Trained by Ecology? Yes  No Date of training 11/8-9/20, 2017  
 HGM Class used for rating DEPRESSION 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 Jefferson County & Google Photos, USFW, DRN & WF&W maps

**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					
<i>Circle the appropriate ratings</i>										
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	<b>TOTAL</b>
<b>Score Based on Ratings</b>	5		5		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	N/A



Wetland name or number Wetland D

## 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	SEE NOTE
Hydroperiods	D 1.4, H 1.2	SEE NOTE
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	N/A

### Riverine Wetlands

NOTE: HERBACEOUS AND SHRUB WETLAND AREA COULD NOT BE SHOWN BECAUSE OF DENSE TREES COVER OVER THE WETLAND.  
1. Rating was done check two other rating of wetland

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 <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> 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	



Wetland name or number            Wetland ID           

## 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 Wetland D

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 Wetland D

<b>DEPRESSIONAL AND FLATS WETLANDS</b>		
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>		
<b>D 1.0. Does the site have the potential to improve water quality?</b>		
<b>D 1.1. Characteristics of surface water outflows from the wetland:</b>		
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3		<b>2</b>
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		
<b>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</b>		<b>4</b>
<b>D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):</b>		
Wetland has persistent, ungrazed, plants > 95% of area points = 5		<b>3</b>
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		
<b>D 1.4. Characteristics of seasonal ponding or inundation:</b>		
<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		<b>0</b>
Area seasonally ponded is > ¼ total area of wetland points = 2		
Area seasonally ponded is < ¼ total area of wetland points = 0		
<b>Total for D 1</b>	<b>Add the points in the boxes above</b>	<b>9</b>

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

<b>D 2.0. Does the landscape have the potential to support the water quality function of the site?</b>		
<b>D 2.1. Does the wetland unit receive stormwater discharges?</b>	Yes = 1 No = 0	<b>0</b>
<b>D 2.2. Is &gt; 10% of the area within 150 ft of the wetland in land uses that generate pollutants?</b>	Yes = 1 No = 0	<b>0</b>
<b>D 2.3. Are there septic systems within 250 ft of the wetland?</b>	Yes = 1 No = 0	<b>0</b>
<b>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?</b>		<b>0</b>
Source _____	Yes = 1 No = 0	
<b>Total for D 2</b>	<b>Add the points in the boxes above</b>	<b>0</b>

**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

<b>D 3.0. Is the water quality improvement provided by the site valuable to society?</b>		
<b>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?</b>	Yes = 1 No = 0	<b>0</b>
<b>D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?</b>	Yes = 1 No = 0	<b>0</b>
<b>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)?</b>	Yes = 2 No = 0	<b>0</b>
<b>Total for D 3</b>	<b>Add the points in the boxes above</b>	<b>0</b>

**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 Wetland D

<b>DEPRESSIONAL AND FLATS WETLANDS</b>		
<b>Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation</b>		
<b>D 4.0. Does the site have the potential to reduce flooding and erosion?</b>		
<b>D 4.1. Characteristics of surface water outflows from the wetland:</b>		
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	2
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	
<b>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.</b>		
Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	0
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
The wetland is a "headwater" wetland	points = 3	
Wetland is flat but has small depressions on the surface that trap water	points = 1	
Marks of ponding less than 0.5 ft (6 in)	points = 0	
<b>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.</b>		
The area of the basin is less than 10 times the area of the unit	points = 5	3
The area of the basin is 10 to 100 times the area of the unit	points = 3	
The area of the basin is more than 100 times the area of the unit	points = 0	
Entire wetland is in the Flats class	points = 5	
<b>Total for D 4</b>	<b>Add the points in the boxes above</b>	<b>8</b>
<b>Rating of Site Potential</b> If score is: <u>   </u> 12-16 = H <u>  X  </u> 6-11 = M <u>   </u> 0-5 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		
<b>D 5.0. Does the landscape have the potential to support hydrologic functions of the site?</b>		
<b>D 5.1. Does the wetland receive stormwater discharges?</b>	Yes = 1 No = 0	0
<b>D 5.2. Is &gt;10% of the area within 150 ft of the wetland in land uses that generate excess runoff?</b>	Yes = 1 No = 0	1
<b>D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at &gt;1 residence/ac, urban, commercial, agriculture, etc.)?</b>	Yes = 1 No = 0	0
<b>Total for D 5</b>	<b>Add the points in the boxes above</b>	<b>1</b>
<b>Rating of Landscape Potential</b> If score is: <u>   </u> 3 = H <u>  X  </u> 1 or 2 = M <u>   </u> 0 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		
<b>D 6.0. Are the hydrologic functions provided by the site valuable to society?</b>		
<b>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.</b>		
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):		
<input type="checkbox"/> Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	0
<input type="checkbox"/> 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	
<b>D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</b>		
	Yes = 2 No = 0	0
<b>Total for D 6</b>	<b>Add the points in the boxes above</b>	<b>0</b>
<b>Rating of Value</b> If score is: <u>   </u> 2-4 = H <u>   </u> 1 = M <u>  X  </u> 0 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		



Wetland name or number Wetland D

<b>DEPRESSIONAL AND FLATS WETLANDS</b>		
<b>Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation</b>		
<b>D 4.0. Does the site have the potential to reduce flooding and erosion?</b>		
<b>D 4.1. Characteristics of surface water outflows from the wetland:</b>		
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	2
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	
<b>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.</b>		
Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	0
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
The wetland is a "headwater" wetland	points = 3	
Wetland is flat but has small depressions on the surface that trap water	points = 1	
Marks of ponding less than 0.5 ft (6 in)	points = 0	
<b>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.</b>		
The area of the basin is less than 10 times the area of the unit	points = 5	3
The area of the basin is 10 to 100 times the area of the unit	points = 3	
The area of the basin is more than 100 times the area of the unit	points = 0	
Entire wetland is in the Flats class	points = 5	
<b>Total for D 4</b>	<b>Add the points in the boxes above</b>	<b>8</b>
<b>Rating of Site Potential</b> If score is: <u>   </u> 12-16 = H <u>  X  </u> 6-11 = M <u>   </u> 0-5 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		
<b>D 5.0. Does the landscape have the potential to support hydrologic functions of the site?</b>		
<b>D 5.1. Does the wetland receive stormwater discharges?</b>	Yes = 1 No = 0	0
<b>D 5.2. Is &gt;10% of the area within 150 ft of the wetland in land uses that generate excess runoff?</b>	Yes = 1 No = 0	1
<b>D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at &gt;1 residence/ac, urban, commercial, agriculture, etc.)?</b>	Yes = 1 No = 0	0
<b>Total for D 5</b>	<b>Add the points in the boxes above</b>	<b>1</b>
<b>Rating of Landscape Potential</b> If score is: <u>   </u> 3 = H <u>  X  </u> 1 or 2 = M <u>   </u> 0 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		
<b>D 6.0. Are the hydrologic functions provided by the site valuable to society?</b>		
<b>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.</b>		
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):		
<input type="checkbox"/> Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	0
<input type="checkbox"/> 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	
<b>D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</b>		
	Yes = 2 No = 0	0
<b>Total for D 6</b>	<b>Add the points in the boxes above</b>	<b>0</b>
<b>Rating of Value</b> If score is: <u>   </u> 2-4 = H <u>   </u> 1 = M <u>  X  </u> 0 = L <span style="float: right;"><i>Record the rating on the first page</i></span>		



Wetland name or number Wetland D

**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 1/4 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 | 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          |   |
| <i>If the unit has a Forested class, check if:</i>   |                                  |   |
| <input checked="" 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 1/4 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 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 ft<sup>2</sup>.

*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*

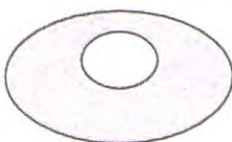
- |                              |            |   |
|------------------------------|------------|---|
| If you counted: > 19 species | points = 2 | 1 |
| 5 - 19 species               | points = 1 |   |
| < 5 species                  | points = 0 |   |

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



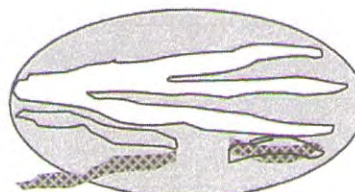
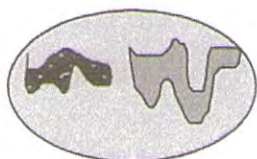
Low = 1 point



Moderate = 2 points



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



2



Wetland name or number Wetland D

<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 (&gt; 4 in diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (dbh &gt; 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> 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 (&gt; 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	12

**Rating of Site Potential** If score is: 15-18 = H X 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: % undisturbed habitat <u>38</u> + [(% moderate and low intensity land uses)/2] <u>4</u> = <u>42</u> %</p> <p>If total accessible habitat is:</p> <p>&gt; 1/3 (33.3%) of 1 km Polygon <span style="float: right;">points = 3</span></p> <p>20-33% of 1 km Polygon <span style="float: right;">points = 2</span></p> <p>10-19% of 1 km Polygon <span style="float: right;">points = 1</span></p> <p>&lt; 10% of 1 km Polygon <span style="float: right;">points = 0</span></p>		3
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % undisturbed habitat <u>75</u> + [(% moderate and low intensity land uses)/2] <u>7</u> = <u>82</u> %</p> <p>Undisturbed habitat &gt; 50% of Polygon <span style="float: right;">points = 3</span></p> <p>Undisturbed habitat 10-50% and in 1-3 patches <span style="float: right;">points = 2</span></p> <p>Undisturbed habitat 10-50% and &gt; 3 patches <span style="float: right;">points = 1</span></p> <p>Undisturbed habitat &lt; 10% of 1 km Polygon <span style="float: right;">points = 0</span></p>		3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>&gt; 50% of 1 km Polygon is high intensity land use <span style="float: right;">points = (- 2)</span></p> <p>≤ 50% of 1 km Polygon is high intensity <span style="float: right;">points = 0</span></p>		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*

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>		
<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: <span style="float: right;">points = 2</span></p> <p><input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</p> <p><input checked="" type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p><input checked="" type="checkbox"/> It is mapped as a location for an individual WDFW priority species</p> <p><input checked="" type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p><input checked="" 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 <span style="float: right;">points = 1</span></p> <p>Site does not meet any of the criteria above <span style="float: right;">points = 0</span></p>		1

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



Wetland name or number Wetland D

## 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.



Wetland name or number Wetland D

### 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>	
<b>SC 1.0. Estuarine wetlands</b> Does the wetland meet the following criteria for Estuarine wetlands? <input type="checkbox"/> The dominant water regime is tidal, <input type="checkbox"/> Vegetated, and <input type="checkbox"/> With a salinity greater than 0.5 ppt      Yes –Go to <b>SC 1.1</b> No= <b>Not an estuarine wetland</b>	
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? <span style="float: right;">Yes = <b>Category I</b>    No - Go to <b>SC 1.2</b></span>	<b>Cat. I</b>
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? <input type="checkbox"/> 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) <input type="checkbox"/> 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. <input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <span style="float: right;">Yes = <b>Category I</b>    No = <b>Category II</b></span>	<b>Cat. I</b>  <b>Cat. II</b>
<b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b> SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? <span style="float: right;">Yes – Go to <b>SC 2.2</b>      No – Go to <b>SC 2.3</b></span> SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? <span style="float: right;">Yes = <b>Category I</b>      No = <b>Not a WHCV</b></span> SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a> <span style="float: right;">Yes – <b>Contact WNHP/WDNR and go to SC 2.4</b>      No = <b>Not a WHCV</b></span> 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? <span style="float: right;">Yes = <b>Category I</b>      No = <b>Not a WHCV</b></span>	<b>Cat. I</b>
<b>SC 3.0. Bogs</b> 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? <span style="float: right;">Yes – Go to <b>SC 3.3</b>      No – Go to <b>SC 3.2</b></span> 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? <span style="float: right;">Yes – Go to <b>SC 3.3</b>      No = <b>Is not a bog</b></span> 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? <span style="float: right;">Yes = <b>Is a Category I bog</b>      No – Go to <b>SC 3.4</b></span> <b>NOTE:</b> 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? <span style="float: right;">Yes = <b>Is a Category I bog</b>      No = <b>Is not a bog</b></span>	<b>Cat. I</b>



