



**CRITICAL AREA STUDY
AND
BUFFER MITIGATION PLAN**

FOR

ALLEN TOWNHOMES
ARLINGTON, WA

Wetland Resources, Inc. Project #21282

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TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 SITE DESCRIPTION	2
1.2 PROJECT DESCRIPTION.....	2
2.0 REVIEW OF PUBLICLY AVAILABLE INFORMATION	2
3.0 WETLAND AND STREAM DETERMINATION	3
3.1 ORDINARY HIGH WATER MARK DETERMINATION METHODOLOGY	3
3.2 WETLAND DETERMINATION METHODOLOGY.....	3
3.2.1 Hydrophytic Vegetation Criteria.....	3
3.2.2 Soils Criteria	4
3.2.3 Hydrology Criteria.....	4
3.3 BOUNDARY DETERMINATION FINDINGS	4
3.3.1 Wetland A.....	4
3.3.2 Wetland B	5
3.3.3 Non-Wetland Areas	6
3.3.4 Other Environmentally Critical Areas.....	6
4.0 WILDLIFE	6
5.0 BUFFER REQUIREMENTS AND PROPOSED MODIFICATIONS.....	7
5.1 BUFFER WIDTH.....	7
5.2 TABLE XX.2 MITIGATION MEASURES	8
5.3 BUFFER AVERAGING.....	10
5.4 BUFFER CONDITION.....	11
5.5 BUFFER ENHANCEMENT.....	11
5.6 LEVEL SPREADER TRENCH	12
5.7 BUILDING SETBACKS	12
5.8 BUFFER FENCING AND SIGNAGE	12
6.0 USE OF THIS REPORT.....	13
7.0 REFERENCES	14

LIST OF APPENDICES

APPENDIX A: CITY OF ARLINGTON INTERIM BUFFER WIDTHS

APPENDIX B: WETLAND DETERMINATION DATA FORMS

APPENDIX C: WETLAND RATING FORMS AND FIGURES

APPENDIX D: CRITICAL AREA STUDY MAPS

LIST OF FIGURES

FIGURE 1 – AERIAL VIEW OF THE SUBJECT PROPERTY (NOT TO SCALE).	1
FIGURE 2 – WETLAND A (FACING NORTHEAST; DECEMBER 2021).....	5

1.0 INTRODUCTION

Wetland Resources, Inc. (WRI) conducted a site investigation on December 6, 2021, to identify and evaluate wetlands, waterbodies, and fish and wildlife conservation areas on the subject property. The five-acre site is composed of two parcels (31052400300900 and 31052400301000), located at 8927 172nd Street NE, in the city limits of Arlington, Washington. The Public Land Survey System (PLSS) locator for the property is Section 24, Township 31N, Range 5E, W.M. The site is situated within the Portage Creek Sub-Basin of the Stillaguamish watershed (WRIA 5).



Figure 1 – Aerial view of the subject property (not to scale).

1.1 SITE DESCRIPTION

The property is currently developed with a single-family residence, several outbuildings, and associated infrastructure. A majority of the property was historically converted to pasture, with scattered trees. The eastern fringe of the site is forested. Vegetation on site includes Western red cedar (*Thuja plicata*), red alder (*Alnus rubra*), salmonberry (*Rubus spectabilis*), mixed grasses, Himalayan blackberry (*Rubus armeniacus*), reed canarygrass (*Phalaris arundinacea*), and lady fern (*Athyrium filix-femina*). Topography underlying the site is relatively flat with a gradual northeast aspect slope. Land use in the vicinity includes a mixture of high-density and low-density residential development and undeveloped land.

One wetland (Wetland A) was identified on the site and another wetland (Wetland B) was identified off-site to the north. This project is vested to the version of Arlington Municipal Code (AMC) Chapter 20.93 that was in effect prior to October 17, 2022. Pursuant to AMC 20.93.800(a) under that version of the code, the wetlands were rated using the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Hruby, 2014). Wetlands A and B are Category III wetlands with moderate habitat scores of 6. At the time the project was submitted, City of Arlington was applying a combination of adopted code language and interim buffer width guidance from Washington State Department of Ecology (DOE; see Appendix A). Pursuant to those documents, Category III wetlands with moderate habitat scores (6-7) receive 110-foot standard buffers.

1.2 PROJECT DESCRIPTION

The applicant proposes to construct a residential townhome development on the site, with associated access, tracts, and utilities. Access will be provided from the south via two drive aisles from 172nd Street NE. Buffer averaging is proposed, as described in Section 5 of this report.

2.0 REVIEW OF PUBLICLY AVAILABLE INFORMATION

Prior to conducting the site investigation, public resource information was reviewed to gather background information on the subject property and the surrounding area in regard to wetlands, streams, and other critical areas. These sources included the following:

- USDA/Natural Resources Conservation Service (NRCS) Web Soil Survey: The Web Soil Survey indicates that the subject property is underlain by Tokul gravelly medial loam, 0-8 percent slopes and 15 to 30 percent slopes. Tokul is not rated as a hydric soil.
- United States Fish and Wildlife Service (USFWS) National Wetlands Inventory: The NWI map does not depicts any wetlands or streams on or near the subject property.
- WA DNR Wetlands of High Conservation Value Map Viewer: This source does not map any resources on or near of the subject site.
- Washington Department of Fish and Wildlife (WDFW) SalmonScape Interactive Mapping System: The SalmonScape interactive map does not depict any streams on or near the subject property. The nearest mapped stream is approximately 1,500 feet off-site to the east.

- WDFW Priority Habitat and Species (PHS) Interactive Map: The PHS Interactive Map does not depict any wetlands, streams, or other Priority Habitats on or near the subject property. The nearest mapped feature is a freshwater pond, approximately 750 feet off-site to the northeast.
- Washington Department of Natural Resources (WA DNR) Forest Practices Application Mapping Tool: DNR FPAMT does not depict any wetlands or streams on or near the subject property.
- Snohomish County PDS Map Portal: The PDS Map Portal does not depict any wetlands or streams on or near the subject property.

3.0 WETLAND AND STREAM DETERMINATION

3.1 ORDINARY HIGH WATER MARK DETERMINATION METHODOLOGY

The presence of the ordinary high water marks (OHWM) of streams was determined using the methodology described in *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Anderson et. al. 2016). Streams are classified according to the water typing system provided in the Washington Administrative Code (WAC), section 222-16-030, and AMC 20.93.700.

3.2 WETLAND DETERMINATION METHODOLOGY

Wetland conditions were evaluated and delineated using routine methodology described in the *Corps of Engineers Wetlands Delineation Manual (Final Report, January 1987)*, except where superseded by the *2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0, referred to as 2010 Regional Supplement)*. Our findings are consistent with these manuals. The following criteria descriptions were used in the boundary determination:

- 1.) Examination of the site for hydrophytic vegetation (species present and percent cover);
- 2.) Examination of the site for hydric soils;
- 3.) Determining the presence of wetland hydrology

3.2.1 Hydrophytic Vegetation Criteria

The manuals define hydrophytic vegetation as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. One of the most common indicators for hydrophytic vegetation is when more than 50 percent of a plant community consists of species rated “Facultative” and wetter on lists of plant species that occur in wetlands.

3.2.2 Soils Criteria

The 2010 Regional Supplement (per the National Technical Committee for Hydric Soils) defines hydric soils as soils “that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.” Field indicators are used to determine whether a given soil meets the definition for hydric soils. Indicators are numerous and include, but are not limited to, presence of a histosol or histic epipedon, a sandy gleyed matrix, depleted matrix, and redoximorphic depressions.

3.2.3 Hydrology Criteria

The 2010 Regional Supplement defines wetland hydrology as “areas that are inundated (flooded or ponded) or the water table is less than or equal to 12 inches below the soil surface for 14 or more consecutive days during the growing season at a minimum frequency of 5 years in 10.” During the early growing season, wetland hydrology determinations are made based on physical observation of surface water, a high water table, or saturation in the upper 12 inches. Outside of the early growing season, wetland hydrology determinations are made based on physical evidence of recent inundation or saturation (i.e. water marks, surface soil cracks, water-stained leaves).

3.3 BOUNDARY DETERMINATION FINDINGS

One wetland (Wetland A) was identified on the project site and one wetland (Wetland B) was identified off-site to the north. Wetlands are classified under the Cowardin classification system (Cowardin et al. 1979) and under the Hydrogeomorphic classification system (Brinson, 1993). Pursuant to AMC 20.93.800, wetlands were also rated according to the Department of Ecology *Washington State Wetland Rating System for Western Washington: 2014 Update* (Hruby 2014).

3.3.1 Wetland A

2014 DOE Rating: Category III, habitat score of 6

HGM Rating Classification: Depressional

Cowardin Classification: Palustrine, Forested Wetland, Broad-Leaved Deciduous, Saturated

City of Arlington Standard Buffer: 110 Feet

Wetland A is a depressional wetland located in the eastern and northeastern portions of the site. Vegetation within this wetland includes Western red cedar (*Thuja plicata*; FAC), red alder (*Alnus rubra*; FAC), Himalayan blackberry (*Rubus armeniacus*; FAC), salmonberry (*Rubus spectabilis*; FAC), common rush (*Juncus effuses*; FACW), lady fern (*Athyrium filix-femina*; FAC), and creeping buttercup (*Ranunculus repens*; FAC). Dominant vegetation is rated as facultative (FAC) or wetter and therefore represents a hydrophytic plant community.

The top eight inches of soil within Wetland A is black (10YR 2/1) sandy loam with dark yellowish brown (10YR 4/4) redoximorphic concentrations present in the matrix. From eight to 16 inches in depth, the soil is very dark grayish brown (10YR 3/2) and contains dark yellowish brown (10YR 4/4) redoximorphic concentrations. These soils meet the criteria for the hydric soil indicator Redox Dark Surface (F6). Wetland A is hydrologically supported by groundwater and precipitation. Soils were saturated at four inches below the surface during the December 2021 site visit. Sheet flow was observed within areas of the wetland.

The presence of hydrophytic vegetation, hydric soils, and multiple secondary wetland hydrology indicators indicate that the area mapped as Wetland A is saturated or inundated long enough during the growing season to develop anaerobic conditions in the upper portion of the soil profile.



Figure 2 – Wetland A (facing northeast; December 2021).

3.3.2 Wetland B

2014 DOE Rating: Category III, habitat score of 6

HGM Rating Classification: Depressional

Cowardin Classification: Palustrine, Forested Wetland, Broad-Leaved Deciduous, Saturated

City of Arlington Standard Buffer: 110 Feet

Wetland B is a depressional wetland that was historically an extension of Wetland A. A gravel road along the northern property line separates the two wetland units. Vegetation within this wetland includes Western red cedar (*Thuja plicata*; FAC), red alder (*Alnus rubra*; FAC), Himalayan blackberry (*Rubus armeniacus*; FAC), salmonberry (*Rubus spectabilis*; FAC), and lady fern (*Athyrium filix-femina*; FAC). Dominant vegetation is rated as facultative (FAC) or wetter and therefore represents a hydrophytic plant community.

Due to lack of legal access, soils within Wetland B were not observed. It is our best professional opinion based on a hydrophytic plant community, observed saturation and sheet flow, and geomorphic position that the area identified as Wetland B meets the criteria for a wetland. An approximate depiction of the wetland boundary is shown on the attached map and approximate wetland rating figures area provided in Appendix C.

3.3.3 Non-Wetland Areas

Vegetation in non-wetland portions of the site includes maintained lawn, pasture, red alder (*Alnus rubra*), Western red cedar (*Thuja plicata*), salmonberry (*Rubus spectabilis*), Himalayan blackberry (*Rubus armeniacus*), reed canarygrass (*Phalaris arundinacea*), creeping buttercup (*Ranunculus repens*), and trailing blackberry (*Rubus ursinus*).

Soils in the non-wetland areas are generally very dark brown (10YR 2/2) sandy loam in the upper seven inches. Soils between seven and 16 inches below the surface range from dark brown (10YR 3/3) to brown (10YR 4/3) with dark yellowish brown (10YR 3/6) redoximorphic features. The upper sixteen inches were dry to moist at the time of our December site investigation, during a period that was wetter than normal. Non-wetland soils do not meet any hydric soil indicators and were generally dry at the time of the investigation. These characteristics do not meet any wetland hydrology or hydric soil indicators.

3.3.4 Other Environmentally Critical Areas

In addition to wetlands, waterbodies, and fish and wildlife conservation areas, the City of Arlington regulates geologically hazardous areas and aquifer recharge areas under AMC 20.93. Snohomish County PDS Map Portal does not depict any aquifer recharge areas, erosion hazard areas, landslide hazard areas, seismic hazard areas, or steep slopes on the subject site. Further evaluation of these environmentally critical areas is outside the scope of this report.

4.0 WILDLIFE

Most of the southern portion of the site has previously been cleared and consists of a mix of emergent and scrub-shrub vegetation including native and non-native invasive species. The site provides resources that are beneficial to wildlife including, forage resources, seasonal water sources, thermal and hiding cover in close proximity, and large, woody debris.

Given the habitat available, mammalian species that are expected to utilize the site include: black-tailed deer (*Odocoileus hemionus ssp. columbianus*), coyote (*Canis latrans*), eastern cottontail rabbits (*Sylvilagus floridanus*), shrews (*Sorex spp.*), moles (*Scapanus spp.*), Douglas' squirrel (*Tamiasciurus douglasii*), eastern gray squirrel (*Sciurus carolinensis*), and deer mice (*Peromyscus maniculatus*).

Avian species expected to be found on the site include: American Crow (*Corvus brachyrhynchos*), Hairy Woodpecker (*Picoides villosus*), Downy Woodpecker (*Picoides pubescens*), Swainson's Thrush (*Catharus ustulatus*), American Robin (*Turdus migratorius*), House Finch (*Carpodacus mexicanus*), Black-capped Chickadee (*Poecile atricapillus*), Dark-eyed Junco (*Junco hyemalis*), and Bushtit (*Psaltiriparus minimus*), Northern Flicker (*Colaptes auratus*).

Amphibians that may utilize the site include: pacific tree frog (*Hyla regilla*), northwestern salamander (*Ambystoma gracile*), and rough-skinned newt (*Taricha granulosa*).

These lists are not meant to be all-inclusive and may omit species that currently utilize or could utilize the site. The PHS online mapping tool does not identify any priority habitats or species on

the subject site. No threatened or endangered species or species of local importance are known to be associated with the subject site.

5.0 BUFFER REQUIREMENTS AND PROPOSED MODIFICATIONS

5.1 BUFFER WIDTH

This project is vested to the version of AMC Chapter 20.93 prior to October 17, 2022. At the time the project was submitted, City of Arlington was applying a combination of adopted code language and interim buffer width guidance from Washington State Department of Ecology (DOE; see Appendix A).

Section XX.050(1) of the DOE guidance has the following requirements in italics, with applicant responses following each in normal text:

(1) For wetlands that score 6 points or more for habitat function, the buffers in Table XX.1 can be used if both of the following criteria are met:

- *A relatively undisturbed, vegetated corridor at least 100 feet wide is protected between the wetland and any other Priority Habitats as defined by the Washington State Department of Fish and Wildlife. The latest definitions of priority habitats and their locations are available on the WDFW website at: <http://wdfw.wa.gov/hab/phshabs.htm>.*

The corridor must be protected for the entire distance between the wetland and the Priority Habitat by some type of legal protection such as a conservation easement.

Presence or absence of a nearby habitat must be confirmed by a qualified biologist. If no option for providing a corridor is available, Table XX.1 may be used with the required measures in Table XX.2 alone.

- *All of the measures in Table XX.2 are implemented, where applicable, to minimize the impacts of the adjacent land uses.*

As described in Section 2 above, no Priority Habitats are mapped on or near the subject property. Wetland B, located off-site to the north, meets the definition of a Priority Habitat, however, a gravel road is present between Wetlands A and B, so a vegetated corridor cannot be established between the two wetlands. No other Priority Habitats are present that could be connected with a corridor to Wetland A.

Since no option for providing a corridor is available, Table XX.1 may be used with the application of the required measures in Table XX.2, as described in the DOE guidance above. The applicant is proposing to provide all of the mitigation measures in Table XX.2, so the buffer width provided in Table XX.1 is applicable. As Category III wetlands with 6 habitat points, Table XX.1 requires 110-foot buffers for Wetlands A and B.

(2) For wetlands that score 3-5 habitat points, only the measures in Table XX.2 are required for the use of Table XX.1.

Both wetlands associated with this site score 6 habitat points, so this section does not apply.

(3) If an applicant chooses **not** to apply the mitigation measures in Table XX.2, or is unable to provide a protected corridor where available, then Table XX.3 **must** be used.

The applicant is choosing to apply the mitigation measures in Table XX.2 and a protected corridor is not available, so Table XX.3 does not apply.

(4) The buffer widths in Table XX.1 and XX.3 assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided.

The buffer is currently vegetated with scattered native trees with a dense shrub and emergent understory that is dominated by native plants, so the buffer is not unvegetated or sparsely vegetated. Although some invasive species are present, the vegetation is dense and predominantly native, so no planting or widening of the buffer is proposed.

5.2 TABLE XX.2 MITIGATION MEASURES

As described in Section 5.1 above, the application of the standard buffer widths in Table XX.1 requires the implementation of the mitigation measures provided in Table XX.2. The following measures will be applied to this project.

Disturbance	Examples of Activities and Uses that Cause Disturbances	Required Measures to Minimize Impacts
Lights	<ul style="list-style-type: none"> • Parking lots • Residential 	<ul style="list-style-type: none"> • No parking areas are proposed along the buffer edge. • Residential building and yard lights will be low wattage lamps that will be manually controlled and generally used for short durations. • Lights along the access roads will be directed downward at the road surfaces and will not broadcast into Wetland A.
Noise	<ul style="list-style-type: none"> • Construction • Residential • Vehicles 	<ul style="list-style-type: none"> • Noise from construction activities will be temporary, during daylight hours. Machinery will be turned off when not actively in use. • Vehicle use will be at low speed in this townhome development, reducing noise. • Noise from the residences will be limited to low decibels that will dissipate quickly to ambient levels, consistent with other residential uses.

Disturbance	Examples of Activities and Uses that Cause Disturbances	Required Measures to Minimize Impacts
Toxic runoff	<ul style="list-style-type: none"> • Parking lots • Roads • Residential areas • Landscaping 	<ul style="list-style-type: none"> • During the clearing and grading activities, runoff will be collected and directed to temporary stormwater facilities. • Erosion and sedimentation control measures will be in place while clearing, grading, and construction occurs. • Construction equipment will be kept outside of the wetland buffer. • All runoff from the proposed development will be collected and/or treated in a manner consistent with the applicable drainage manual.
Stormwater runoff	<ul style="list-style-type: none"> • Vegetation removal • Grading • Roads • Parking lots • Residential areas • Landscaping 	<ul style="list-style-type: none"> • During clearing and grading activities, stormwater runoff will be collected and directed to temporary stormwater facilities. • Erosion and sedimentation control measures will be in place while clearing, grading, and construction occurs. • Stormwater from the proposed development will be collected and/or treated in a manner consistent with the applicable drainage manual.
Change in Water regime	<ul style="list-style-type: none"> • Impervious surfaces • Lawns • Forest and forest duff removal 	<ul style="list-style-type: none"> • The stormwater management system for the proposed project, including a level spreader trench upslope of Wetland A, is designed to ensure that hydrology within the wetland is maintained. • No forested areas will be impacted from this project. • Lawns will be located well away from the wetland.
Pets and human disturbance	<ul style="list-style-type: none"> • Future residents • Pets 	<ul style="list-style-type: none"> • Critical area fencing will be constructed along the buffer boundary to keep pets and humans out of the wetland and buffer. • Critical area signage will be posted along the buffer boundary to educate residents about its location. • The townhomes will have privacy fencing around them, so the fences near buffer areas will prevent people and pets from entering them.
Dust	<ul style="list-style-type: none"> • Construction sites 	<ul style="list-style-type: none"> • Dust produced during construction will be controlled with best management practices, as described in the Stormwater Pollution Prevention Plan.

Disturbance	Examples of Activities and Uses that Cause Disturbances	Required Measures to Minimize Impacts
Disruption of corridors or connections	<ul style="list-style-type: none"> • Roads • Residential • Landscaping • Stormwater 	<ul style="list-style-type: none"> • The on-site wetland and buffer will be retained, so the proposed development will not disrupt any corridors or connections to other systems.

5.3 BUFFER AVERAGING

Buffer averaging is proposed along the western buffer edge, as allowed by AMC 20.93.320. The applicable code sections are provided in italics below, with applicant responses following each in standard text.

AMC 20.93.320: Buffer widths may be modified by averaging. In no instance shall the buffer width be reduced by more than twenty-five percent of the standard buffer unless specifically identified in other sections of this chapter. Buffer width averaging shall be allowed only where the applicant demonstrates all of the following:

- (1) *That averaging is necessary to avoid an extraordinary hardship to the applicant caused by circumstances peculiar to the property or that there would be a benefit to the environmentally critical area;*

Buffer averaging is required to allow for the proposed development. The irregular shape of Wetland A and its buffer provide an extraordinary hardship to the applicant in trying to design a project that meets density goals while complying with all of the other requirements of the AMC. Wetland A will benefit from the buffer averaging proposal as a slight net increase in buffer area on the site will occur. A total of 9,927 square feet (9245+682) of additional buffer will be provided for 9,922 square feet of buffer reductions, yielding a net increase in 5 square feet of buffer.

- (2) *That the least impactful aspects of the proposed land use would be located adjacent to areas where the buffer width is reduced;*

The original design allowed for lesser impactful aspects of the project to be located adjacent to the reduced buffer areas. A loop road is currently being required on the east side of the project, in the area of the reduced buffer. Impacts will be minimized by installing fencing and signage along the reduced buffer edge and buffer enhancement, where necessary. Runoff from the roadway will be captured and treated in the on-site stormwater system.

(3) That width averaging will not adversely impact the environmentally critical area functional values; and

The reduced buffer area will be replaced with additional buffer areas of similar vegetative quality. The net gain in buffer area on the site, along with buffer enhancement where necessary, will result in a lift in functional values provided by the buffer, so the averaging will not adversely impact the functional values of Wetland A.

(4) That the total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging.

A total of 9,927 square feet (9245+682) of additional buffer will be provided for 9,922 square feet of buffer reductions, yielding a net increase in 5 square feet of buffer. The total area contained within the buffer after averaging will not be less than that contained within the standard buffer prior to averaging.

5.4 BUFFER CONDITION

Pursuant to AMC 20.93.830(b)(3) and the DOE guidance in XX.050(A)(4), the standard buffer widths provided in Table XX.1 “assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform the needed functions, the buffer should either be planted to create the appropriate plant community, or the buffer should be widened to ensure that adequate functions of the buffer are provided.”

The buffer is currently vegetated with scattered native trees with a dense shrub and emergent understory that is dominated by native plants, so the buffer is not unvegetated or sparsely vegetated. Although some invasives are present, the vegetation is dense and predominantly native. Any areas of invasive species that are larger than 50 square feet will be removed and enhanced with native trees and shrubs.

5.5 BUFFER ENHANCEMENT

As described above, the buffer is predominantly native, but any areas of invasive species within the final buffer that are larger than 50 square feet will be removed and replaced with native trees and shrubs. The timing of construction is not certain, so areas of invasive species that meet this criteria will be field located at the time of construction and shown on an as-built plan. The following list of trees and shrubs shall be used for buffer enhancement, where necessary. The locations, species, and quantities will be reported in an as-built mitigation plan.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Size</u>	<u>Spacing</u>	<u>Quantity</u>
Douglas fir	<i>Pseudotsuga menziesii</i>	1 gallon	10'	tbd
Nootka rose	<i>Rosa nutkana</i>	1 gallon	5'	tbd
Salmonberry	<i>Rubus spectabilis</i>	1 gallon	5'	tbd
Snowberry	<i>Symphoricarpos albus</i>	1 gallon	5'	tbd
Vine maple	<i>Acer circinatum</i>	1 gallon	5'	tbd

5.6 LEVEL SPREADER TRENCH

A level spreader trench is required in the buffer of Wetland A to provide an outlet for the proposed stormwater treatment system. Due to elevation requirements to provide positive drainage from the vault, the level spreader trench cannot be placed outside of the buffer. Pursuant to AMC 20.93.830(3)(B), stormwater management facilities are allowed in the buffers of Category III and IV wetlands when there is no reasonable alternative on-site location. The trench will be placed in the outer half of the buffer, in an area dominated by pasture grasses. Any temporary impacts associated with the installation of the trench will be restored through with the native buffer grass seed mixture below. The trench will benefit Wetland A by providing treated water to the wetland, helping to maintain wetland hydrology.

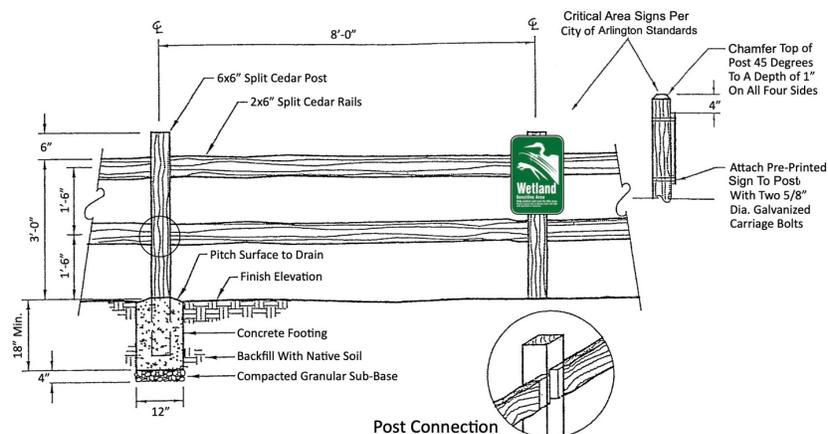
Common Name	Latin Name	Percent Mixture	Seeding Rate
Red fescue	<i>Festuca rubra</i>	40%	120 lbs/acre
Colonial bentgrass	<i>Agrostis tenuis</i>	5%	
Perennial ryegrass	<i>Lolium perenne</i>	50%	
White clover	<i>Trifolium repens</i>	5%	

5.7 BUILDING SETBACKS

Pursuant to AMC 20.93.340, a building setback of 15 feet is required from the edge of any critical area buffer. All buildings will be set back at least 15 feet from the edge of the buffer.

5.8 BUFFER FENCING AND SIGNAGE

Pursuant to AMC 20.93.290(a), environmentally critical area tracts or easements shall be marked with appropriate permanent fencing and signage unless otherwise determined by the natural resources manager. Split-rail fencing, or similar alternative approved by the City, will be constructed along the western edge of the buffer, as shown on the attached map. Fencing shall be permanent, including quickset concrete to secure the posts. Critical area signs shall be affixed to the fence posts on 100 foot intervals, in the locations shown on the attached map. An example detail is provided below, but may be modified by City staff.



SPLIT-RAIL FENCE WITH CRITICAL AREA SIGNS

6.0 USE OF THIS REPORT

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 critical areas 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.



Shaun Sweeney
Associate Ecologist



John Laufenberg, PWS
Principal

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<http://apps.wdfw.wa.gov/salmonscape/map.html>
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Appendix A
City of Arlington Interim Buffer Widths

July 2018 Modifications for Habitat Score Ranges

Section XX.040 Exemptions and Allowed Uses in Wetlands

A.1.d

Do not score 6 or more points for habitat function based on the 2014 update to the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Ecology Publication #14-06-029, or as revised and approved by Ecology)

B.9.a

The wetland is classified as a Category IV or a Category III wetland with a habitat score of 3-5 points, and

XX.050 Wetland Buffers

A. Buffer Requirements. The following buffer widths have been established in accordance with the best available science. They are based on the category of wetland and the habitat score as determined by a qualified wetland professional using the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Ecology Publication #14-06-029, or as revised and approved by Ecology). The adjacent land use intensity is assumed to be high.

1. For wetlands that score 6 points or more for habitat function, the buffers in Table XX.1 can be used if both of the following criteria are met:
 - A relatively undisturbed, vegetated corridor at least 100 feet wide is protected between the wetland and any other Priority Habitats as defined by the Washington State Department of Fish and Wildlife. The latest definitions of priority habitats and their locations are available on the WDFW web site at: <http://wdfw.wa.gov/hab/phshabs.htm>)

The corridor must be protected for the entire distance between the wetland and the Priority Habitat by some type of legal protection such as a conservation easement.

Presence or absence of a nearby habitat must be confirmed by a qualified biologist. If no option for providing a corridor is available, Table XX.1 may be used with the required measures in Table XX.2 alone.¹

¹ See discussion in the Introduction, page 12 as to whether this applies in small urban jurisdictions.

July 2018 Modifications for Habitat Score Ranges

- All of the measures in Table XX.2 are implemented, where applicable, to minimize the impacts of the adjacent land uses.
2. For wetlands that score 3-5 habitat points, only the measures in Table XX.2 are required for the use of Table XX.1
 3. If an applicant chooses **not** to apply the mitigation measures in Table XX.2, or is unable to provide a protected corridor where available, then Table XX.3 **must** be used.
 4. The buffer widths in Table XX.1 and XX.3 assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided.

July 2018 Modifications for Habitat Score Ranges

**Table XX.1 Wetland Buffer Requirements for Western Washington
if Table XX.2 is Implemented and Corridor Provided**

Wetland Category	Buffer width (in feet) based on habitat score		
	3-5	6-7	8-9
Category I: Based on total score	75	110	225
Category I: Bogs and Wetlands of High Conservation Value	190		225
Category I: Interdunal	225 (buffer width not based on habitat scores)		
Category I: Forested	75	110	225
Category I: Estuarine and Coastal Lagoons	150 (buffer width not based on habitat scores)		
Category II: Based on score	75	110	225
Category II: Interdunal Wetlands	110 (buffer width not based on habitat scores)		
Category II: Estuarine and Coastal Lagoons	110 (buffer width not based on habitat scores)		
Category III (all)	60	110	225
Category IV (all)	40		

July 2018 Modifications for Habitat Score Ranges

Table XX.2 Required measures to minimize impacts to wetlands
(All measures are required if applicable to a specific proposal)

Disturbance	Required Measures to Minimize Impacts
Lights	<ul style="list-style-type: none"> • Direct lights away from wetland
Noise	<ul style="list-style-type: none"> • Locate activity that generates noise away from wetland • If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source • For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10' heavily vegetated buffer strip immediately adjacent to the outer wetland buffer
Toxic runoff	<ul style="list-style-type: none"> • Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered • Establish covenants limiting use of pesticides within 150 ft of wetland • Apply integrated pest management
Stormwater runoff	<ul style="list-style-type: none"> • Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized flow from lawns that directly enters the buffer • Use Low Intensity Development techniques (for more information refer to the drainage ordinance and manual)
Change in water regime	<ul style="list-style-type: none"> • Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	<ul style="list-style-type: none"> • Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion • Place wetland and its buffer in a separate tract or protect with a conservation easement
Dust	<ul style="list-style-type: none"> • Use best management practices to control dust

July 2018 Modifications for Habitat Score Ranges

**Table XX.3 Wetland Buffer Requirements for Western Washington
if Table XX.2 is NOT Implemented or Corridor NOT provided**

Wetland Category	Buffer width (in feet) based on habitat score		
	3-5	6-7	8-9
Category I: Based on total score	100	150	300
Category I: Bogs and Wetlands of High Conservation Value	250		300
Category I: Interdunal	300 (buffer width not based on habitat scores)		
Category I: Forested	100	150	300
Category I: Estuarine and Coastal Lagoons	200 (buffer width not based on habitat scores)		
Category II: Based on score	100	150	300
Category II: Interdunal Wetlands	150 (buffer width not based on habitat scores)		
Category II: Estuarine and Coastal Lagoons	150 (buffer width not based on habitat scores)		
Category III (all)	80	150	300
Category IV (all)	50		

Appendix B
Wetland Determination Data Forms

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

Project/Site: Allen Townhomes City/County: Arlington Sampling Date: 12/6/21
 Applicant/Owner: JM1 Holdings, LLC State: WA Sampling Point: S1
 Investigator(s): EC, SS Section, Township, Range: S24, T31N, R4E W.M.
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): None Slope (%): 10%
 Subregion (LRR): LRR-A Lat: 48.15266 Long: -122.10986 Datum: WGS84
 Soil Map Unit Name: Tokul gravelly medial loam, 15 to 30 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology 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"/>
Remarks: Climatic conditions prior to site visit are "Wetter than Normal" per WETS Table. Data taken near WRA13	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Notes	
Tree Stratum (Plot size: 5m radius)					
1. <u>Thuja plicata</u>	10	Y	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
2. <u>Alnus rubra</u>	2	N	FAC		
3. _____					
4. _____					
	12	= Total Cover			
Sapling/Shrub Stratum (Plot size: 3m radius)					
1. <u>Rubus spectabilis</u>	25	Y	FAC	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = <u>0</u> FACW species _____ x 2 = <u>0</u> FAC species _____ x 3 = <u>0</u> FACU species _____ x 4 = <u>0</u> UPL species _____ x 5 = <u>0</u> Column Totals: <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____	
2. <u>Rubus armeniacus</u>	5	N	FAC		
3. _____					
4. _____					
5. _____					
	30	= Total Cover			
Herb Stratum (Plot size: 1m radius)					
1. <u>Juncus effusus</u>	40	Y	FACW		
2. <u>Ranunculus repens</u>	40	Y	FAC		
3. <u>Athyrium filix-femina</u>	30	Y	FAC		
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
	110	= Total Cover			
Woody Vine Stratum (Plot size: 1m radius)					
1. <u>None</u>	0				
2. _____					
	0	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:

SOIL

Sampling Point: S1

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-8	10YR 2/1	95	10YR 4/4	5			sl	
8-16	10YR 3/2	95	10YR 4/4	5			sl	

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

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

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

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> 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)
	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 7"	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 4"	

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

Remarks:

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

Project/Site: Allen Townhomes City/County: Arlington Sampling Date: 12/6/21
 Applicant/Owner: JM1 Holdings, LLC State: WA Sampling Point: S2
 Investigator(s): EC, SS Section, Township, Range: S24, T31N, R4E W.M.
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): None Slope (%): 10%
 Subregion (LRR): LRR-A Lat: 48.15266 Long: -122.10986 Datum: WGS84
 Soil Map Unit Name: Tokul gravelly medial loam, 15 to 30 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology 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"/>
Remarks: Climatic conditions prior to site visit are "Wetter than Normal" per WETS Table.	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 5m radius)					
1. <u>Thuja plicata</u>	10	Y	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____	10	= Total Cover			
Sapling/Shrub Stratum (Plot size: 3m radius)					
1. <u>Rubus spectabilis</u>	20	Y	FAC	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = <u>0</u> FACW species _____ x 2 = <u>0</u> FAC species _____ x 3 = <u>0</u> FACU species _____ x 4 = <u>0</u> UPL species _____ x 5 = <u>0</u> Column Totals: <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____	
2. <u>Rubus armeniacus</u>	15	Y	FAC		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____	35	= Total Cover			
Herb Stratum (Plot size: 1m radius)					
1. <u>Agrostis Sp.</u>	45	Y	_____		
2. <u>Ranunculus repens</u>	40	Y	_____		
3. <u>Rubus ursinus</u>	20	N	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
_____	105	= Total Cover			
Woody Vine Stratum (Plot size: 1m radius)					
1. <u>None</u>	0	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. _____	_____	_____	_____		
_____	0	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>					

Remarks:

SOIL

Sampling Point: S2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-7	10YR 2/2	100					sl	
7-10	10YR 3/3	95	10YR 3/6	5	C	M	sl	slightly moist
10-16	10YR 3/4	90	10YR 3/6	10	C	M	sl	moist

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input 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 (S5) <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"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
	³ 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres 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)
	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): 16" (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

Appendix C
Wetland Rating Forms and Figures

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 12/6/21

Rated by EC, SS Trained by Ecology? Yes No Date of training 10/2018

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 Snohomish County

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"/> <input checked="" type="checkbox"/> L	H <input type="checkbox"/> <input checked="" type="checkbox"/> L	<input checked="" type="checkbox"/> H M L	
Value	<input checked="" type="checkbox"/> H M L	H <input type="checkbox"/> <input checked="" type="checkbox"/> L	H <input type="checkbox"/> <input checked="" type="checkbox"/> L	TOTAL
Score Based on Ratings	7	6	6	19

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

Wetland name or number A

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 A **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 A

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

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

D 2.0. Does the landscape have the potential to support the water quality function of the site?		
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 <input type="checkbox"/> No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	<input type="checkbox"/> Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	<input type="checkbox"/> Yes = 1 No = 0	1
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source _____	Yes = 1 <input type="checkbox"/> No = 0	0
Total for D 2	Add the points in the boxes above	2

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

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 A**DEPRESSIONAL AND FLATS WETLANDS****Hydrologic Functions** - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland:		
<input type="checkbox"/> Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	2
<input checked="" 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	
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.		
<input type="checkbox"/> Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	3
<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	
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.		
<input type="checkbox"/> The area of the basin is less than 10 times the area of the unit	points = 5	3
<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	
Total for D 4	Add the points in the boxes above	8

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

Record the rating on the first page

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

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

Record the rating on the first page

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):		
<input type="checkbox"/> • Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	1
<input checked="" 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 type="checkbox"/> There are no problems with flooding downstream of the wetland.	points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?		
	Yes = 2 <input type="checkbox"/> No = <input type="checkbox"/>	0
Total for D 6	Add the points in the boxes above	1

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

Record the rating on the first page

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

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

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac 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 ft².

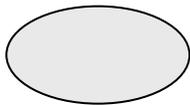
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

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

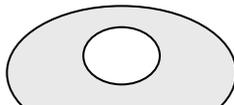
1

H 1.4. Interspersion of habitats

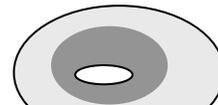
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



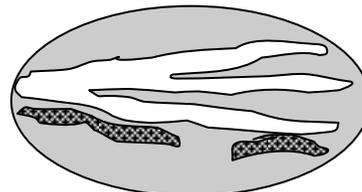
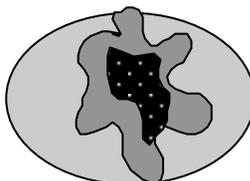
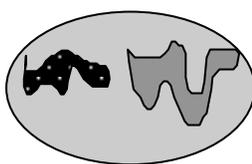
None = 0 points

Low = 1 point

Moderate = 2 points

**0**

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



Wetland name or number A

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

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><i>Calculate:</i> % undisturbed habitat <u>16</u> + [(% moderate and low intensity land uses)/2] <u>13</u> = <u>29</u> %</p> <p>If total accessible habitat is:</p> <p><input type="checkbox"/> > 1/3 (33.3%) of 1 km Polygon points = 3</p> <p><input checked="" 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"/> < 10% of 1 km Polygon points = 0</p>		2
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>34</u> + [(% moderate and low intensity land uses)/2] <u>20</u> = <u>54</u> %</p> <p><input checked="" type="checkbox"/> Undisturbed habitat > 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 > 3 patches points = 1</p> <p><input type="checkbox"/> Undisturbed habitat < 10% of 1 km Polygon points = 0</p>		3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p><input type="checkbox"/> > 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>		0
Total for H 2	Add the points in the boxes above	5

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

Record the rating on the first page

<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>		1

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

Record the rating on the first page

Wetland name or number A

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.

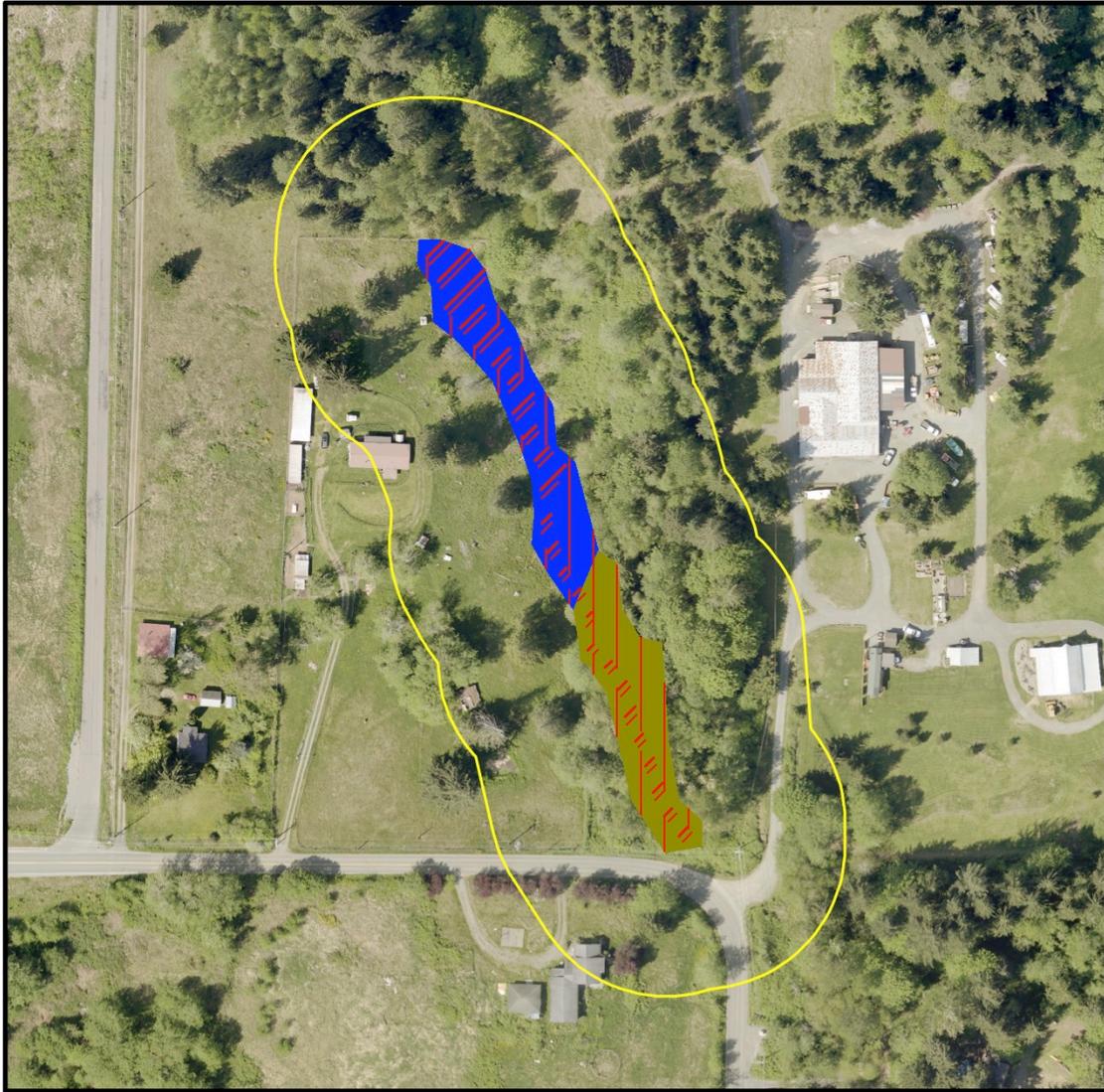
Wetland name or number A**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? <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 SC 1.1 No= Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? <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 = Category I No = Category II	Cat. I Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to SC 2.2 No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = Category I No = Not a WHCV	Cat. I
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3 No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog	Cat. I

Wetland name or number A

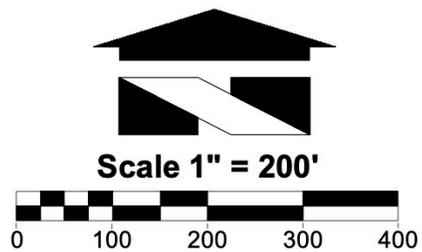
<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <p><input type="checkbox"/> Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.</p> <p><input type="checkbox"/> Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).</p> <p style="text-align: right;">Yes = Category I No = Not a forested wetland for this section</p>	Cat. I
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <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 (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>)</p> <p style="text-align: right;">Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <p><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 ft²)</p> <p style="text-align: right;">Yes = Category I No = Category II</p>	Cat. I Cat. II
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <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 SC 6.1 No = not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV</p>	Cat I Cat. II Cat. III Cat. IV
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	N/A

ALLEN TOWNHOMES
 WETLAND RATING FIGURE 1 - WETLAND A



LEGEND

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

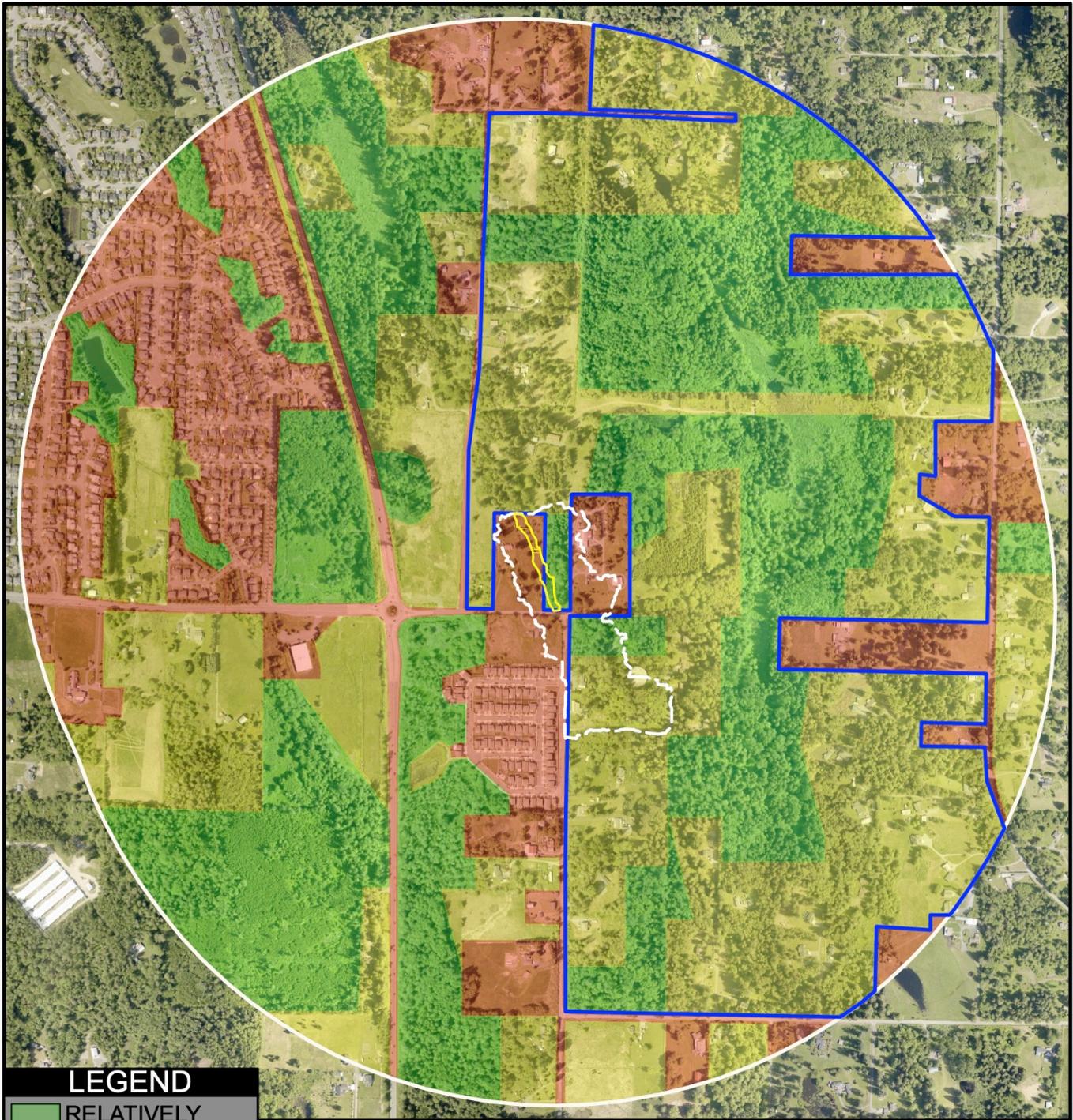


Wetland Resources, Inc.
 Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance
 9505 19th Avenue S.E. Suite 106 Everett, Washington 98208
 Phone: (425) 337-3174
 Fax: (425) 337-3045
 Email: mailbox@wetlandresources.com

WETLAND RATING
Wetland A

Figure A-1
 WRI Job # 21282
 Rated by: SS

ALLEN TOWNHOMES
WETLAND RATING FIGURE 2 - WETLAND A



LEGEND

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



Scale 1" = 1,000'



**CONTRIBUTING BASIN
AREA RELATIVE TO
WETLAND UNIT IS 22:1**

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**WETLAND RATING
Wetland A**

Figure A-2
WRI Job # 21282
Rated by: SS

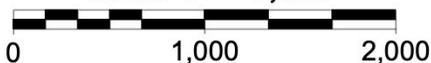
ALLEN TOWNHOMES
WETLAND RATING FIGURE 3 - WETLAND A



LEGEND

 WETLAND

 AQUATIC RESOURCES ON THE 303(d) LIST


Scale 1" = 1,000'


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WETLAND RATING
Wetland A

Figure A-3
WRI Job # 21282
Rated by: SS

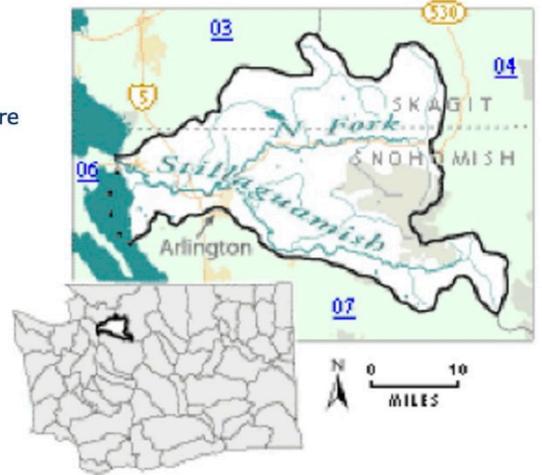
ALLEN TOWNHOMES
WETLAND RATING FIGURE 4 - WETLAND A

WRIA 5: Stillaguamish

The following table lists overview information and links to specific water quality improvement projects (including total maximum daily loads, or TMDLs) for this water resource inventory area (WRIA). Please use links (where available) for more information on a project.

Counties

- [Skaqit](#)
- [Snohomish](#)



Waterbody Name	Pollutant(s)	Status**	TMDL Lead
Old Stillaguamish Channel	Dissolved Oxygen	On hold	Ralph Svrcek 425-649-7165
Stillaguamish River	Arsenic Dissolved Oxygen Fecal Coliform Mercury pH Temperature	Approved by EPA Has an implementation plan	Ralph Svrcek 425-649-7165

** **Status** will be listed as one of the following: Approved by EPA, Under Development or Implementation

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WETLAND RATING
Wetland A

Figure A-4
 WRI Job # 21282
 Rated by: SS

Wetland name or number B

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B (approx; off-site) Date of site visit: 12/6/21

Rated by EC, SS Trained by Ecology? Yes No Date of training 10/2018

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 Snohomish County

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"/> <input checked="" type="checkbox"/> L	H <input type="checkbox"/> <input checked="" type="checkbox"/> L	<input checked="" type="checkbox"/> H M L	
Value	<input checked="" type="checkbox"/> H M L	H <input type="checkbox"/> <input checked="" type="checkbox"/> L	H <input type="checkbox"/> <input checked="" type="checkbox"/> L	TOTAL
Score Based on Ratings	7	6	6	19

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 B

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Wetland name or number **B**_____

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 B **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 B

DEPRESSIONAL AND FLATS WETLANDS		
Water Quality Functions - Indicators that the site functions to improve water quality		
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. <u>Characteristics of surface water outflows from the wetland:</u>		
<input type="checkbox"/> Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3		2
<input checked="" 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		0
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		3
<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 checked="" type="checkbox"/> Area seasonally ponded is > ½ total area of wetland points = 4		4
<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		
Total for D 1		9

Add the points in the boxes above

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

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 <input type="checkbox"/> No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	<input type="checkbox"/> Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	<input type="checkbox"/> Yes = 1 No = 0	1
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source _____	Yes = 1 <input type="checkbox"/> No = 0	0
Total for D 2		2

Add the points in the boxes above

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

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	Yes = 1 <input type="checkbox"/> No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	<input type="checkbox"/> Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)?	<input type="checkbox"/> Yes = 2 No = 0	2
Total for D 3		3

Add the points in the boxes above

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

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

D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland:		
<input type="checkbox"/> Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	2
<input checked="" 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	
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.		
<input type="checkbox"/> Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	3
<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	
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.		
<input type="checkbox"/> The area of the basin is less than 10 times the area of the unit	points = 5	3
<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	
Total for D 4		8

Add the points in the boxes above

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

Record the rating on the first page

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

Add the points in the boxes above

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

Record the rating on the first page

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.		
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):		
<input type="checkbox"/> • Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	1
<input checked="" 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 type="checkbox"/> There are no problems with flooding downstream of the wetland.	points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?		
Yes = 2 <input type="checkbox"/> No = <input type="checkbox"/>		0
Total for D 6		1

Add the points in the boxes above

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

Record the rating on the first page

Wetland name or number B**These questions apply to wetlands of all HGM classes.****HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat**H 1.0. Does the site have the potential to provide habitat?**

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

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

H 1.3. Richness of plant species

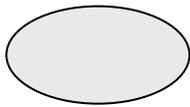
Count the number of plant species in the wetland that cover at least 10 ft².

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

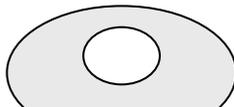
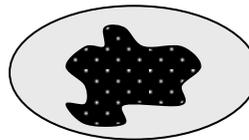
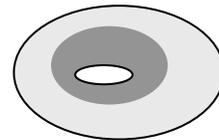
- | | | |
|------------------------------|-------------------|----------|
| If you counted: > 19 species | points = 2 | 1 |
| 5 - 19 species | points = 1 | |
| < 5 species | points = 0 | |

H 1.4. Interspersion of habitats

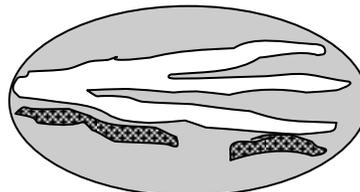
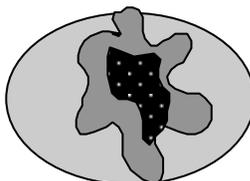
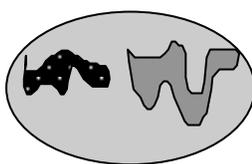
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



None = 0 points

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

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

**1**

Wetland name or number B

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

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

Record the rating on the first page

H 2.0. Does the landscape have the potential to support the habitat functions of the site?			
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat <u>23</u> + [(% moderate and low intensity land uses)/2] <u>14</u> = <u>37</u> %</p> <p>If total accessible habitat is:</p> <p><input checked="" type="checkbox"/> > 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"/> < 10% of 1 km Polygon points = 0</p>			3
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>35</u> + [(% moderate and low intensity land uses)/2] <u>20</u> = <u>55</u> %</p> <p><input checked="" type="checkbox"/> Undisturbed habitat > 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 > 3 patches points = 1</p> <p><input type="checkbox"/> Undisturbed habitat < 10% of 1 km Polygon points = 0</p>			3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p><input type="checkbox"/> > 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>			0
Total for H 2	Add the points in the boxes above	6	

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

Record the rating on the first page

H 3.0. Is the habitat provided by the site valuable to society?			
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p> <p>Site meets ANY of the following criteria: points = 2</p> <p><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>			1

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

Record the rating on the first page

Wetland name or number B

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.

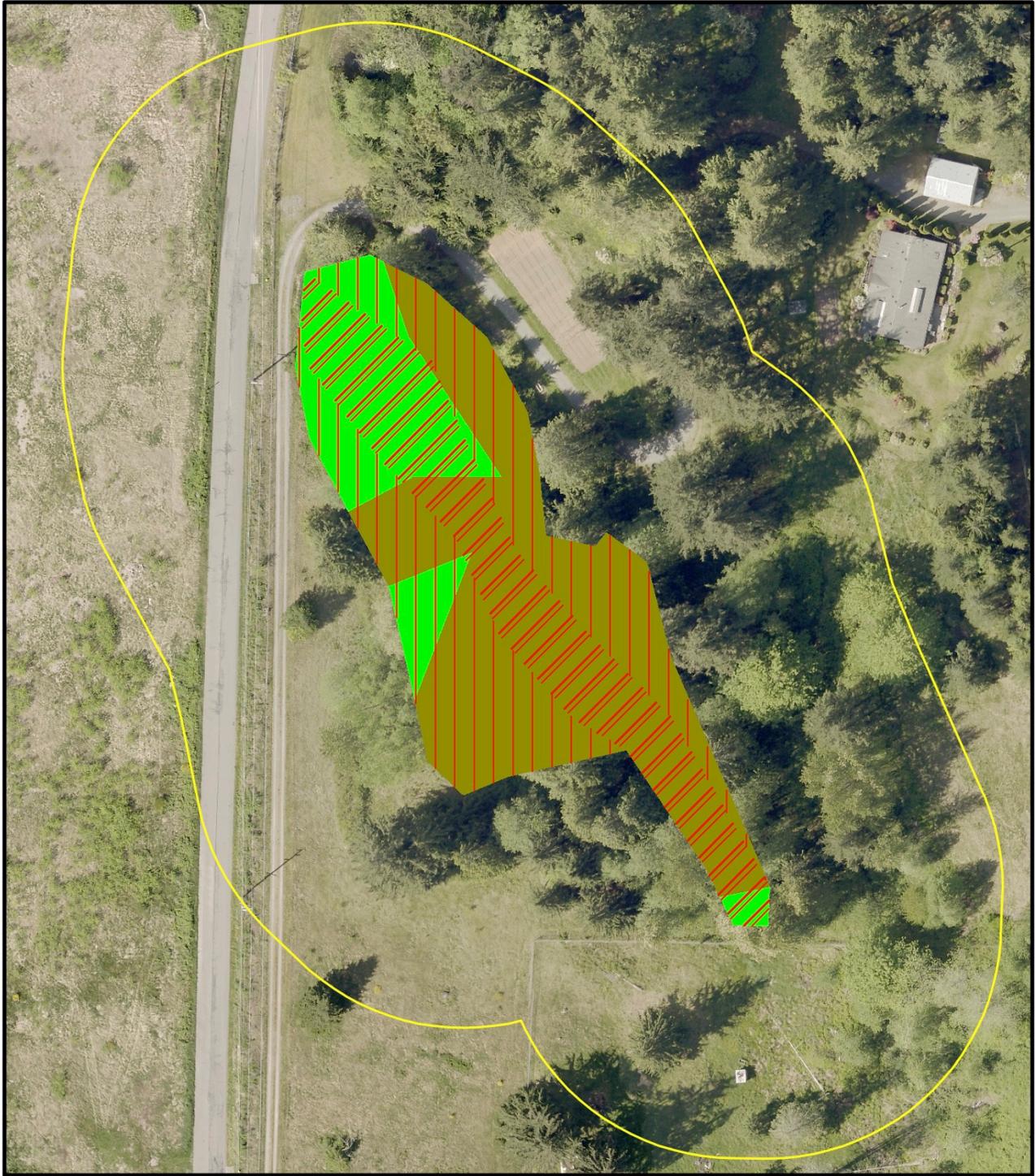
Wetland name or number B**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? <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 SC 1.1 No= Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? <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 = Category I No = Category II	Cat. I Cat. II
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to SC 2.2 No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = Category I No = Not a WHCV	Cat. I
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3 No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog	Cat. I

Wetland name or number B

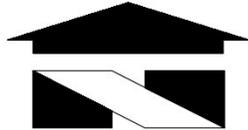
<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <p><input type="checkbox"/> Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.</p> <p><input type="checkbox"/> Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).</p> <p style="text-align: right;">Yes = Category I No = Not a forested wetland for this section</p>	Cat. I
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <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 (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>)</p> <p style="text-align: right;">Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <p><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 ft²)</p> <p style="text-align: right;">Yes = Category I No = Category II</p>	Cat. I Cat. II
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <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 SC 6.1 No = not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV</p>	Cat I Cat. II Cat. III Cat. IV
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	N/A

ALLEN TOWNHOMES
WETLAND RATING FIGURE 1 - WETLAND B

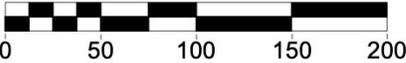


LEGEND

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



Scale 1" = 100'

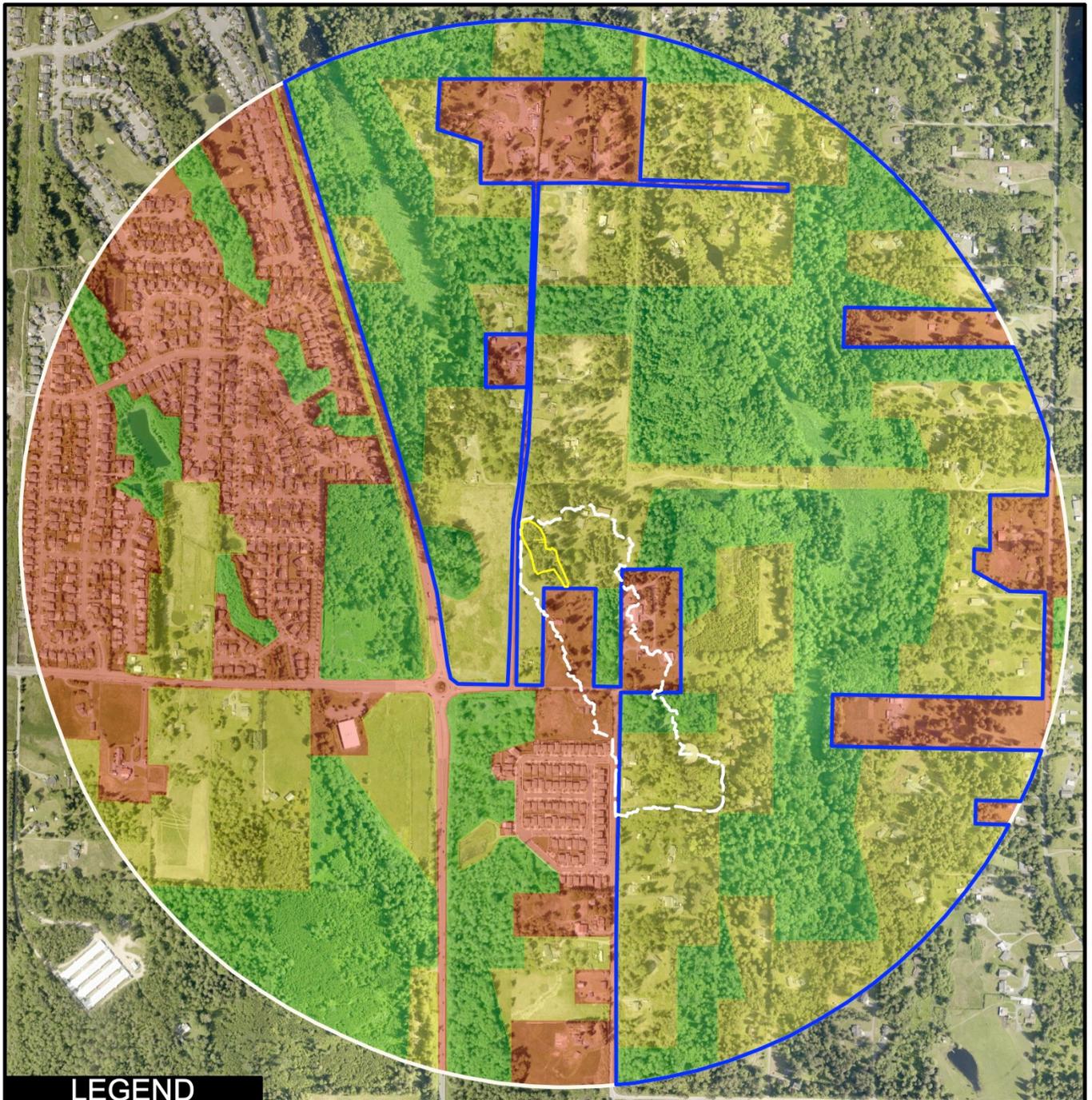


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WETLAND RATING
Wetland B

Figure B-1
WRI Job # 21282
Rated by: SS

ALLEN TOWNHOMES
WETLAND RATING FIGURE 2 - WETLAND B



LEGEND

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



Scale 1" = 1,000'



**CONTRIBUTING BASIN
AREA RELATIVE TO
WETLAND UNIT IS 23:1**

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**WETLAND RATING
Wetland B**

Figure B-2
WRI Job # 21282
Rated by: SS

ALLEN TOWNHOMES
WETLAND RATING FIGURE 3 - WETLAND B

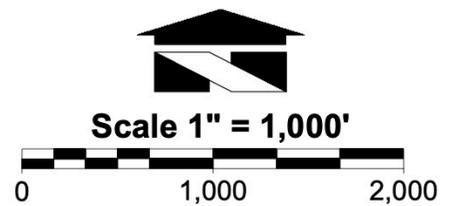


LEGEND

 WETLAND

 AQUATIC RESOURCES ON THE 303(d) LIST





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WETLAND RATING
Wetland B

Figure B-3
WRI Job # 21282
Rated by: SS

ALLEN TOWNHOMES

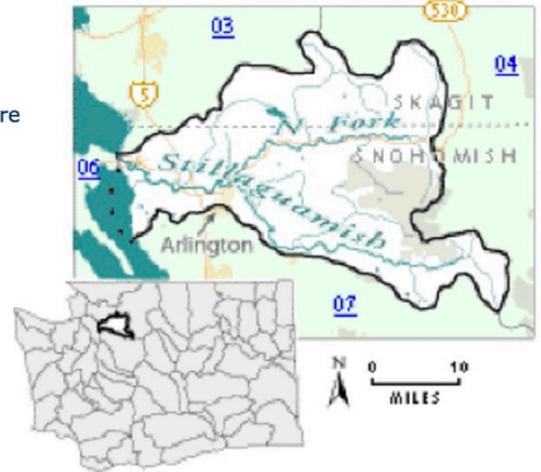
WETLAND RATING FIGURE 4 - WETLAND B

WRIA 5: Stillaguamish

The following table lists overview information and links to specific water quality improvement projects (including total maximum daily loads, or TMDLs) for this water resource inventory area (WRIA). Please use links (where available) for more information on a project.

Counties

- [Skaqit](#)
- [Snohomish](#)



Waterbody Name	Pollutant(s)	Status**	TMDL Lead
Old Stillaguamish Channel	Dissolved Oxygen	On hold	Ralph Svrjcek 425-649-7165
Stillaguamish River	Arsenic Dissolved Oxygen Fecal Coliform Mercury pH Temperature	Approved by EPA Has an implementation plan	Ralph Svrjcek 425-649-7165

** Status will be listed as one of the following: Approved by EPA, Under Development or Implementation

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WETLAND RATING
Wetland B

Figure B-4
 WRI Job # 21282
 Rated by: SS

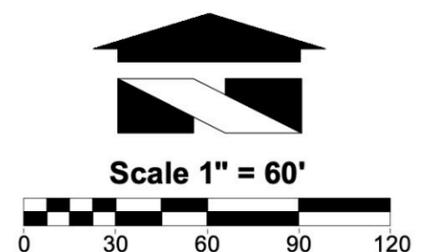
Appendix D
Critical Area Study Maps

CRITICAL AREA STUDY MAP ALLEN TOWNHOMES

PORTION OF SECTION 24, TOWNSHIP 31N, RANGE 5E, W.M.



LEGEND	
	WETLAND (SURVEYED)
	WETLAND (APPROX.)
	STANDARD BUFFER
	PROPERTY BOUNDARY
	DATA SITE



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**CRITICAL AREA STUDY MAP
ALLEN TOWNHOMES
ARLINGTON, WA**

JM1 Holdings, LLC c/o Land Pro Group, Inc. 10515 20th St SE, #202 Lake Stevens, WA 98258	Sheet 1/2 WRI #: 21282 Drawn by: SS Rev. 1: 08.10.2023
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