



Crescent Environmental PLLC
Environmental Consulting

**Revised Wetland Delineation of Parcel 972600211
City of Port Townsend, Washington.**

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Carla Sebastian, Anderson Homes

At your request and consistent with our agreed scope-of-work dated 4/15/2021, I performed a Level II wetland delineation and functional assessment for parcel 972600211, City of Port Townsend, Washington (Figure 1).

The subject parcel is located at 1790 31st Street, Port Townsend, Washington. (Figure 1).

The parcel is known as Lot 3 of the O'Meara Short Plat and is approximately 0.115 acres in area (Figure 2).

Site Characteristics

The subject parcel is situated on a flat to gently sloping terraced outwash and till plain bordering the northern slope of the Olympic Mountains. A palustrine scrub-shrub wetland associated with a drainage known as Addie's ditch, is located adjacent to the western side of the parcel. (Figure 2).

The elevation of the subject parcel is approximately 240 feet above mean sea level (m.s.l.) based on LiDAR bare earth elevation data using the National Vertical Datum of 1988 (NAVD88) (Figure 3).

Precipitation is seasonally variable, characterized by wet mild winters and relatively dry, cool, summers. Annual average precipitation (1981-2010) is 22.9 inches primarily occurring as rainfall.

Native upland vegetation on the parcels is a mixed second-growth conifer-dominated forest composed of Douglas fir, Western red cedar, Big Leaf Maple, Red alder and Madrone. The understory vegetation is dominated by plant species such as Salal, Swordfern, Snowberry, Rhododendron and Red alder.

I visited the site on April 21, 2021, during the growing season and walked the parcel boundaries and adjacent areas. I excavated shallow soil pits to 16 inches to evaluate soil color, texture, and shallow groundwater characteristics and recorded vegetation communities consistent with methodology published by the U.S. Army Corps of Engineers Western Valleys and Mountains Regional Supplement to the Federal Wetland Delineation Manual adopted by Jefferson County (USACE, 2010).

I collected vegetation, soils, and hydrology data in two plots, one located within a wetland area and one located in an adjacent upland area. Plot locations are shown on Figure 11 and Plot Data Forms are included in Appendix A. Additionally, prior to visiting the site I reviewed the following information:

1. LiDAR Topography.
2. NRCS On-line soil survey (NRCS, 2020).
3. Jefferson County Critical Areas On-Line Mapping.
4. National Wetlands Inventory Mapping (NWI, USFWS 2021).
5. Aerial photographs from 1990, 2005, 2009, 2011, 2017, and 2019.
6. Wetland Delineation from 2002 performed by Olympic Wetland Resources, Inc.

The NRCS On-Line Soil Survey indicates the soils in the parcel area are mapped as Swantown, and Tukey gravelly loam (non-hydric) (Figure 4).

The National Wetlands Inventory (NWI) mapping shows no wetlands on or adjacent to parcel 972600211.

Vegetation height (ft.) distribution on and adjacent to the subject parcel is shown on Figure 5.

Aerial photographs (Figures 6-11) show the vegetation and site development history on and adjacent to the subject parcel.

On-Site Observations

The primary wetland area observed on the west side of parcel 972600211 is a palustrine scrub-shrub wetland associated with the shallow drainage of Addie's Ditch. Addie's Ditch flows under 31st Street from the south to the north via a culvert.

Upland areas, including the subject parcel east of the Addie's Ditch wetland are dominated by Douglas fir, Western Red Cedar (*Thuja plicata*), Madrone (*Arbutus menziesii*), Salal (*Gaultheria shallon*) and Swordfern (*Polystichum munitum*).

The boundary between the Addie's Ditch wetland and adjacent upland is easily defined by a topographic break in slope and an abrupt transition from a hydrophytic plant community to an upland plant community.

In order to determine the location of the upland-wetland boundary on-site, I documented vegetation, soils and hydrology observations at two plots.

Plot 1 is located in the Addie's Ditch wetland west of the subject parcel and Plot 2 is located in an upland area also located west of the subject.

Data collected at these plots are shown in Appendix A and the delineated wetland area is shown as a number of sequentially numbered points on Figure 10.

I did observe wetland boundary flags on the wetland-upland boundary that I assume were placed during the 2002 wetland delineation by Olympic Wetland Resources, Inc. I agree with the placement of the 2002 wetland delineation that I observed on April 21, 2021.

Plot 1 (Wetland)

Plot 1 is located in a wetland area on the west side of the subject parcel (Figure 11) (Appendix C, Photograph 2).

Vegetation at Plot 1 was dominated by hydrophytic vegetation including Scouler's willow (*Salix scouleriana*), hardhack spirea (*Spirea douglassii*), Nootka rose (*Rosa nutkana*), Slough sedge (*Carex obnupta*), Water parsley (*Oenanthe sarmentosa*), and Soft rush (*Juncus effusus*).

Soils at Plot 1 consisted of 8 inches of black (10YR 2/1) mucky silt loam, over 8 inches of Very Dark Grayish Brown 10 YR 3/2 sandy silt with many medium 2.5 YR 3/3 dark reddish brown mottles.

The soil profile at Plot 1 was saturated to the soil surface and a shallow water table was observed within 8 inches of the soil surface.

Site conditions observed at Plot 1 indicate the positive presence of wetland parameters.

Plot 2 (Upland)

Plot 2 is located approximately 50 feet east of Plot 1 (Figure 12.)

The plant community at Plot 2 is dominated by an 100% cover of upland species including Douglas fir (*Pseudotsuga menziesii*), Salal (*Gaultheria shallon*) and Sword fern (*Polystichum munitum*).

Soils at Plot 2 consisted of Dark Brown (10YR 3/3) sandy gravelly loam. (**Note:** soil color nomenclature follows Munsell Soil Color Chart standards (Munsell Color, 2000).

The soil profile at Plot 2 was composed of brown gravelly sandy loam and dry to the surface on April 21, 2021. There was no evidence of wetland hydrology at Plot 2 (e.g., soil saturation, shallow water table, water stained leaves, drift deposits, and soil cracking).

No wetland parameters (plants, soils and hydrology) are satisfied at Plot 2, therefore Plot 2 is located in an upland location.

Wetland Delineation

Based on previous wetland delineations (Olympic Wetland Resources Inc., 2002, 2005), mapping and on-site investigation of plants, soils and hydrology within and adjacent to the parcel boundaries, one wetland area was delineated adjacent to the west of parcel 972600211.

This wetland is classified as an, palustrine scrub-shrub wetland, using the Cowardin

classification system (Cowardin, et al., 1979), based on the presence of hydrophytic vegetation, hydric soils, and observations of shallow surface inundation and/or saturation of the soil profile in the upper 16 inches.

The Hydrogeomorphic Wetland Class (HGM) for this wetland would be a “depressional flow through” wetland, because it has a gradient of 0-1%, uni-directional water flow, and seasonal inundation and/or ponding.

Wetland boundaries were staked and flagged in the field and sequentially numbered from south to north and the locations mapped using an Arrow Gold real-time kinematic global positioning system (RTK-GPS) connected to the Washington State Reference Network (WSRN) to access real-time positioning corrections. Wetland boundaries were mapped in two-dimensional (x, y) space using U.S. Feet in the NAD83 datum using the State Plane Washington North projection with an accuracy of approximately +/- 5 cm Root Mean Square Error (RMSE).

The wetland boundary adjacent to the subject parcel are staked approximately every 50 feet with 4-foot tall wood surveyor stakes and flagging. Plot locations are marked in the field with 4-foot tall wood surveyor stakes and flags with plot labels.

Wetland Functional Assessment

Wetlands delineated adjacent to the parcel were evaluated using the methods published by the Washington Department of Ecology (WDOE, 2015) “Washington State Wetland Rating System for Western Washington”. The assessment forms are presented in Appendix B.

Based on the WDOE Western Washington Wetland Rating System, the wetland present on the parcel would be designated as Class II wetland based on function. The Addie’s Ditch wetland scored High on Habitat Functions. The City of Port Townsend Code designates a buffer distance of 225 ft. for Class II wetlands that rate a High for Habitat Function, and Moderate Impact for residential development.

Wetland Classification

The palustrine, scrub-shrub wetland identified adjacent to the west of the subject parcel is typed as a Class II wetland by the City of Port Townsend County Code because it scored 22 points in the functional rating (e.g., rates “High” for habitat function). (See Functional Assessment, Appendix B).

Upland Classification

Areas not mapped as wetland in Figure 10 are classified as upland sites.

Critical Areas Buffers

The 225-foot wetland buffer required by the City of Port Townsend Code covers the entire subject property Figure 13.

Construction of a single family residential structure will result in a 0.098-acre reduction in mature tree and shrub vegetation within the wetland buffer from existing conditions.

Because the 225-foot wetland buffer covers the entire subject parcel, the proponent is requesting that the City of Port Townsend allow for buffer reduction along the western and northern parcel boundary to a maximum width of 140 feet along the southern boundary and a width of 55 feet where the buffer intersects the building envelope proposed for the subject property (Figure 12) per the City of Port Townsend Critical Areas code:

Section 19.05.110 Critical Area 5-Wetlands, G.5. states:

“5. Reduced Buffer Widths. The director may reduce the standard buffer width on a case-by-case basis to a width of no fewer than 25 feet when the director determines that:

- a. No direct, indirect, short-term, or long-term adverse impacts to regulated wetlands will result from the proposed development activity; or
- b. The site is extensively vegetated and has less than 15 percent slopes; or
- c. The project contains provisions to enhance buffers using native vegetation which will provide additional protection for the wetland’s functions and values.”

All three criteria listed above will be met by this project.

There will be no direct, indirect short or long-term adverse impacts to the regulated wetland as a result of this development activity.

The site is currently extensively vegetated and has less than 15 percent slope,

The project contains provisions to restore and enhance buffers using native vegetation which will provide additional protection for the wetland’s functions and values

Following completion of the single family residence, wetland buffer restoration will be implemented along the western and northern parcel boundaries including:

Native shrub plantings to increase plant density, provide screening from the residence, and to increase food availability for birds and wildlife adjacent to the wetland.

The following shrub species are recommended to be planted within the buffer:

- Mountain ash- (*Sorbus scopulina*)
- Oregon ash (*Fraxinus latifolia*)
- Douglas fir- (*Pseudotsuga menziesii*)
- Madrone (*Arbutus menziesii*)

Big Leaf Maple (*Acer macrophyllum*)
Oceanspray (*Holodiscus discolor*)

Installation of bird/bat nest boxes.

Wetland Buffer Restoration and Mitigation Actions

Construction of a single-family residential structure on the subject parcel will result in a reduction within the outer edge of the wetland buffer of 0.098 acre of mature tree and shrub vegetation.

Port Townsend Critical Areas Code (PTMC 19.05.110(I)) requires a Mitigation and Monitoring Plan when unavoidable impacts to a wetland buffer occur. Below are the requirements of the Mitigation and Monitoring Plan:

” Wetland Mitigation/Compensation Plan Requirements. When wetland alteration is permitted by this chapter, a mitigation plan shall be required to describe the methods the applicant will use to minimize impacts to wetland functions and values. A detailed mitigation plan shall be approved by the director prior to any development activity occurring on a lot upon which wetland or wetland buffer alteration, restoration, creation or enhancement is proposed. The mitigation plan shall be prepared by a qualified (wetlands) critical area consultant using accepted methodologies, shall include information as required by the director, and shall:

1. Include a baseline study that quantifies the existing functions and values of the wetland, the function and values that will be lost due to compensation, and the functions and values of the wetland to be created, restored or enhanced; and
2. Specify how functions and values will be preserved or replaced; and how impacts will be avoided, minimized or compensated for; and
3. Establish goals and objectives for the mitigation plan; and
4. Specify within the mitigation plan written specifications for grading, sedimentation and erosion control, revegetation, hydraulic analysis, staging of construction areas, appropriate diagrams and drawings, and recommended construction practices; and
5. Specify quantified criteria for monitoring the mitigated area on a long-term basis to determine whether the goals and objectives of the project have been met; and
6. Include a contingency plan specifying what corrective actions will be taken should the mitigation not be successful; and
7. Include provisions for maintenance bonding or other security acceptable to the director to assure that work is completed in accordance with the mitigation plan and that restoration or rehabilitation is performed in accordance with the contingency plan if mitigation fails within five

years of implementation.

The reduction of vegetation within the outer buffer area will result in the following reductions to the functions and values of the buffer:

1. Reduction in the density of vegetation.
2. Reduction in the structural diversity of existing vegetation (e.g., loss of mature conifer trees).
3. Reduction in available forage opportunity particularly for birds.
4. Reduction in available avian roosting and nesting habitat.

Mitigation actions to reduce the amount of wetland buffer functional impacts including:

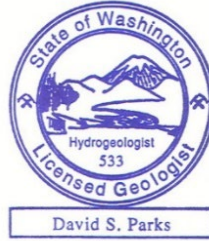
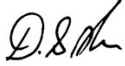
- a. Minimizing the eastern and northern lot setback distances to place the structure as far away from the wetland edge as allowed under City of Port Townsend Critical Areas Codes.
- b. Screening of the wetland and buffer by re-establishing dense native vegetation along the northern and western sides of the parcel and building a wood fence to reduce noise and light levels.
- c. Lighting will be located so it points away from the wetland and buffer.
- d. Placement of bird and bat nest boxes long the outer edge of the wetland buffer.

SUMMARY

Remote review of available wetland mapping, historic aerial photography, and on-site investigation of the subject parcel for the purposes of wetland delineation indicates there is one regulatory wetland adjacent to the parcel boundaries.

On-site investigation determined that the vegetation community, soils and hydrology on the area adjacent to the west of parcel 972600211 meet the criteria for wetland characteristics published by the U.S. Army Corps of Engineers, Western Valleys and Mountains Regional Supplement to the Federal Wetland Delineation Manual adopted by Jefferson County.

No other wetland areas were observed on the subject parcel other than the areas identified on Figure 13.



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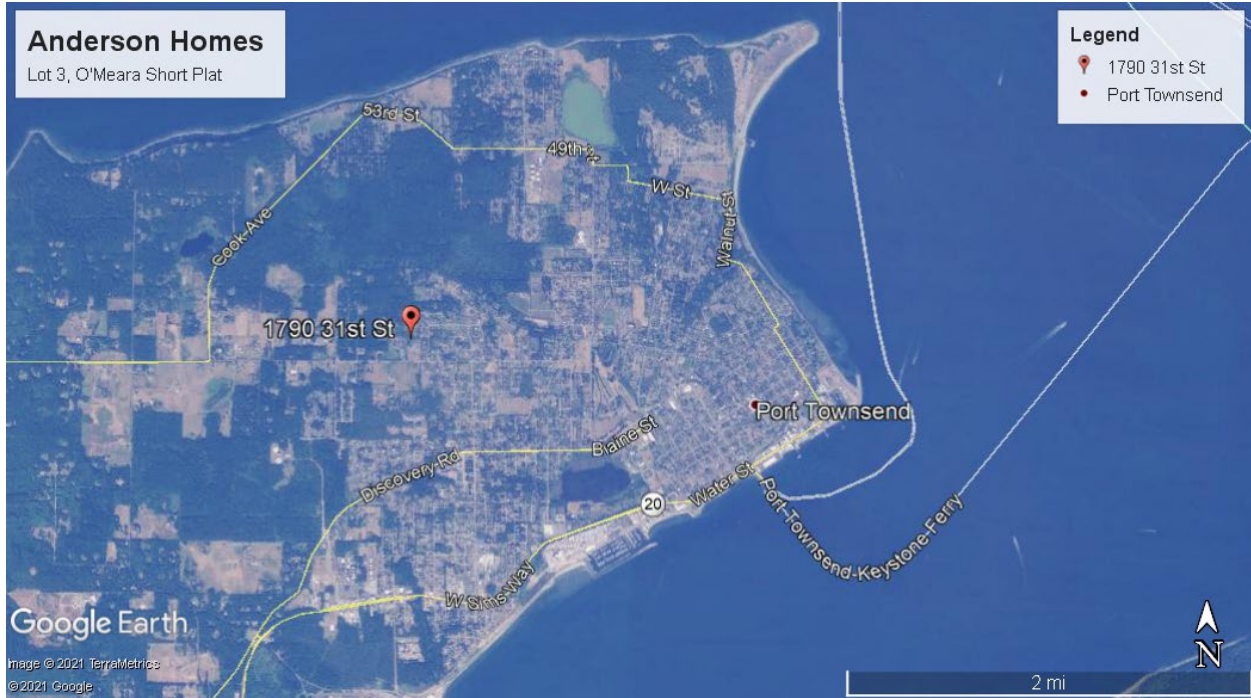


Figure 1: Location of Subject Parcel in Northeast Jefferson County, Washington.

Subject Parcel LiDAR Topography

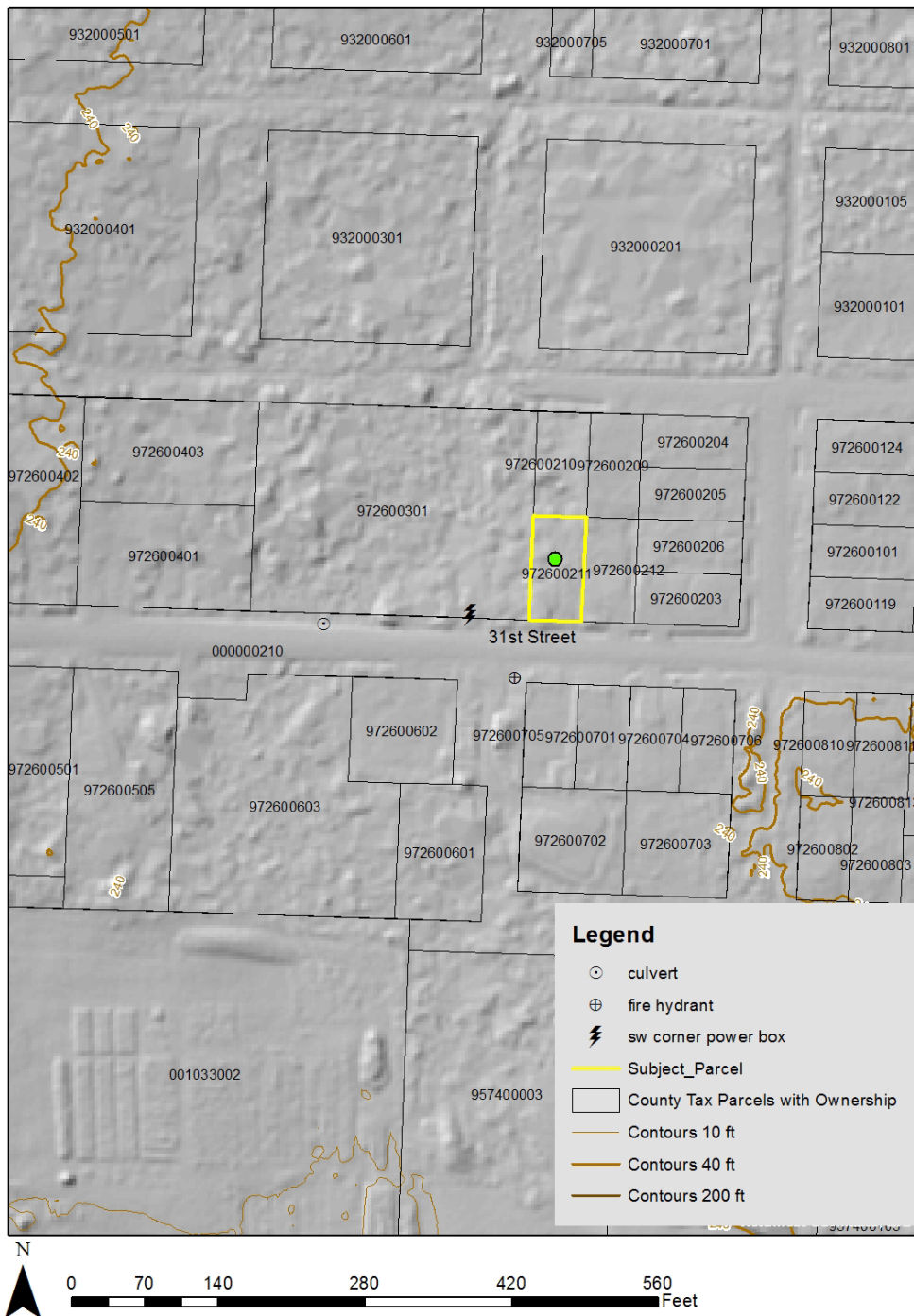


Figure 3. Site topography based on LiDAR bare earth Digital Elevation Model.

Subject Parcel Soils Mapping (NRCS)

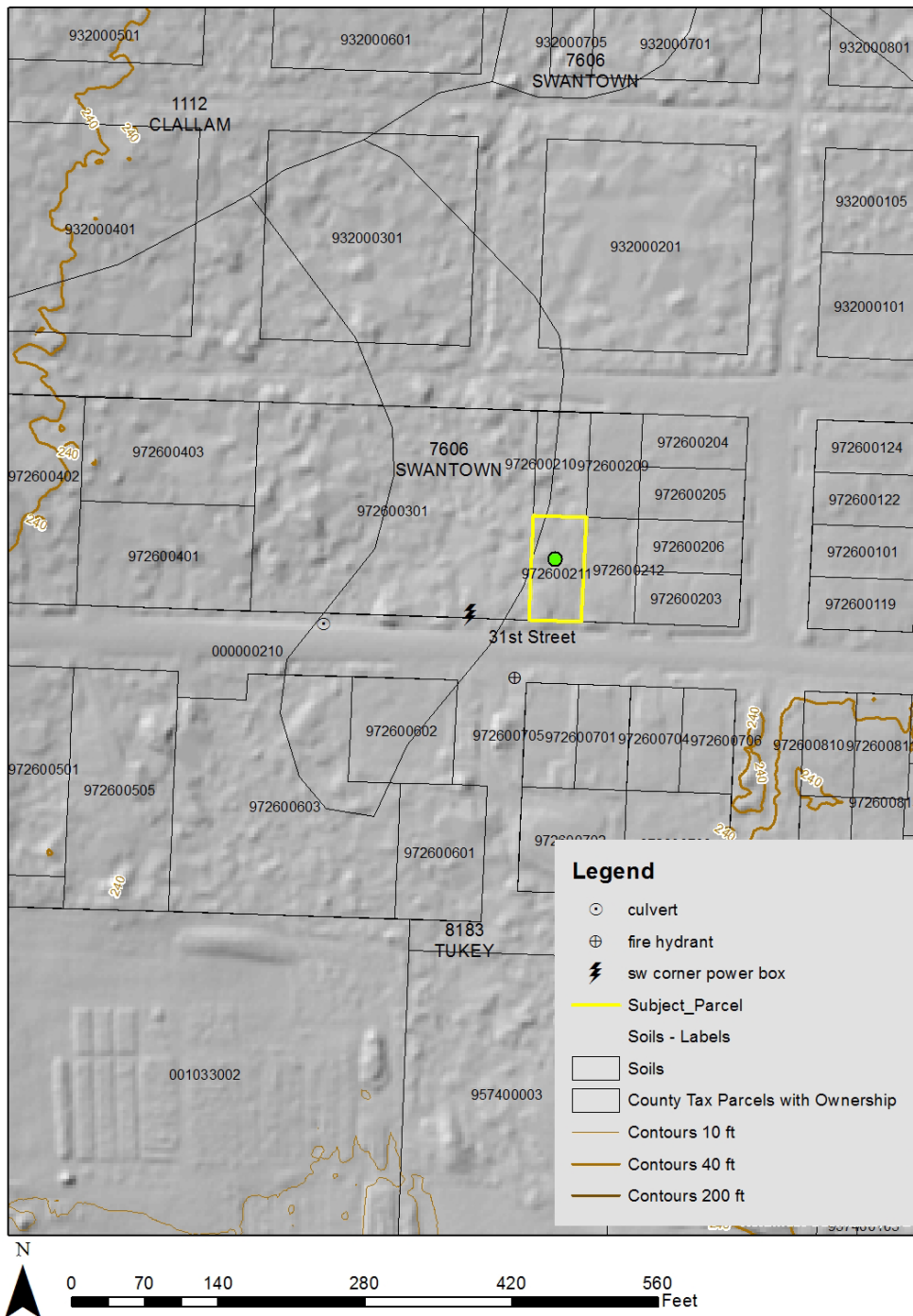


Figure 4: Natural Resources Conservation Service (NRCS) Soils Mapping for the Subject Parcel.

Subject Parcel Vegetation Height (ft.)

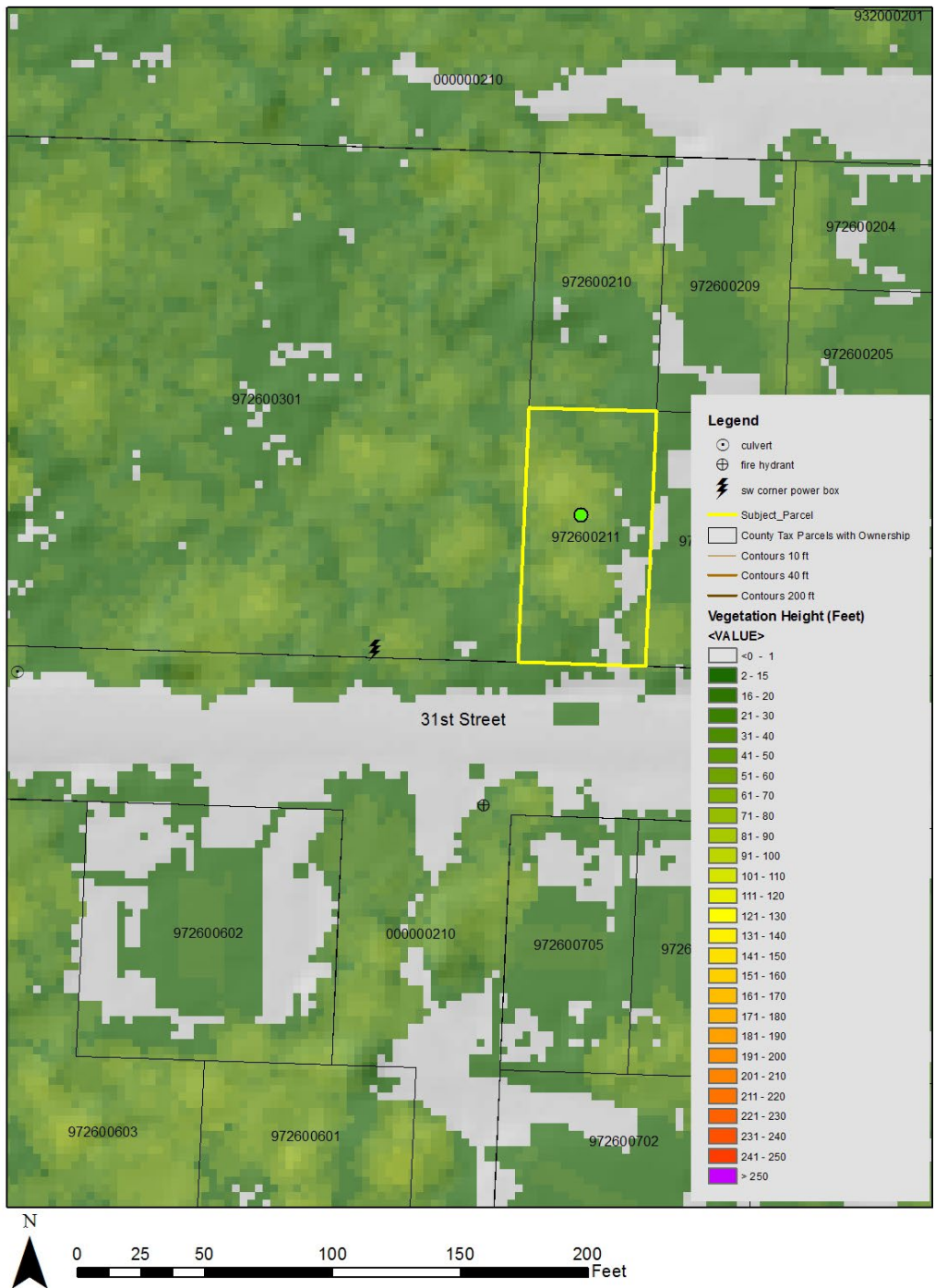


Figure 5: LiDAR Vegetation Height (ft.) Mapping of the Subject Parcel.

Subject Parcel 1990 Orthophotography

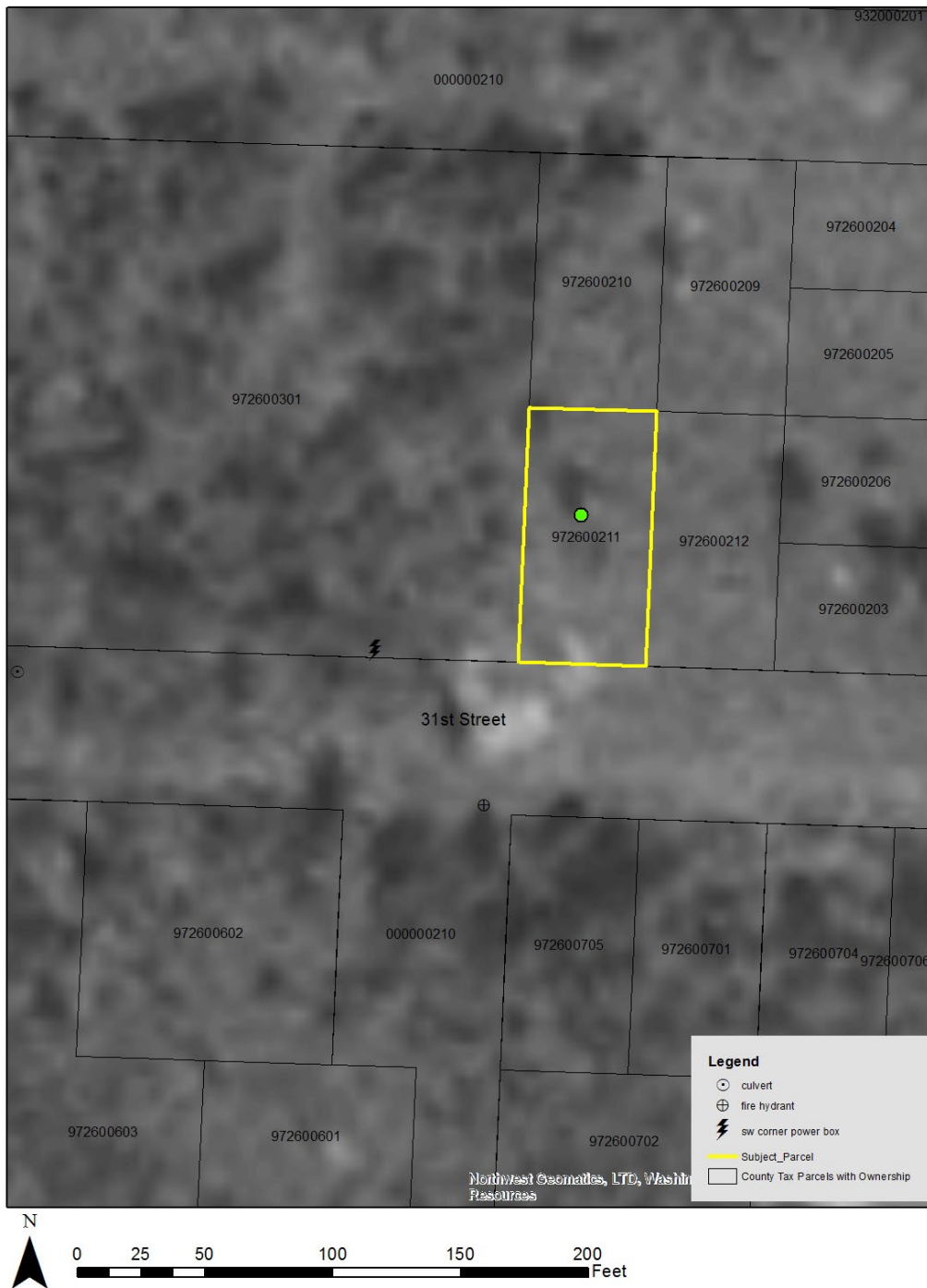


Figure 6: 1990 Ortho-photograph of the Subject Parcel,

Subject Parcel 2005 Orthophotography



Figure 7: 2005 Color Ortho-photograph of the Subject Parcel.

Subject Parcel 2009 Orthophotography



Figure 8: 2009 Orthophotograph of the Subject Parcel

Subject Parcel 2011 Orthophotography



Figure 9: 2011 Color Orthophotograph of the Subject Parcel

Subject Parcel 2017 Orthophotography



Figure 10: 2017 Orthophotograph of the Subject Parcel.

Subject Parcel 2019 Orthophotography



Figure 11: 2019 Orthophotograph of the Subject Parcel.

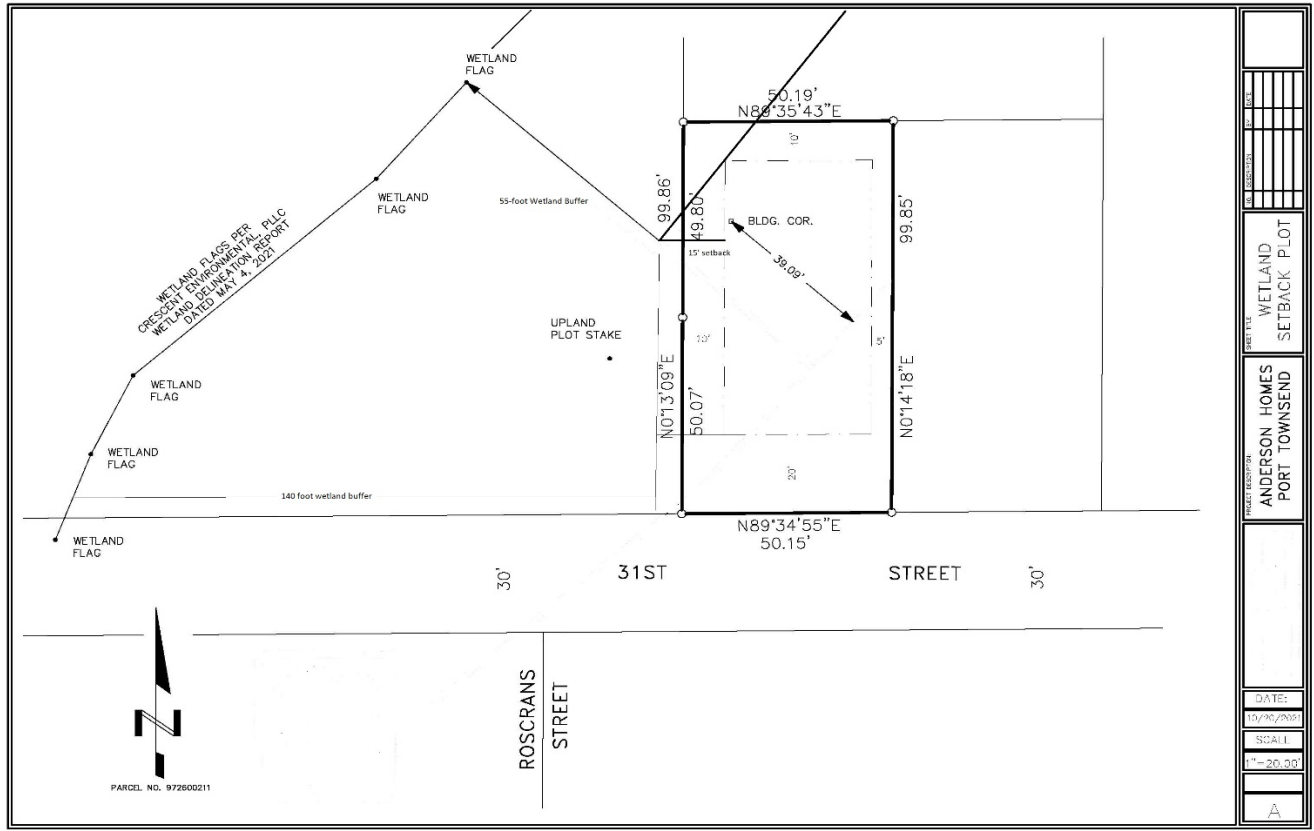


Figure 12: Field delineated wetland boundaries and buffers with proposed buffer reduction per City of Port Townsend Critical Areas Code 19.05.110, G, 5. Reduced buffer widths.

Subject Parcel Wetland Buffer Distances

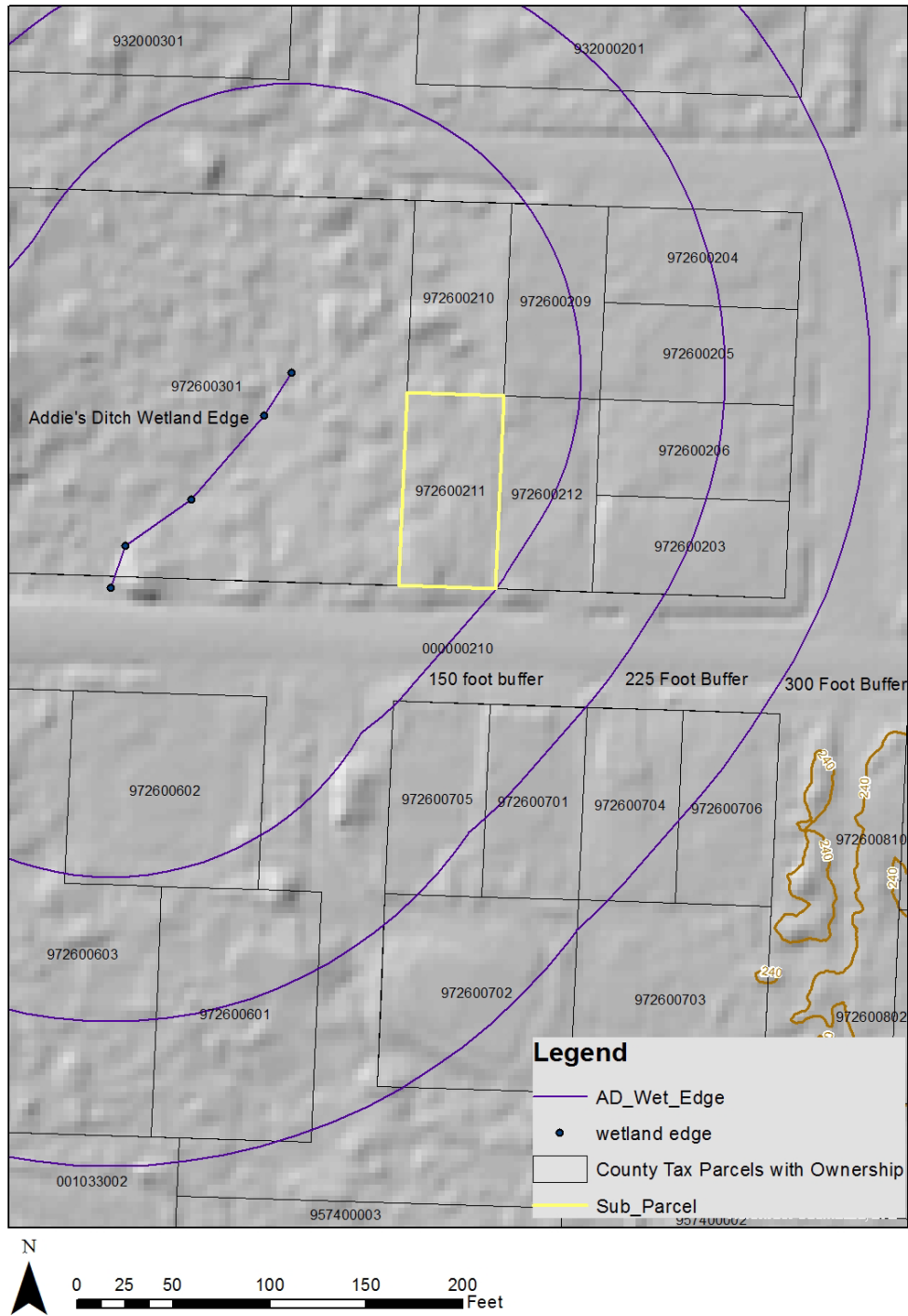


Figure 13: Subject Parcel Wetland Buffer Distances for different levels of land use intensity.

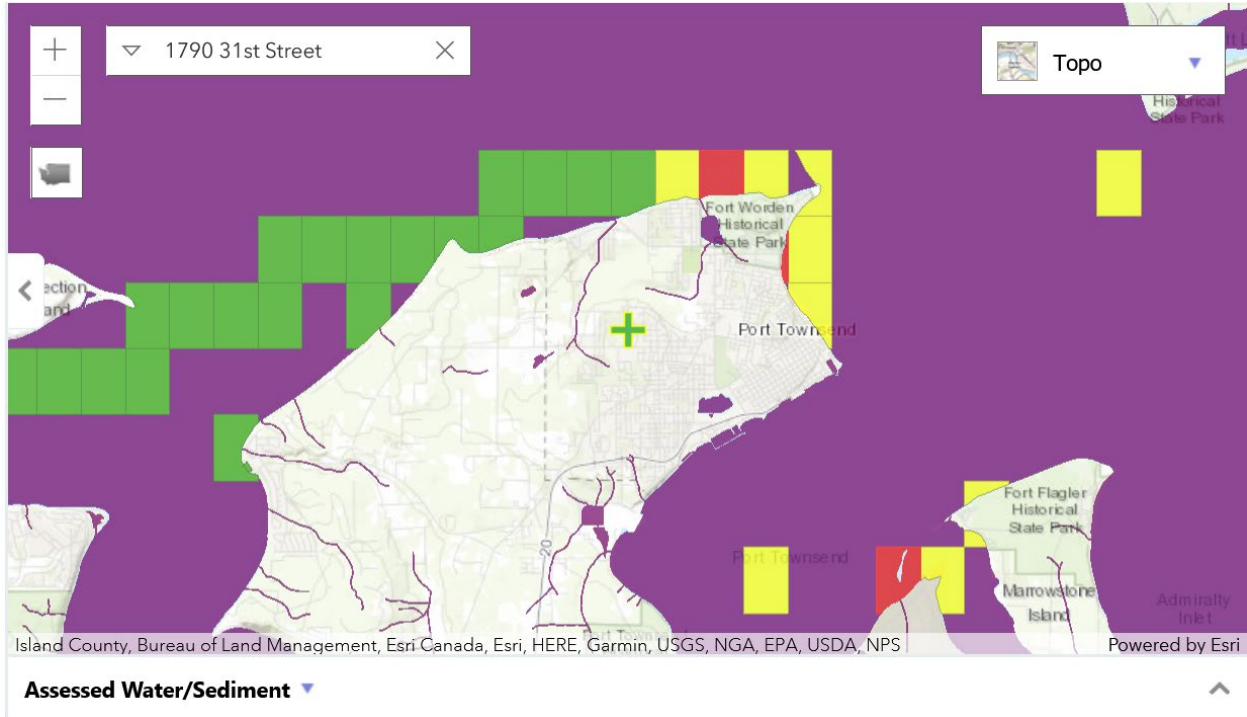
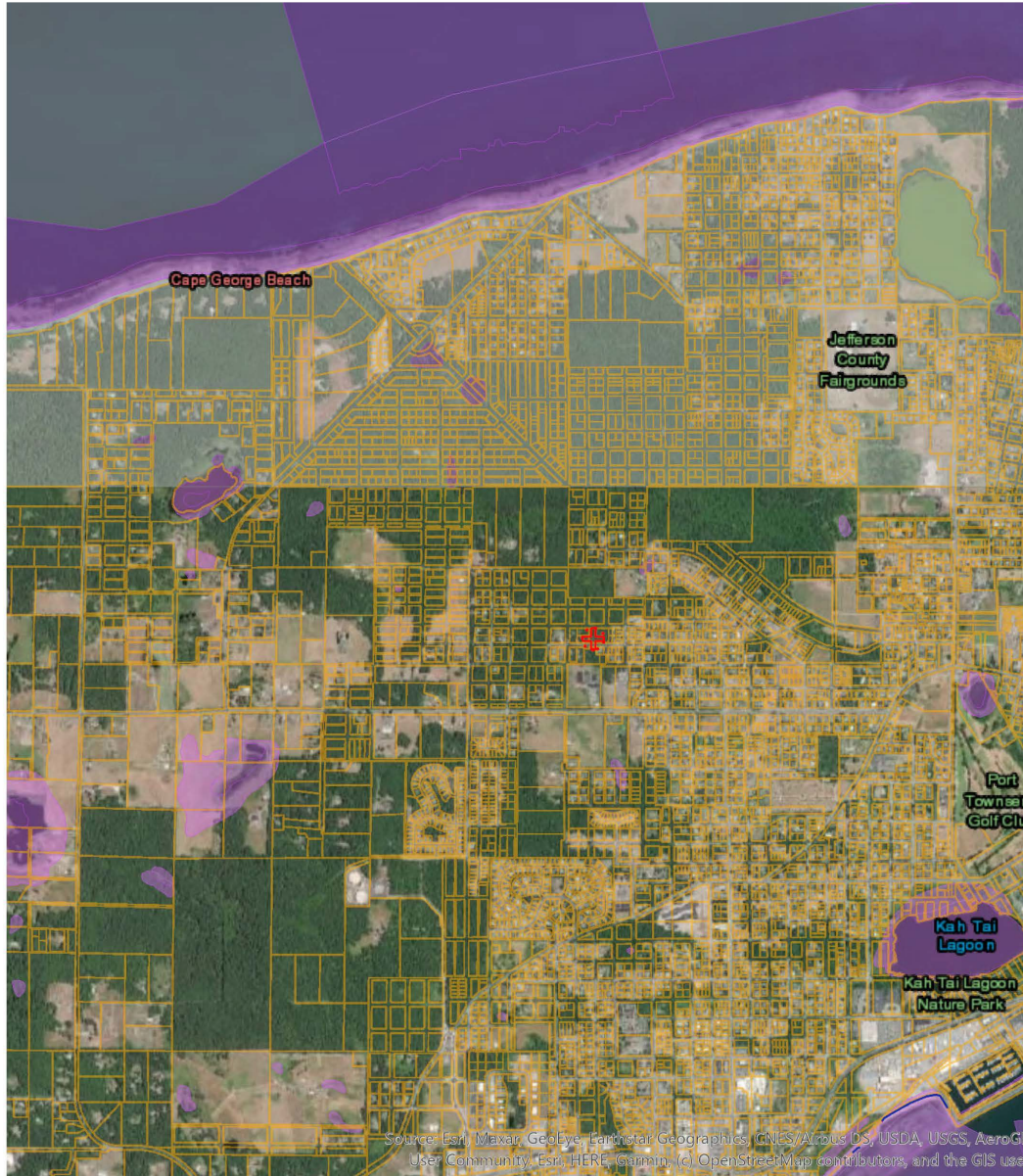


Figure 14: Screen shot of Water Quality Limited waters downstream of subject parcel (none).



Priority Habitats and Species on the Web



Buffer radius: 150 Feet

Report Date: 05/04/2021

Figure 15: WDFW Priority Habitats within 225 feet of Addie's Ditch Wetland.

1 Km Circle Around Subject Parcel



Figure 16: 1 KM Circle surrounding subject parcel.

Subject Parcel Upstream Contributing Area (1.18 KM2)



Figure 17: Contributing Basin area to Subject Parcel.

Appendix A: Plot Data (Plants, Soils, Hydrology)

(Note: Plot locations are shown on Figure 12)

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

Project/Site: Anderson Homes-1790 31st Street City/County: Port Townsend, Jefferson Sampling Date: 4/21/2021
 Applicant/Owner: Anderson Homes State: WA Sampling Point: Plot 1
 Investigator(s): David Parks, PWS#1623 Section, Township, Range: S3, T30N, R1W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Concave Slope (%): 1-5
 Subregion (LRR): Western Mountains and Valleys Lat: 48.1228 Long: -122.7977 Datum: NAD 83
 Soil Map Unit Name: Swantown NWI classification: PSS
 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:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	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>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1.2</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>60</u> x 1 = <u>60</u> FACW species <u>50</u> x 2 = <u>100</u> FAC species <u>50</u> x 3 = <u>150</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species _____ x 5 = _____ Column Totals: <u>180</u> (A) <u>390</u> (B) Prevalence Index = B/A = <u>2.12</u>
Sapling/Shrub Stratum (Plot size: <u>5 m</u>)				
1. <u>Salix scouleriana</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Spirea douglassi</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Rosa nutkana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
= Total Cover				
Herb Stratum (Plot size: <u>1 M</u>)				
1. <u>Carex obovata</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Oenanthe sarmentosa</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Phalaris arundinacea</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
= Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____ = Total Cover				
Remarks:				
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

SOIL

Sampling Point: Plot 1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8"	10 YR 2/1						Mucky Silt Loam	
8-16"	10 YR 3/2		2.5 YR 3/3	60	C	M	Sandy Silt Loam	

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

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Water table observed with 8" of soil surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): 8"

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

Wetland Hydrology Present? Yes No

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

Remarks:

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

Project/Site: Anderson Homes/1790 31st Street City/County: Port Townsend, Jefferson Sampling Date: 4/21/2021
 Applicant/Owner: Anderson Homes State: WA Sampling Point: Plot 2
 Investigator(s): David Parks, PWS#1623 Section, Township, Range: S3,T30N,R1W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1-5
 Subregion (LRR): Western Mountains and Valleys Lat: 48.1228 Long: -122.7974 Datum: NAD 83
 Soil Map Unit Name: Tukey NWI classification: Upland

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

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10M</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
1. <u>Pseudotsuga menziesii</u>	<u>50</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Thuja plicata</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Arbutus mensiesii</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
Sapling/Shrub Stratum (Plot size: <u>5M</u>)				
1. <u>Gaultheria shallon</u>	<u>60</u>	<u>Y</u>	<u>UPL</u>	OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>30</u> x 3 = <u>90</u> FACU species _____ x 4 = _____ UPL species <u>170</u> x 5 = <u>850</u> Column Totals: <u>200</u> (A) <u>940</u> (B)
2. <u>Polystichum munitum</u>	<u>40</u>	<u>Y</u>	<u>UPL</u>	
3. _____	_____	_____	_____	Prevalence Index = B/A = <u>4.7</u>
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				Remarks:
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				

Wetland name or number Addie's Ditch

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Addies Ditch-Anderson Homes Date of site visit: _____
 Rated by David Parks, PWS#1623 Trained by Ecology? Yes No Date of training _____
 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 2019 NAIP

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

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality			Hydrologic			Habitat			
	<i>Circle the appropriate ratings</i>									
Site Potential	H	M	L	H	M	L	H	M	L	
Landscape Potential	H	M	L	H	M	L	H	M	L	
Value	H	M	L	H	M	L	H	M	L	TOTAL
Score Based on Ratings	6			7			8			21

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

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Wetland name or number Addies' Ditch

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	5
Hydroperiods	D 1.4, H 1.2	6-11
Location of outlet <i>(can be added to map of hydroperiods)</i>	D 1.1, D 4.1	6-11
Boundary of area within 150 ft of the wetland <i>(can be added to another figure)</i>	D 2.2, D 5.2	14
Map of the contributing basin	D 4.3, D 5.3	16
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	15
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	13
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	NA

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	

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NO – go to 6

YES – The wetland class is **Riverine**

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

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland name or number Addie's Ditch-Anderson Homes

DEPRESSIONAL AND FLATS WETLANDS			
Water Quality Functions - Indicators that the site functions to improve water quality			
D 1.0. Does the site have the potential to improve water quality?			
D 1.1. Characteristics of surface water outflows from the wetland:			
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3		2	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2			
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1			
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0			
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):			
Wetland has persistent, ungrazed, plants > 95% of area points = 5		5	
Wetland has persistent, ungrazed, plants > ½ of area points = 3			
Wetland has persistent, ungrazed plants > 1/10 of area points = 1			
Wetland has persistent, ungrazed plants < 1/10 of area points = 0			
D 1.4. Characteristics of seasonal ponding or inundation:			
<i>This is the area that is ponded for at least 2 months. See description in manual.</i>			
Area seasonally ponded is > ½ total area of wetland points = 4		2	
Area seasonally ponded is > ¼ total area of wetland points = 2			
Area seasonally ponded is < ¼ total area of wetland points = 0			
Total for D 1		Add the points in the boxes above	9

Rating of Site Potential If score is: 12-16 = H 9 6-11 = M 0-5 = L Record the rating on the first page

D 2.0. Does the landscape have the potential to support the water quality function of the site?			
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0		1	
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0		1	
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0		0	
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source _____ Yes = 1 No = 0		1	
Total for D 2		Add the points in the boxes above	3

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

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

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

Wetland name or number Addie's Ditch-Anderson Homes

DEPRESSIONAL AND FLATS WETLANDS			
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation			
D 4.0. Does the site have the potential to reduce flooding and erosion?			
D 4.1. Characteristics of surface water outflows from the wetland:			
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	2	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2		
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1		
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0		
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.			
Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	3	
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5		
Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3		
The wetland is a "headwater" wetland	points = 3		
Wetland is flat but has small depressions on the surface that trap water	points = 1		
Marks of ponding less than 0.5 ft (6 in)	points = 0		
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.			
The area of the basin is less than 10 times the area of the unit	points = 5	3	
The area of the basin is 10 to 100 times the area of the unit	points = 3		
The area of the basin is more than 100 times the area of the unit	points = 0		
Entire wetland is in the Flats class	points = 5		
Total for D 4		Add the points in the boxes above	8
Rating of Site Potential If score is: <u>12-16 = H</u> <u>8-11 = M</u> <u>0-5 = L</u> <i>Record the rating on the first page</i>			
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?			
D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	1	
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	0	
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0	1	
Total for D 5		Add the points in the boxes above	2
Rating of Landscape Potential If score is: <u>3 = H</u> <u>2-1 or 2 = M</u> <u>0 = L</u> <i>Record the rating on the first page</i>			
D 6.0. Are the hydrologic functions provided by the site valuable to society?			
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.			
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):			
• Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	2	
• Surface flooding problems are in a sub-basin farther down-gradient.	points = 1		
Flooding from groundwater is an issue in the sub-basin.	points = 1		
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____	points = 0		
There are no problems with flooding downstream of the wetland.	points = 0		
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?			
		Yes = 2 No = 0	0
Total for D 6		Add the points in the boxes above	2
Rating of Value If score is: <u>X 2-4 = H</u> <u>1 = M</u> <u>0 0 = L</u> <i>Record the rating on the first page</i>			

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RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
R 1.0. Does the site have the potential to improve water quality?	
R 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event:	
Depressions cover $> \frac{3}{4}$ area of wetland	points = 8
Depressions cover $> \frac{1}{2}$ area of wetland	points = 4
Depressions present but cover $< \frac{1}{2}$ area of wetland	points = 2
No depressions present	points = 0
R 1.2. Structure of plants in the wetland (areas with $> 90\%$ cover at person height, not Cowardin classes)	
Trees or shrubs $> \frac{2}{3}$ area of the wetland	points = 8
Trees or shrubs $> \frac{1}{3}$ area of the wetland	points = 6
Herbaceous plants (> 6 in high) $> \frac{2}{3}$ area of the wetland	points = 6
Herbaceous plants (> 6 in high) $> \frac{1}{3}$ area of the wetland	points = 3
Trees, shrubs, and ungrazed herbaceous $< \frac{1}{3}$ area of the wetland	points = 0
Total for R 1	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*

R 2.0. Does the landscape have the potential to support the water quality function of the site?	
R 2.1. Is the wetland within an incorporated city or within its UGA?	Yes = 2 No = 0
R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area?	Yes = 1 No = 0
R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years?	Yes = 1 No = 0
R 2.4. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0
R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4 Other sources _____	Yes = 1 No = 0
Total for R 2	Add the points in the boxes above

Rating of Landscape Potential If score is: 3-6 = H 1 or 2 = M 0 = L *Record the rating on the first page*

R 3.0. Is the water quality improvement provided by the site valuable to society?	
R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?	Yes = 1 No = 0
R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens?	Yes = 1 No = 0
R 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 drainage in which the unit is found)	Yes = 2 No = 0
Total for R 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 _____

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS	
Hydrologic Functions - Indicators that site functions to reduce flooding and stream erosion	
R 4.0. Does the site have the potential to reduce flooding and erosion?	
R 4.1. Characteristics of the overbank storage the wetland provides: <i>Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average width of stream between banks).</i> If the ratio is more than 20 If the ratio is 10-20 If the ratio is 5-<10 If the ratio is 1-<5 If the ratio is < 1	points = 9 points = 6 points = 4 points = 2 points = 1
R 4.2. Characteristics of plants that slow down water velocities during floods: <i>Treat large woody debris as forest or shrub. Choose the points appropriate for the best description (polygons need to have >90% cover at person height. These are NOT Cowardin classes).</i> Forest or shrub for > ¹ / ₃ area OR emergent plants > ² / ₃ area Forest or shrub for > ¹ / ₁₀ area OR emergent plants > ¹ / ₃ area Plants do not meet above criteria	points = 7 points = 4 points = 0
Total for R 4	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*

R 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
R 5.1. Is the stream or river adjacent to the wetland downcut?	Yes = 0 No = 1
R 5.2. Does the up-gradient watershed include a UGA or incorporated area?	Yes = 1 No = 0
R 5.3. Is the up-gradient stream or river controlled by dams?	Yes = 0 No = 1
Total for R 5	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*

R 6.0. Are the hydrologic functions provided by the site valuable to society?	
R 6.1. Distance to the nearest areas downstream that have flooding problems? <i>Choose the description that best fits the site.</i> The sub-basin immediately down-gradient of the wetland has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream	points = 2 points = 1 points = 0
R 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0
Total for R 6	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 _____

LAKE FRINGE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
L 1.0. Does the site have the potential to improve water quality?	
L 1.1. Average width of plants along the lakeshore (<i>use polygons of Cowardin classes</i>):	
Plants are more than 33 ft (10 m) wide	points = 6
Plants are more than 16 ft (5 m) wide and <33 ft	points = 3
Plants are more than 6 ft (2 m) wide and <16 ft	points = 1
Plants are less than 6 ft wide	points = 0
L 1.2. Characteristics of the plants in the wetland: Choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. <i>These are not Cowardin classes. Area of cover is total cover in the unit, but it can be in patches. Herbaceous does not include aquatic bed.</i>	
Cover of herbaceous plants is >90% of the vegetated area	points = 6
Cover of herbaceous plants is > ² / ₃ of the vegetated area	points = 4
Cover of herbaceous plants is > ¹ / ₃ of the vegetated area	points = 3
Other plants that are not aquatic bed > ² / ₃ unit	points = 3
Other plants that are not aquatic bed in > ¹ / ₃ vegetated area	points = 1
Aquatic bed plants and open water cover > ² / ₃ of the unit	points = 0
Total for L 1	Add the points in the boxes above

Rating of Site Potential If score is: 8-12 = H 4-7 = M 0-3 = L *Record the rating on the first page*

L 2.0. Does the landscape have the potential to support the water quality function of the site?	
L 2.1. Is the lake used by power boats?	Yes = 1 No = 0
L 2.2. Is > 10% of the area within 150 ft of wetland unit on the upland side in land uses that generate pollutants?	Yes = 1 No = 0
L 2.3. Does the lake have problems with algal blooms or excessive plant growth such as milfoil?	Yes = 1 No = 0
Total for L 2	Add the points in the boxes above

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

L 3.0. Is the water quality improvement provided by the site valuable to society?	
L 3.1. Is the lake on the 303(d) list of degraded aquatic resources?	Yes = 1 No = 0
L 3.2. Is the lake in a sub-basin where water quality is an issue (at least one aquatic resource in the basin is on the 303(d) list)?	Yes = 1 No = 0
L 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the lake or basin in which the unit is found.</i>	Yes = 2 No = 0
Total for L 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 _____

LAKE FRINGE WETLANDS	
Hydrologic Functions - Indicators that the wetland unit functions to reduce shoreline erosion	
L 4.0. Does the site have the potential to reduce shoreline erosion?	
L 4.1. Distance along shore and average width of Cowardin classes along the lakeshore (do not include Aquatic bed): <i>Choose the highest scoring description that matches conditions in the wetland.</i>	
> ¼ of distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 6
> ¼ of distance is Scrub-shrub or Forested at least 6 ft (2 m) wide	points = 4
> ¼ distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 4
Plants are at least 6 ft (2 m) wide (any type except Aquatic bed)	points = 2
Plants are less than 6 ft (2 m) wide (any type except Aquatic bed)	points = 0

Rating of Site Potential: If score is: 6 = M 0-5 = L

Record the rating on the first page

L 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
L 5.1. Is the lake used by power boats with more than 10 hp?	Yes = 1 No = 0
L 5.2. Is the fetch on the lake side of the unit at least 1 mile in distance?	Yes = 1 No = 0
Total for L 5	Add the points in the boxes above

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

Record the rating on the first page

L 6.0. Are the hydrologic functions provided by the site valuable to society?	
L 6.1. Are there resources along the shore that can be impacted by erosion? If more than one resource is present, choose the one with the highest score.	
There are human structures or old growth/mature forests within 25 ft of OHWM of the shore in the unit	points = 2
There are nature trails or other paths and recreational activities within 25 ft of OHWM	points = 1
Other resources that could be impacted by erosion	points = 1
There are no resources that can be impacted by erosion along the shores of the unit	points = 0

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

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

Wetland name or number _____

SLOPE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: <i>(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)</i>	
Slope is 1% or less	points = 3
Slope is > 1%-2%	points = 2
Slope is > 2%-5%	points = 1
Slope is greater than 5%	points = 0
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = 0	
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants:	
Choose the points appropriate for the description that best fits the plants in the wetland. <i>Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i>	
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6
Dense, uncut, herbaceous plants > ½ of area	points = 3
Dense, woody, plants > ½ of area	points = 2
Dense, uncut, herbaceous plants > ¼ of area	points = 1
Does not meet any of the criteria above for plants	points = 0
Total for S 1	Add the points in the boxes above

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

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?	
	Yes = 1 No = 0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?	
Other sources _____	Yes = 1 No = 0
Total for S 2	Add the points in the boxes above

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

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

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion	
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.</i>	
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1
All other conditions	points = 0
Rating of Site Potential If score is: <u> </u> 1 = M <u> </u> 0 = L <i>Record the rating on the first page</i>	
S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?	Yes = 1 No = 0
Rating of Landscape Potential If score is: <u> </u> 1 = M <u> </u> 0 = L <i>Record the rating on the first page</i>	
S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems:	
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds)	points = 2
Surface flooding problems are in a sub-basin farther down-gradient	points = 1
No flooding problems anywhere downstream	points = 0
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0
Total for S 6	Add the points in the boxes above
Rating of Value If score is: <u> </u> 2-4 = H <u> </u> 1 = M <u> </u> 0 = L <i>Record the rating on the first page</i>	

NOTES and FIELD OBSERVATIONS:

Wetland name or number Addie's Ditch-Anderson Homes

<p>H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i> <input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input checked="" type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <input checked="" type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>) <input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>	4
<p>Total for H 1 Add the points in the boxes above</p>	14

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>). Calculate: % undisturbed habitat ___ + [(% moderate and low intensity land uses)/2] ___ = ___ % If total accessible habitat is: > 7/8 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0</p>	2
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: % undisturbed habitat ___ + [(% moderate and low intensity land uses)/2] ___ = ___ % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	2
<p>H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0</p>	0
<p>Total for H 2 Add the points in the boxes above</p>	4

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> Site meets ANY of the following criteria: points = 2 — It has 3 or more priority habitats within 100 m (see next page) — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) — It is mapped as a location for an individual WDFW priority species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 Site does not meet any of the criteria above points = 0</p>	2

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

Wetland name or number _____

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 _____

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<p>SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes –Go to SC 1.1 No= Not an estuarine wetland</p>	
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2</p>	Cat. I
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II</p>	Cat. I Cat. II
<p>SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to SC 2.2 No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/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</p>	Cat. I
<p>SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3 No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog</p>	Cat. I

Appendix C: Site Photographs



Photo 1: View looking west along 31st Street, subject parcel is located to the right of the street.



Photo 2: Wetland Plot #1.



Photo 3: Upland Plot # 2