

CRITICAL AREA DETERMINATION REPORT

FOR

JENNINGS SUBSTATION 7728 & 7808 47th Ave NE Marysville, WA

Wetland Resources, Inc. Project #21261

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US ARMY CORPS WETLAND DETERMINATION DATA FORM

1.0 INTRODUCTION

Wetland Resources, Inc. (*WRI*) performed field inspections in January and February, 2012, and September, 2021, on the site located at 7728 & 7808 47th Avenue NE. The 3.21-acre property is composed of two tax parcels (Parcel A=30052100412500; Parcel B=30052100414500) and is located within the city limits of Marysville Washington (Section 21, Township 30N, Range 5E, W.M.). Access to the site is from the east via 47th Avenue NE.



Figure 1 – Aerial View of the Subject Property

1.1 SITE DESCRIPTION

Parcel A fronts along 47th Avenue NE and contains an existing cabinet shop in the eastern portion, with maintained grasses and a small patch of trees in the western portion. Parcel B is accessed from 47th Avenue NE via a narrow panhandle. The larger portion of Parcel B sits to the west. This parcel is undeveloped and is currently covered with maintained grasses and shrubs. A cellular telephone tower is located near the western end of the panhandle to Parcel B. Surrounding land use is a combination of residential and commercial to the north and east, with commercial development to the south and west.

The vegetated portions of the site contain mostly maintained grasses and forbs. A small patch of forest is located in the western portion of Parcel A, containing black cottonwood (*Populus balsamifera*; FAC) and Douglas fir (*Pseudotsuga menziesii*; FACU) with Himalayan blackberry (*Rubus armeniacus*) and Japanese knotweed (*Polygonum cuspidatum*) in the understory.

Soils underlying the site from the surface to ten inches below are generally very dark grayish brown (10YR 3/2) sandy loam. From ten to at least sixteen inches below the surface, soils are typically dark yellowish brown (10YR 3/4) sandy loam. Soils were dry during all of our site inspections.



Figure 2 – Photo of Subject Property (facing east)

2.0 REVIEW OF EXISTING INFORMATION

Prior to conducting the site investigations, publicly available resources were reviewed to gather background information. These sources include the USFWS National Wetlands Inventory (NWI), USDA/NRCS Web Soil Survey, Snohomish County PDS Map Portal, WDFW SalmonScape mapping tool, WDFW Priority Habitat and Species (PHS) Interactive Map, the DNR Forest Practices Application Mapping Tool (DNR-FPAMT), and the City of Marysville's Online Critical Areas Map.

- <u>United States Fish and Wildlife Service (USFWS) National Wetlands Inventory:</u> NWI mapper displays the property being in between two riverine features. Quilceda Creek and associated wetlands along its corridor are mapped approximately 2,300 feet west of the property. Allen Creek with associated wetlands is mapped approximately 2,300 feet to the east.
- <u>USDA/NRCS Web Soil Survey</u>: The Web Soil Survey maps soils on the subject property as Ragnar fine sandy loam, 0 to 8 percent slopes (57), which is not listed a hydric soil. Observed soils were generally consistent with the mapped soil type.
- <u>WDFW Priority Habitat and Species (PHS) Interactive Map</u>: The PHS interactive map depicts the same features as NWI. Allen Creek is mapped well off-site to the east and is documented to contain Bull Trout (Salvelinus confluentus), Resident Cutthroat Trout

(Oncorhynchus clarkii), Coho (O. kisutch), and Chinook (O. tshawytscha). Quilceda Creek and a matrix of freshwater wetlands are mapped well off-site to the west. Quilceda Creek is documented to contain the same species as Allen Creek with the addition of Steelhead (O. mykiss) and Chum (O. keta).

- <u>Washington Department of Fish and Wildlife (WDFW) SalmonScape Interactive Mapping</u> <u>System:</u> SalmonScape depicts the same salmonid species described by PHS within the offsite streams, with the addition of being gradient accessible to odd-year Pink salmon (*Oncorhynchus gorbuscha*).
- <u>Snohomish County PDS Map Portal</u>: The PDS map portal does not show any documented critical areas on or near the subject property. A remote sensing-based wetland is shown on the western parcel, extending to 76th Street NE. This wetland polygon is derived from a predictive model and is not indicative actual wetlands. This feature was not found during our site inspections.
- <u>Marysville WA Critical Areas Interactive Map</u>: This source does not map any wetlands or streams on or near the site. Quilceda Creek and Allen Creek are located 2,300 feet off-site to the west and east, respectively.
- <u>Washington Department of Natural Resources Forest Practices Application Mapping Tool</u> (<u>FPAMT</u>): No wetlands or streams are mapped on or near the site by this source. Quilceda Creek is mapped as a Type S feature and Allen Creek is mapped as a Type F feature.

3.0 CRITICAL AREAS DELINEATION REPORT

3.1 WETLAND DELINEATION METHODOLOGY

Wetland conditions were identified using the methodologies 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 wetland 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

3.1.1 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.

3.1.2 Soils Criteria and Mapped Description

The manuals define hydric soils as those 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 for determining whether a given soil meets the definition for hydric soils.

The soils underlying the site are mapped in the <u>Soil Survey of Snohomish County Area</u> <u>Washington</u> as Ragnar fine sandy loam, 0 to 8 percent slopes. Soils sampled on-site appear to match the description for these soils.

The Ragnar series is described as moderately well drained on outwash plains. The surface layer is typically a dark brown fine sandy loam about two inches thick. The upper part of the subsoil is dark brown and brown sandy loam about 22 inches thick. Included in this unit are areas of Everett, Indianola, Pastik and Wilson soils on terraces and outwash plains.

3.1.3 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).

3.2 STREAM DELINEATION METHODOLOGY

The ordinary high water marks (OHWM) of streams and waterbodies were identified using the methodology described in *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Anderson et al. 2016).

3.3 CRITICAL AREA BOUNDARY DETERMINATION FINDINGS

No wetlands, streams, or buffers are located on or near the subject property. Wetlands require a dominance of hydrophytic vegetation, hydric soils, and wetland hydrology to meet wetland criteria. Wetland hydrology and hydric soil indicators are not present anywhere on this site. Undeveloped areas off-site to the south appear to have the same characteristics.

4.0 CONCLUSION

No wetlands, streams, or buffers are located on or near the subject property. Wetlands require a dominance of hydrophytic vegetation, hydric soils, and wetland hydrology to meet wetland criteria. Wetland hydrology and hydric soil indicators are not present anywhere on this site. Undeveloped areas off-site to the south appear to have the same characteristics. The closest documented critical areas to the subject property are Quilceda Creek and Allen Creek, both of which are located more than 2,000 feet away from the subject property.

5.0 Use OF This Report

This Critical Area Determination Report is supplied to PUD No. 1 of Snohomish County as a means of determining the presence of on-site and nearby critical areas, as required by City of Marysville. 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.

This report conforms 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.

Alex Wachter Associate Ecologist

John Laufenberg Principal Ecologist Professional Wetland Scientist

6.0 REFERENCES

- Brinson, M.M. 1993. *A Hydrogeomorphic Classification for Wetlands*. Technical Report WRPDE-4. US Army Engineers Waterways Experiment Station, Vicksburg, MS.
- Cowardin, et al., 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior. FWS/OBS-79/31. December 1979.
- Hruby, T. 2014. Washington State Wetland Rating System for Western Washington: 2014 Update. Washington State Department of Ecology. Publication #14-06-029. October 2014.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. Western Mountains, Valleys & Coast 2016 Regional Wetland Plant List. Phytoneuron 2016-30: 1-17.
- Marysville, City of. 2021. Marysville Municipal Code, Title 22E Environmental Standards.
- Marysville, City of. 2021. Marysville WA Critical Areas Interactive Mapper. https://marysvillewa.maps.arcgis.com/apps/webappviewer/index.html?id=2ad43986d4 204c278b68e2bf2126e1ff
- Munsell Color. 2012. Munsell Soil Color Book. Munsell Color, Grand Rapids, MI.
- Natural Resources Conservation Service (NRCS). 2015. *Web Soil Survey*. United States Department of Agriculture. http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.
- Snohomish, County of. 2021. Snohomish County Code, Title 30 Unified Development Code, Chapter 30.62A Wetlands and Fish & Wildlife Habitat Conservation Areas.
- Snohomish, County of. 2021. Snohomish County PDS Map Portal. http://gis.snoco.org/maps/snoscape/
- U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). Environmental Laboratory, Vicksburg, MS. Publication # ERDC/EL TR-10-3.
- U.S. Army Corps of Engineers. 1987. Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1. Environmental Laboratory, Vicksburg, MS.
- U.S. Fish & Wildlife Service. 2021. National Wetlands Inventory (NWI) Online Mapper. http://www.fws.gov/wetlands/Data/Mapper.html.
- WA Department of Fish & Wildlife. 2021a. Priority Habitat and Species (PHS) Interactive Map. http://apps.wdfw.wa.gov/phsontheweb/
- WA Department of Fish & Wildlife. 2021b. SalmonScape Online Mapping Application. http://apps.wdfw.wa.gov/salmonscape/map.html.

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

Project/Site: Jennings Substsation	City/County: Mar	Sampling Date: 9/30/2021				
Applicant/Owner: Snohomish County PUD No. 1		State: WA	Sampling Point: S1			
Investigator(s): _JL / SB	Sectio	n, Township, Range: <u>Sec 21</u>	, Twp 30N, Rge 05E, W.M.			
Landform (hillslope, terrace, etc.): terrace	Local relief (con	cave, convex, none): <u>None</u>	Slope (%): ~1%			
Subregion (LRR): LRR A	Lat: 48.066832°	Long: <u>-122.170140°</u>	Datum: WGS84			
Soil Map Unit Name:		NWI classifi	cation: N/A			
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 Vegetation, Soil, or Hydrology natur	ally problematic? (If ne	eded, explain any answers ir	Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes V						
Hydric Soil Present? Yes No	Is the Sam within a W	·	No			
Wetland Hydrology Present? Yes No 🗸						
Remarks:						
Maintained lawn						

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 5m^2		Species?		Number of Dominant Species	
1. Populus balsamifera	5	Y	FAC	That Are OBL, FACW, or FAC: 3	(A)
2				Total Number of Dominant	
3				Species Across All Strata: 5	(B)
4				· · · · · · · · · · · · · · · · · · ·	(-)
	5	= Total Co	over	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u>	(A/B)
Sapling/Shrub Stratum (Plot size: 3m^2		N/			
1. Rubus armeniacus	15	<u>Y</u>	FAC	Prevalence Index worksheet:	
2. Polygonum cuspidatum	5	Y	FACU	Total % Cover of:Multiply by:	
3				OBL species x 1 = _0	_
4				FACW species x 2 = _0	
5				FAC species x 3 = _0	
	20	= Total Co	over	FACU species $x 4 = 0$	_
Herb Stratum (Plot size: 1m^2		10101 0	570.	UPL species x 5 = 0	_
1. Phalaris arundinacea	40	Y	FACW	Column Totals: 0 (A) 0	(B)
2. Trifolium pratense	15	Y	FACU		_ \- /
3. Cirsium scariosum	10	Ν	FAC	Prevalence Index = B/A =	
4. Plantago lanceolata	5	N	FACU	Hydrophytic Vegetation Indicators:	
5				Rapid Test for Hydrophytic Vegetation	
6				✓ Dominance Test is >50%	
7				Prevalence Index is ≤3.0 ¹	
8				Morphological Adaptations ¹ (Provide suppor	
9				data in Remarks or on a separate sheet)
10				Wetland Non-Vascular Plants ¹	
11				Problematic Hydrophytic Vegetation ¹ (Expla	in)
·····	70	= Total Co	over	¹ Indicators of hydric soil and wetland hydrology	must
Woody Vine Stratum (Plot size: 3m^2	<u> </u>	- 10ta 0t	JVEI	be present, unless disturbed or problematic.	
1. None					
2				Hydrophytic	
<u>ــــــــــــــــــــــــــــــــــــ</u>	0	= Total Co	over	Vegetation Present? Yes V No	
% Bare Ground in Herb Stratum 30	<u> </u>		Dvei		
Remarks:					

SOIL

Brofile Door	rintion: (Describe)	to the day	th pooded to decu	nent the indicator	or confirm	the choose	of indicators)	
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	<u>x Features</u> % Type ¹	Loc ²	Texture	Remarks	
0-10	10YR 3/2	100				sandy laom	dry	
10-16	10YR 3/4	100				sandy laom	dry	
·								
·								
¹ Type: C=C	oncentration, D=Dep	letion, RM:	=Reduced Matrix, CS	S=Covered or Coat	ed Sand Gr	ains. ² Lo	cation: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators: (Application)	able to all	LRRs, unless othe	rwise noted.)		Indicato	ors for Problematic Hydric Soils ³ :	
Histosol	(A1)		Sandy Redox (S	S5)		2 cn	n Muck (A10)	
	ipedon (A2)		Stripped Matrix	· · ·			Parent Material (TF2)	
Black Hi	()		— · ·	lineral (F1) (excep	t MLRA 1)		/ Shallow Dark Surface (TF12)	
_ · ·	n Sulfide (A4)		Loamy Gleyed I	. ,			er (Explain in Remarks)	
	l Below Dark Surface rk Surface (A12)	e (A11)	Depleted Matrix Redox Dark Sui	()		³ Indicate	ore of hydrophytic vogotation and	
	lucky Mineral (S1)		Depleted Dark St			³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
	leyed Matrix (S4)		Redox Depress			unless disturbed or problematic.		
	Layer (if present):					1		
	,							
Depth (in	ches):					Hydric Soil	Present? Yes No	
Remarks:						,		
rtomanto.								
HYDROLO	GY							
Wetland Hy	drology Indicators:							
Primary Indi	cators (minimum of o	ne require	d; check all that appl	v)		Seco	ndary Indicators (2 or more required)	
	Water (A1)			ned Leaves (B9) (xcept MLF		/ater-Stained Leaves (B9) (MLRA 1, 2,	
=	ter Table (A2)			A, and 4B)			4A, and 4B)	
Saturatio	. ,		Salt Crust	(B11)		🗌 D	rainage Patterns (B10)	
	arks (B1)			vertebrates (B13)			ry-Season Water Table (C2)	
Sedimer	t Deposits (B2)		Hydrogen	Sulfide Odor (C1)		🗌 s	aturation Visible on Aerial Imagery (C9)	
=	osits (B3)			hizospheres along	Living Roo		eomorphic Position (D2)	
=	t or Crust (B4)		Presence of	of Reduced Iron (C	4)		hallow Aquitard (D3)	
Iron Dep	osits (B5)		Recent Iro	n Reduction in Tille	d Soils (C6) 🗌 F.	AC-Neutral Test (D5)	
	Soil Cracks (B6)		Stunted or	Stressed Plants (D	1) (LRR A)	R	aised Ant Mounds (D6) (LRR A)	
Inundation	on Visible on Aerial Ir	magery (B7	7) 🗌 Other (Exp	lain in Remarks)		🗌 FI	rost-Heave Hummocks (D7)	
Sparsely	Vegetated Concave	Surface (E	38)					
Field Obser	vations:							

Sparsely Vegetated Conc	ave Surface (B8)			
Field Observations:				
Surface Water Present?	Yes No 🖌	Depth (inches):		
Water Table Present?	Yes No 🖌	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	Wetland Hydrology Present?	Yes No
Describe Recorded Data (stre	eam gauge, monitori	ng well, aerial photos, previous inspec	tions), if available:	
Remarks:				