Wetland Delineation for the Bozarth Property, Woodland, Cowlitz County, Washington

Prepared for

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PHS Project Number: 7645

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I. INTRODUCTION

Pacific Habitat Services, Inc. (PHS) conducted a wetland delineation on Bozarth Property (Parcel IDs: 507350104, 507350103 and 507350102) in Woodland, Washington (Township 5 North, Range 1 West, Sections 13, 14, 23, and 24). This report presents the results of PHS's investigation of the study area. Figures, including maps depicting the locations of wetlands within the study area are in Appendix A. Data sheets documenting delineated wetland boundaries and site conditions are provided in Appendix B. Ground-level photos of the study area are included in Appendix C.

II. RESULTS AND DISCUSSION

A. Landscape Setting and Land Use

The study area is located west of N Pekin Road, approximately 450 feet south of W Scott Avenue in Woodland, Cowlitz County, Washington. The study area consists of three parcels, totaling approximately 69.5 acres. The study area is on all sides by a mixture of agricultural and light industrial land uses. The majority of the site consists of agricultural fields that were planted in grasses for grass seed production at the time of PHS's wetland investigation. A single-family residence and other associated structures are located on the southeastern portion of the study area. Small woodlots dominated by deciduous trees and shrubs are present in the north-central, west-central, and south-central portions of the study area.

Review of the U.S. Geological Survey topographic mapping (Figure 1) shows that the project site is located on a broad, flat terrace of the Columbia River. The USGS mapping shows an unnamed stream crossing the central and northern portions of the study area; however, the site investigation revealed that a stream channel is not present under existing conditions. The project site is within the Burris Creek-Frontal Columbia River Hydrologic Unit (HUC 170800030306).

The United States Department of Agriculture, Natural Resource Conservation Service (USDA-NRCS) maps four soil map units within the study area: Caples silty clay loam, 0 to 3 percent slopes, Clato silt loam, 0 to 3 percent slopes, Newberg fine sandy loam, 0 to 3 percent slopes; and Pilchuck loamy fine sand, 0 to 8 percent slopes. Cato silty clay loam, 0 to 3 percent slopes is classified as a hydric soil, and this map unit is mapped in portions of the northern, western, and southern parts of the study area.

B. Site Alterations

Review of online aerial photographs available for viewing at <u>https://historicaerials.com</u> shows that the much of the study area has been in agricultural uses since before 1951. These photos also suggest that the drainageway shown on the USGS topographic mapping (Figure 1) may have been altered between 1951 and 1970. PHS is not aware of recent site alterations that might have affected the location and extent of wetlands within the study area.

C. Precipitation Data and Analysis

PHS conducted the wetland delineation field work on November 23 and December 6, 2022. PHS used the Direct Antecedent Rainfall Analysis Method (DAREM) for the field date to compare observed precipitation prior to the site visits to normal climatic conditions. Table 1 compares the average monthly precipitation at the Kalama Falls Hatchery, WA WETS Station, to the observed monthly precipitation. As shown in Table 1, observed precipitation for the three months preceding the wetland delineation field work was approximately normal.

		30% Ch Ha	ance Will ave ¹	Maanmad	Condition Value ³	Manah	Condition	S
Month	Average Precipitation ¹	Less Than Average	More Than Average	Precipitation ²	(1=dry, 2=normal, 3=wet)	Weight ⁴	Value X Month Weight	Sum Total ⁵
November 2022	9.90	7.28	11.92	10.54	Normal (2)	3	6	
October 2022	6.37	4.51	7.52	3.19	Drier (1)	2	2	9 (drier)
September 2022	2.67	1.13	3.16	0.44	Drier (1)	1	1	
Total	18.94	12.92	22.60	14.17				

 Table 1.
 Comparison of Average and Observed Monthly Precipitation Prior to the Wetland Delineation Field Work

¹NRCS WETS Table for the Kalama Falls Hatchery, WA. Source: http://agacis.rcc-acis.org/?fips=53015.

² Measured rainfall is the precipitation recorded at the Kalama Falls Hatcher, WA. Source: http://agacis.rcc-acis.org/?fips=53015.

³Condition Value: compared to nearest WETS normal range.

⁴Month Weight: most recent month = 3, 2^{nd} most recent month = 2, third most recent month = 1

⁵Sum Total: sum of eighth column: drier (sum 6-9), normal (sum 10-14), wetter (sum 15-18)

Precipitation in the three months preceding the wetland delineation site visit was lower than normal in September and October, and higher than average, but with normal ranges in November. Overall, precipitation was drier than normal, but within normal range for the three months preceding the wetland delineation field work. It is PHS's best professional judgement that observed hydrologic conditions were not adversely affected by precipitation.

D. Methods

PHS investigated the study area for the presence of jurisdictional wetlands based on observation of wetland hydrology, hydric soils, and hydrophytic vegetation indicators in accordance with the Routine On-site Determination, as described in the *Corps of Engineers Wetland Delineation Manual, Wetlands Research Program Technical Report Y 87 1* ("The 1987 Manual") and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region.* The conclusions drawn by PHS were based on the methods outlined in the regional supplement. Prior to conducting the site investigation, PHS examined applicable U.S. Geological Service (USGS) topographic mapping (Figure 1), National Wetlands Inventory (NWI) mapping (Figure 3), NRCS Soil Survey mapping (Figure 4), and a recent aerial photograph (Figure 5) to identify potential wetland areas.

At the time of the site investigation, PHS examined vegetation, soils, and hydrology within the study area to define areas that meet the three wetland parameters (hydrophytic vegetation, hydric soils, and wetland hydrology), in accordance with the USACE Wetland Delineation Manual and the Western Mountains, Valleys, and Coast Regional Supplement. PHS collected data at wetland and upland sample plots at representative locations along the wetland boundaries to document the vegetation, soil, and hydrologic characteristics used to determine the wetland boundaries. PHS also collected data at sample plots at non-wetland locations where mapped hydric soils or local topographic conditions suggested that wetlands might potentially occur. Data collected at representative sample plots were recorded on the wetland determination data forms, which are included in Appendix C. PHS conducted a functional assessment of the delineated wetlands using the *Washington State Wetland Rating System for Western Washington: 2014 Update.* Wetland Rating Forms are provided in Appendix D.

E. Description of all Wetlands and Non-Wetland Waters

PHS identified and delineated four potentially jurisdictional wetlands within the study area. The total area of wetlands within the study area is approximately 144,136 square feet (3.31 acres). No non-wetland waters (i.e., streams or other waterbodies) are present within the study area. Brief descriptions of the wetlands are provided below.

Wetland A

Wetland A is a palustrine, forested/scrub-shrub/emergent, seasonally flooded/saturated (PFOE/PEME) wetland with a hydrogeomorphic (HGM) class of Depressional. Wetland A is located in the southern portion of the study area. The area of Wetland A is approximately 110,811 square feet (2.54 acres).

The westernmost portion of Wetland A is forested; the northeastern portion of the wetland and the northern fringe that extends into the agricultural field are dominated by herbaceous vegetation; and the central and southern portions of the wetland are dominated by dense shrubs. Sample Point 7 characterizes the forested wetland community in the western part of Wetland A. In this area, the plant community is dominated by black cottonwood (*Populus balsamifera* ssp. *trichocarpa*, FAC) in the forest canopy and red-twig dogwood (*Cornus alba*, FACW) in the understory. No herbaceous species are present at the sample point location. The soils meet the Redox Dark Surface hydric soils indicator. The soil was not saturated at the time of the wetland delineation site visit, but oxidized rhizospheres provided evidence of wetland hydrology. In the adjacent upland (characterized by Sample Point 8), the plant community is hydrophytic. Dominant species include black cottonwood, red-twig dogwood, Douglas hawthorn (*Crataegus douglasii*; FAC), sword fern (*Polystichum munitum*; FACU), and California dewberry (*Rubus ursinus*; FACU). However, the soils are not hydric, and there are no indicators of wetland hydrology.

Sample Point 17 characterizes the scrub-shrub wetland community in the central and southern parts of Wetland A. In this area, the plant community is dominated by willow (*Salix* sp., presumed FAC or wetter) and stinging nettle (*Urtica dioica*, FAC). The soils meet the Depleted Matrix hydric soils indicator. The soil was not saturated at the time of the wetland delineation site visit, but geomorphic position and a positive FAC- provided evidence of wetland hydrology. In the adjacent upland (characterized by Sample Point 18), the plant community is hydrophytic, with dominant species including willow, stinging nettle, and California dewberry. The soils are not hydric, and there are no indicators of wetland hydrology.

Sample Point 15 characterizes the emergent wetland community in the northeastern portion of Wetland A. In this area, the plant community is dominated by reed canarygrass (*Phalaris arundinaceus*, FACW). The soils meet the Redox Dark Surface hydric soils indicator. The soil was not saturated at the time of the wetland delineation site visit, but geomorphic position and a positive FAC- provided evidence of wetland hydrology. The adjacent upland is characterized by Sample Points 14 and 16. Sample Point 14 is in the agricultural field to the north of the wetland, and Sample Point 16 is In the unmowed field to the south. The plant communities at both sample points are hydrophytic. However, the soils are not hydric, and there are no indicators of wetland hydrology.

Throughout the wetland, a seasonally high water table appears to be the primary source of hydrology for the wetland. There was no ponded water or evidence of ponding within the wetland at the time of PHS's wetland investigation. Wetland A has a narrow, constricted wetland connection to an off-site, excavated ditch that extends in an east-west orientation to the south of the southern boundary of the study area. The ditch has hydric soil, but it is not vegetated. The ditch does not have an ordinary high water mark, and there was no surface water in the ditch at the time of PHS's wetland investigation.

Wetland B

Wetlands B is a palustrine forested wetland in the north-central portion of the study area. Wetland B continues outside of the study area to the northeast. The Cowardin classification of each is palustrine, forested, seasonally flooded/saturated (PFOE) wetland; the HGM classification is Depressional. The area of Wetland B within the study area is approximately 32,697 square feet (0.75 acre).

Sample Points 9 and 11 characterize Wetland B. Dominant woody plant species in the wetland include Pacific willow (*Salix lasiandra*, FACW) and red-twig dogwood. The soils meet the Redox Dark Surface or Depleted Matrix hydric soils indicator. The soil was not saturated at the time of the wetland delineation site visit, but a sparsely vegetated concave surface, geomorphic position and a positive FAC- provided evidence of wetland hydrology. Sample Points 10 and 12 characterize the adjacent non-wetland communities. The plant community is hydrophytic at Sample Point 12 but non-hydrophytic at Sample Point 10. However, the soils are not hydric, and there are no indicators of wetland hydrology at either sample point.

A seasonally high water table appears to be the primary source of hydrology in Wetland B.

Wetlands C and D

Wetlands C and D are very small, isolated depressions in the west-central portion of the westcentral portion of the study area. The Cowardin classification of the wetlands is palustrine, forested, seasonally saturated (PFOE); the hydrogeomorphic (HGM) class is Depressional. Wetland C continues outside of the study area to the east. The area of Wetland C is approximately 315 square feet (0.007 acre), and the area of Wetland D is approximately 313 square feet (0.007 acre).

Sample Points 2 and 4 characterize Wetlands C and D. Within the wetlands, the forest canopy is dominated by black cottonwood, with red-twig dogwood and Himalayan blackberry (*Rubus armeniacus*, FAC) dominant in the forest understory. Slough sedge (*Carex obnupta*, OBL) is a dominant species in the herbaceous layer. The soils meet the Redox Dark Surface or Depleted Matrix hydric soils indicator. The soil was not saturated at the time of the wetland delineation site

visit, but oxidized rhizospheres, geomorphic position and a positive FAC- provided evidence of wetland hydrology. In the adjacent uplands (characterized by Sample Points 1 and 3), the soils are not hydric, and there are no indicators of wetland hydrology.

Throughout the wetland, a seasonally high water table appears to be the primary source of hydrology for Wetlands C and D.

F. Deviation from National Wetland Inventory

The National Wetland Inventory (NWI) mapping shows wetlands in the vicinity of Wetlands A and B, though the location and extent of the wetlands depicted on the NWI mapping do not correspond exactly to the delineated wetlands.

G. Mapping Method

PHS used blue flagging tape to delineate the wetland boundaries, and pink flagging tape to mark sample point locations. Locations of flagged wetland boundaries and sample points were surveyed by Gibbs & Olson, Inc. with sub-centimeter accuracy.

H. Additional Information

Wetland Functional Ratings and Wetland Buffers

PHS evaluated the functions and values of wetlands within the study area based on the methodology prescribed by Washington State Wetland Rating System for Western Washington: 2014 Update. The results of the functions and values evaluation are summarized in Table 2, below. Wetland Rating Forms are provided in Appendix D.

Watland		Wetland Ra	ting Score		Watland	Land Usa	Buffer	
ID	Water Quality	Hydrologic	Habitat	Total	Category	Intensity	Width	
Wetland A	6	5	5	16	III	High	150 ft	
Wetland B	6	5	4	15	IV	High	50 ft	
Wetland C	6	5	4	15	IV	High	n/a	
Wetland D	6	5	4	15	IV	High	n/aoffice	

 Table 2. Summary of Wetland Functional Rating Results

Based on the results of the functional assessment, Wetland A is classified as a Category III wetland, and Wetlands B, C, and D are classified as Category IV wetlands. In accordance with Chapter 15.08.400 of the Woodland Municipal Code, wetland buffers for Category III wetlands are based on the category of wetland, the intensity of the proposed land use, and the level of function for habitat. Wetland buffers for Category IV wetlands are based on the category of wetland use. The level of function for habitat does not figure into the buffer width determination for Category IV wetlands. Because the proposed land use is commercial/industrial, the land use intensity used to determine the buffer widths is "high", in accordance with Chapter 15.08.400 of the Municipal Code. Wetland A is a Category III wetland with a moderate function for habitat; therefore, Wetland A has a 150-foot buffer in accordance with Table 15.08.400-1 in Chapter 15.08.400. Wetlands B is a Category IV wetlands C and D are less than 1000 square feet each and

do not contain federally listed species or critical habitat, they are exempt from the buffer provisions contained in Chapter 15.08.400 of the Woodland Municipal Code. The buffers associated with wetlands within the study area are depicted on Figures 6, 6A, 6B, and 6C.

I. Results and Conclusions

PHS delineated four potentially jurisdictional wetlands within the study area. The total area of wetlands within the study area is approximately 144,136 square feet (3.31 acres). All wetlands within the study area are Category IV wetlands based on the Washington State Wetland Rating System for Western Washington. In accordance with City of Woodland Municipal Code Chapter 15.08.400, all of the wetlands within the study area have a 50-foot buffer.

J. Disclaimer

This report documents the investigation, best professional judgment, and conclusions of the investigators. It is correct and complete to the best of our knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Washington Department of Ecology in accordance with Chapter 90.48 RCW or the U.S. Army Corps of Engineers.

III. REFERENCES

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Appendix A

Figures









Source: USFWS, National Wetlands Inventory Wetlands Mapper (https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/)



National Wetlands Inventory Map Bozarth Property - Woodland, Washington FIGURE

3/20/2023



(https://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx)



FIGURE Soil Survey Map

Bozarth Property - Woodland, Washington

3/20/2023

4



Source: Google Earth 2023



Recent Aerial Photograph

Bozarth Property - Woodland, Washington

5

FIGURE

3/20/2023



Pacific Habitat Services, Inc. 9450 SW Commerce Cirde, Suite 180 Wilsonville, Oregon 97070 Phone: (603) 570-0800 Fax (603) 670-0855 Gibbs & Olson, Inc. Survey and Sample point accuracy is sub-centimeter.

Boza

LEGEND

	Study Area Boundary (3,026,322 sf / 69.47 ac)	
	Wetland (Site Total 144,136 sf / 3.31 ac)	
	Resource Buffer (Site Total 378,188 sf / 8.68 ac)	
	Tax Lot Line	
·24·	Existing Contour	
NOTE See Fi Points	gures 6A-6C for Sample and Photo Points	
W arth Prope	etland Delineation Overview erty - Woodland, Washington	FIGURE
		2-9-2023



Survey and sample point accuracy is sub-centimeter. Pacific Habitat Services, Inc.

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LEGEND











Survey provided by Gibbs & Olson, Inc. Survey and Sample point accuracy is sub-centimeter.

50 100		<u>20</u> 0	
 Existing Conto	our		
 Tax Lot Line			
Photo Point			
Sample Point			
Resource Buf (Site Total 37	fer 8,188 sf / 8.	68 ac)	
Wetland (Site Total 14	4,136 sf / 3.	31 ac)	
Study Area Bo (3,026,322 sf	oundary / 69.47 ac)		

SCALE IN FEET

Wetland Delineation

Bozarth Property - Woodland, Washington



2-9-2023





Survey provided by Gibbs & Olson, Inc. Survey and sample point accuracy is sub-centimeter.

LEGEND







Relatively Undisturbed and Accessible Habitats within 1 km Milly Bozarth DCL #48 - Woodland, Washington









3-16-2023





Source: Washington Department of Ecology, Water Quality Atlas (https://apps.ecology.wa.gov/waterqualityatlas/wga/map)

303(d)-Listed Waters in the Basin

Bozarth Property - Woodland, Washington

FIGURE

3/23/2023

Appendix B

Wetland Determination Data Sheets



WF		RMINATION		RM - Weste	rn Mountains, Vall	evs and Coas	PHS # st Region	7645
Project/Site:	N Pekin Roa	d	City/County:	Woo	dland/Cowlitz	Sampling Date:	11/23	8/2022
Applicant/Owner: T I	ammell Crow C	Company	j;j;		State:	WA	Sampling Point:	1
Investigator(s):	TF/MS		Section, To	wnship, Range:	Section	n 14, Township 5	N, Range 1W	
Landform (hillslope, terra	ce. etc.:)	Slope	_ ,	Local relief (cor	ncave, convex, none):	none	Slope (%):	1%
Subregion (LRR):		RA	Lat:	45.91 1	1 2 Long:	-122.7664	Datum:	WGS84
Soil Map Unit Name:		Caples si	- Itv clav loam		NWI Clas	ssification:	none -	
Are climatic/hvdrologic co	onditions on the site	e typical for this time	e of vear?	Yes	X No	(if no. exp	lain in Remarks)	
Are vegetation N	Soil N or	Hydrology N	significantly dist	turbed?	Are "Normal Circumstand	es" present? (Y/N)	Ŷ	
Are vegetation N	Soil N or	Hvdrology N	naturally proble	matic? If needed	. explain any answers in Re	marks.)		
°						,		
SUMMARY OF FIN	IDINGS – Atta	ach site map s	showing san	npling point	locations, transects	, important feat	ures, etc.	
Hydrophytic Vegetation P	resent? Yes	No	<u> </u>	Is Sampled Ar	ea within			
Hydric Soil Present?	Yes	No	<u> </u>	a Wetlar	nd? Yes_		No X	
Netland Hydrology Prese	ent? Yes	No	<u> </u>					
Remarks:								
EGETATION - US	e scientific na	ames of plants	S.	Indiactor	Dominanaa Taat wax	kabaati		
		% cover	Species?	Status	Dominance rest wor	KSHeet.		
ree Stratum (plot size	e: 30)			Number of Dominant Spe	cies		
1 Populus balsami	fera	70	<u> </u>	FAC	That are OBL, FACW, or	FAC:	2	(A)
2								
3					Total Number of Dominan	t		
4					Species Across All Strata:		4	(B)
		70	= Total Cover					
Sapling/Shrub Stratum	(plot size: 15)			Percent of Dominant Spec	cies		
1 Cornus alba		80	<u> </u>	FACW	That are OBL, FACW, or	FAC:	50%	(A/B)
2 Symphoricarpos	albus	20	<u> </u>	FACU	Drevelence Index W/s	wheel he at		
3					Total % Cover of	Multiply by	r.	
4 5					OBL Species	1000000000000000000000000000000000000	<u>, </u>	
		100	= Total Cover		FACW species	x 2 =	0	
					FAC Species	x 3 =	0	
lerb Stratum (plot size	e: <u>5</u>)			FACU Species	x 4 =	0	
1 Rubus ursinus		80	<u> </u>	FACU	UPL Species	x 5 =	0	
2					Column Totals	0 (A)	0	(B)
3					Decusion of Index -			
4 5					Prevalence Index =E	3/A =		
5 5					Hydrophytic Vegetati	on Indicators:		
7					1	- Rapid Test for Hyd	rophytic Vegetatior	1
8					2	- Dominance Test is	>50%	
		80	= Total Cover			B-Prevalence Index is	≤ 3.0 ¹	
					4	-Morphological Adap	tations ¹ (provide s	upporting
Voody Vine Stratum (plot size:)			c	lata in Remarks or or	a separate sheet	
1					5	5- Wetland Non-Vasc	ular Plants'	
2			- Total Course			roblematic Hydrophy	ruc Vegetation' (E)	(piain)
			- Total Cover		disturbed or problematic.	na weliana nyarology	musi pe present, i	2629111
					Hydrophytic			
	Stratum	20			Vegetation	Yes	No	X
% Bare Ground in Herb S					Procont?			

Profile Deseri			PHS #	7645			Sampling Point:	1
Denth	ption: (Describe to	the depth	needed to docum	ent the indicato	or or confirm the absolution	ence of indicators.)		
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹ Loc ²	– Texture	Remark	s
0-11	10YR 2/2	100				Silt Loam		
11-14	10YR 3/2	60	7.5YR 3/4	10	с м	Silty Clay Loam	Medium	
11-14	10YR 4/2	30				Silty Clay Loam		
14-18	10YR 5/2	80	7 5VR 3/4	20	<u>с</u> м	Silty Clay Loam	Medium	
14-10	10110 3/2		7.511(5/4				Medium	
				·				
				·				
				·	·			
				·				
Type: C=Conc	centration, D=Depleti	ion, RM=Re	educed Matrix, CS=	Covered or Coa	ated Sand Grains.	India	² Location: PL=Pore Lining, N	/=Matrix. dric Soils ³ :
Hyune Son i			all LKKS, utiles	S Utilei wise		marca		
'				San	idy Redox (S5)		2 cm Muck (A10	0)
ł	Histic Epipedon (A2)			Strip	pped Matrix (S6)		Red Parent Mat	terial (TF2)
E	Black Histic (A3)			Loar	my Mucky Mineral (F1) (except MLRA 1)	Very Shallow D	Park Surface (TF12)
ŀ	Hydrogen Sulfide (A4	4)		Loar	my Gleyed Matrix (F2)		Other (explain i	in Remarks)
[Depleted Below Dark	s Surface (/	411)	Dep	oleted Matrix (F3)			
1	Thick Dark Surface (A12)		Red	lox Dark Surface (F6)		³ Indiactors of hydrophytic year	rotation and watland
	Sandy Mucky Minera	ll (S1)		Dep	oleted Dark Surface (F	7)	hydrology must be present, i	unless disturbed or
	Sandy Gleyed Matrix	: (S4)		Red	lox Depressions (F8)		problematio	с.
Restrictive L	Layer (if present)	:						
Туре:								
Depth (inches	5):					Hydric Soil Pres	ent? Yes	No X
HYDROLO Wetland Hyd	GY drology Indicator	rs:						
HYDROLO Wetland Hyd	GY drology Indicator	rs:	uired: check all	that apply)			Secondary Indicators (2	or more required)
HYDROLO Wetland Hyd Primary India	GY drology Indicator cators (minimum of Surface Water (A1)	r s: of one req	uired; check all	that apply) Wat	ter stained Leaves (B9) (Except MLRA	Secondary Indicators (2	or more required)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicator cators (minimum o Surface Water (A1) High Water Table (A	r s: of one req	uired; check all	that apply) Wat 1, 2,	ter stained Leaves (B9) (Except MLRA	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A	or more required) Leaves (B9) A, and 4B)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicator cators (minimum o Surface Water (A1) High Water Table (A Saturation (A3)	r s: of one req 2)	uired; check all	that apply) Wat 1, 2, Salt	ter stained Leaves (B9 , 4A, and 4B) t Crust (B11)) (Except MLRA	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter	or more required) Leaves (B9) A, and 4B) rns (B10)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1)	r s: of one req 2)	uired; check all	that apply) Wat 1, 2, Salt Aqu	ter stained Leaves (B9 5, 4A, and 4B) t Crust (B11) natic Invertebrates (B13) (Except MLRA	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa	or more required) Leaves (B9) A, and 4B) rns (B10) ater Table (C2)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (I	r s: of one req 2) B2)	uired; check all	that apply) Wat 1, 2, Salt Aqu. Hydi	ter stained Leaves (B9 5, 4A, and 4B) t Crust (B11) latic Invertebrates (B13) (Except MLRA 3) 1)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visit	or more required) Leaves (B9) A, and 4B) rns (B10) ater Table (C2) ble on Aerial Imagery (C9
HYDROLO Wetland Hyd Primary India	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (I Drift Deposits (B3)	r s: of one req 2) B2)	uired; check all	that apply) Wat Salt Aqu Hydi 	ter stained Leaves (B9 , 4A, and 4B) t Crust (B11) iatic Invertebrates (B13 lrogen Sulfide Odor (C dized Rhizospheres alk) (Except MLRA 3) 1) 20 ng Living Roots (C3)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visit Geomorphic Po	or more required) Leaves (B9) A, and 4B) rns (B10) ater Table (C2) ble on Aerial Imagery (C9 bition (D2)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (I Drift Deposits (B3) Algal Mat or Crust (B	rs: of one req 2) B2) 44)	uired; check all	that apply) Wat Salt Aqu Hydi Oxic Pres	ter stained Leaves (B9 , 4A, and 4B) t Crust (B11) latic Invertebrates (B13 lrogen Sulfide Odor (C dized Rhizospheres alo sence of Reduced Iron) (Except MLRA 3) 1) ong Living Roots (C3) (C4)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquitar	or more required) Leaves (B9) A, and 4B) rns (B10) ater Table (C2) ole on Aerial Imagery (C9 osition (D2) rd (D3)
HYDROLO Wetland Hyd Primary Indic S S S S S S S S S S S S S S S S S S S	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (I Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5)	r s: 2) B2) 44)	uired; check all	that apply) ————————————————————————————————————	ter stained Leaves (B9 5, 4A, and 4B) t Crust (B11) natic Invertebrates (B13 Irogen Sulfide Odor (C dized Rhizospheres al sence of Reduced Iron cent Iron Reduction in I) (Except MLRA 3) 1) ong Living Roots (C3) (C4) Plowed Soils (C6)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquitar Fac-Neutral Tes	or more required) Leaves (B9) A, and 4B) rns (B10) ater Table (C2) ble on Aerial Imagery (C9 bosition (D2) rd (D3) st (D5)
HYDROLO Wetland Hyd Primary Indic S S S S S S S S S S S S S S S S S S S	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B) Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks	r s: 2) B2) H4) (B6)	uired; check all	that apply) Wat 1, 2, Salt Aqu Hydi Oxic Pres Rec Stur	ter stained Leaves (B9 , 4A, and 4B) t Crust (B11) latic Invertebrates (B13 lrogen Sulfide Odor (C dized Rhizospheres all sence of Reduced Iron sent Iron Reduction in I nted or Stressed Plant) (Except MLRA 3) 1) ong Living Roots (C3) (C4) Plowed Soils (C6) s (D1) (LRR A)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquitar Fac-Neutral Tes Raised Ant Mou	or more required) Leaves (B9) A, and 4B) rns (B10) ater Table (C2) ble on Aerial Imagery (C9 bition (D2) rd (D3) st (D5) unds (D6) (LRR A)
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HYDROLO Wetland Hyd Primary India	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible on Sparsely Vegetated of vations: Present? Yes	rs: of one req 2) B2) 44) (B6) (B6) Concave Si	uired; check all gery (B7) urface (B8) No X	that apply) Wat 1, 2, Salt Aqu. Hydi Oxic Pres Rec Stur Othe	ter stained Leaves (B9 ; 4A, and 4B) t Crust (B11) latic Invertebrates (B13 lrogen Sulfide Odor (C dized Rhizospheres all sence of Reduced Iron sent Iron Reduction in I nted or Stressed Plant er (Explain in Remarks hes):) (Except MLRA 3) 1) ong Living Roots (C3) (C4) Plowed Soils (C6) s (D1) (LRR A) ;)	Secondary Indicators (2 Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visit Geomorphic Po Shallow Aquitar Fac-Neutral Tes Raised Ant Mou Frost-Heave Hu	or more required) Leaves (B9) A, and 4B) rns (B10) ater Table (C2) ole on Aerial Imagery (C9 osition (D2) rd (D3) st (D5) unds (D6) (LRR A) ummocks (D7)
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						. /			
roject/Site:	N Pekin F	Road	City/County:	Woo	odland/Cowlitz	Sampli	ng Date:	11/2	3/2022
oplicant/Owner:	Trammell Cro				State:	WA		Sampling Point:	2
vestigator(s):	MS	<u>,/IF</u>	Section, To	wnship, Range:	Sectio	n 14, Iow	nsnip 5N	I, Range 1W	40/
andform (hillslope, ter	race, etc.:)	Depressi	on	Local relief (co	oncave, convex, none):	con		Slope (%):	1%
				45.91		-122.	/ 004	Datum:	WG304
	anditions on the	Capies s		Vaa		ssification:	if no ovel	none	
		or Hydrology	significantly dist	urbod?	Aro "Normal Circumstan	(11 no, expla		
	Soil N	or Hydrology N	- noturally problem	matic? If poodor		marke)	: (1/ N)		
				nade: in needed		anarks.)			
UMMARY OF F	INDINGS –	Attach site map	showing sam	pling point	locations, transects	, importa	Int featu	ures, etc.	
drophytic Vegetatior	ו Present? Ye	es X No)	Is Sampled A	rea within				
ydric Soil Present?	Ye	es X No		a Wetla	nd? Yes	X	I	No	
etland Hydrology Pre	esent? Ye	es X No)						
emarks:									
EGETATION - I	lse scientifi	c names of nlan	ts						
	<u></u>	absolute	Dominant	Indicator	Dominance Test wor	rksheet:			
		% cover	Species?	Status					
r <u>ee Stratum</u> (plot s	size: 30)			Number of Dominant Spe	ecies			
Populus balsai	nifera	65	<u> </u>	FAC	That are OBL, FACW, or	FAC:		2	(A)
					Total Number of Dominar	ht			
, <u> </u>					Species Across All Strata			3	(B)
		65	= Total Cover			-			
apling/Shrub Stratum	ı (plot size:	15)			Percent of Dominant Spe	cies			
Cornus alba		80	X	FACW	That are OBL, FACW, or	FAC:		67%	(A/B)
Rubus ursinus	í	30	X	FACU					
3					Prevalence Index Wo	orksheet:			
۱ 					Total % Cover of	<u> </u>	Multiply by:	_	
			- Total Cover		OBL Species		x 1 =	0	
			= Total Cover		FAC Species		x 2 = x 3 =	0	
erb Stratum (plot s	size:)			FACU Species		x 4 =	0	
1					UPL Species		x 5 =	0	
2					Column Totals	0 (A)	0	(B)
3							ш		
					. Prevalence index =	B/A = _	#	DIV/0!	
					Hvdrophytic Vegetat	ion Indica	tors:		
7						1- Rapid Tes	t for Hydro	ophytic Vegetatio	n
3					<u>x</u>	2- Dominanc	e Test is >	>50%	
		0	= Total Cover			3-Prevalence	e Index is :	≤ 3.0 ¹	
	(nlot size:)			· · · · · · · · · · · · · · · · · · ·	4-Morpholog	ical Adapt	ations' (provide s	supporting
oody vine Stratum)				data in Rema 5- Wetland N	arks or on Ion-Vascu	a separate sneet	()
					·	Problematic	Hvdrophvt	ic Vegetation ¹ (E	xplain)
		0	= Total Cover		¹ Indicators of hydric soil a	ind wetland h	nydrology i	must be present,	unless
					disturbed or problematic.				
					Hydrophytic				
Bare Ground in Her	b Stratum	0			Vegetation	Yes	Х	No	

					45			
Profile Descrip	ption: (Describe to f	the depth	needed to docume	nt the indi	cator or con	firm the abser	ce of indicators.)	
(Inches)	Color (moist)	%	Color (moist)	Kedo: %	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 4/2	90	7.5YR 3/4	10	<u> </u>	м	Silt Loam	
4-14	10YR 4/2	80	5YR 4/6	20	с	M,PL	Silty Clay Loam	Medium
¹ Type: C=Conc	centration, D=Depletion	on, RM=R	educed Matrix, CS=	Covered or	Coated San	d Grains.		² Location: PL=Pore Lining, M=Matrix.
Hydric Soli i	indicators: (Appli	icable to	all LRRS, unles	s otnerwi	ise noted.)	(05)	Indica	ators for Problematic Hydric Solls :
ŀ	Histosol (A1)				Sandy Redox	((S5)		2 cm Muck (A10)
r	Histic Epipedon (A2)				Stripped Mat	rix (S6)		Red Parent Material (1F2)
E	Biack Histic (A3)	IN IN			Loamy Muck	y minerai (F1) (except MLRA 1)	very Shallow Dark Surface (TF12)
H	Hydrogen Sulfide (A4	ŀ) . Ωu=f=′	A 1 1)		Loamy Gleye	ed Matrix (F2)		Other (explain in Remarks)
[Depleted Below Dark	Surrace (/	NT)		Depieted Ma	uix (F3)		
	Thick Dark Surface (/	A12)			Redox Dark	Surface (F6)		³ Indicators of hydrophytic vegetation and wetland
	Sandy Mucky Mineral	I (S1)			Depleted Da	rk Surface (F7)		hydrology must be present, unless disturbed or
	Sandy Gleyed Matrix	(S4)			Redox Depre	essions (F8)	1	problematic.
Restrictive L	_ayer (if present)	:						
Туре:					_			
Depth (inches):				_		Hydric Soil Pres	ent? Yes X No
HYDROLO Wetland Hyd	GY drology Indicator							
HYDROLO Wetland Hyd	GY drology Indicator	s:	uired: check all t	hat apply)				Secondary Indicators (2 or more required)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicator cators (minimum o Surface Water (A1)	s: of one req	uired; check all t	hat apply)	Water staine	d Leaves (B9)	Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (89)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicator cators (minimum o Surface Water (A1) digh Water Table (A2	r s: of one req	uired; check all t	hat apply)	Water staine 1, 2, 4A, and	d Leaves (B9)	Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3)	r s: of one req	uired; check all ti	hat apply)	Water staine 1, 2, 4A, and Salt Crust (B	d Leaves (B9) 4B) 11)	Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1)	r s: of one req 2)	uired; check all t	hat apply)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver	d Leaves (B9) 4B) 11) tebrates (B13)	Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (E	s: <u>of one req</u> 2) 32)	uired; check all t	hat apply)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su	d Leaves (B9) I 4B) 11) tebrates (B13) Ilfide Odor (C1)	Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
HYDROLO Wetland Hyd Primary Indic F F S S S S S S S S S S S S S S S S S	GY drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	r s: of one req 2) 32)	uired; check all t	hat apply) 	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi	d Leaves (B9) 4B) 11) tebrates (B13) Ilfide Odor (C1) zospheres alor	Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicator sators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B3)	s: of one req 2) 32) 4)	uired; check all t	hat apply)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of	d Leaves (B9) I 4B) 11) tebrates (B13) Ilfide Odor (C1) zospheres alor Reduced Iron (Except MLRA g Living Roots (C3) C4)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3)
HYDROLO Wetland Hyd Primary Indic F	GY drology Indicator cators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B- ron Deposits (B5)	r s: <u>of one req</u> 2) 32) 4)	uired; check all t	hat apply)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron f	d Leaves (B9) I 4B) 11) tebrates (B13) ilfide Odor (C1) zospheres alon Reduced Iron (Reduction in Pla	Except MLRA g Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
HYDROLO Wetland Hyd Primary Indic S S S S S S S S S S S S S S S S S S S	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 ron Deposits (B5) Surface Soil Cracks (r s: of one req 2) 32) 4) (B6)	uired; check all t	hat apply)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron F Stunted or S	d Leaves (B9) 4B) 11) tebrates (B13) Ilfide Odor (C1) zospheres alor Reduced Iron (Reduced Iron (ressed Plants	Except MLRA g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hyd Primary Indic Frimary Indic Frimary Indic Frimary Indic Frimary Indic Frimary Indic	GY drology Indicator sators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- ron Deposits (B5) Surface Soil Cracks (nundation Visible on Sparsely Vegetated (s: of one req 2) 32) 4) (B6) Aerial Ima Concave S	uired; check all ti gery (B7) urface (B8)	hat apply)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron f Stunted or S Other (Expla	d Leaves (B9) I 4B) 11) tebrates (B13) Ilfide Odor (C1) zospheres alon Reduced Iron (Reduction in Pla tressed Plants in in Remarks)	Except MLRA g Living Roots (C3) C4) bwed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hyd Primary Indic S S S S S S S S S S S S S S S S S S S	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 ron Deposits (B5) Surface Soil Cracks (nundation Visible on Sparsely Vegetated C vations:	r s: of one req 2) 32) 4) (B6) Aerial Ima Concave S	uired; check all ti gery (B7) urface (B8)	hat apply)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron R Stunted or S Other (Expla	d Leaves (B9) I 4B) 11) Itebrates (B13) Ilfide Odor (C1) zospheres alon Reduced Iron (Reduced Iron (Reduction in Plu tressed Plants in in Remarks)	Except MLRA g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hyd Primary Indic S S Surface Water	GY drology Indicator sators (minimum of Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B3) Algal Mat or Crust (B5) Surface Soil Cracks (nundation Visible on Sparsely Vegetated O vations: Present? Yes	r s: of one req 2) 32) 4) (B6) Aerial Ima Concave S	uired; check all ti igery (B7) urface (B8)	hat apply)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron I Stunted or S Other (Expla (inches):	d Leaves (B9) I 4B) 11) tebrates (B13) Iffide Odor (C1) zospheres alon Reduced Iron (Reduction in Pla tressed Plants in in Remarks)	Except MLRA g Living Roots (C3) C4) pwed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hyd Primary Indic Frimary Indic Field Obsern Surface Water Water Table Primary	GY drology Indicator sators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- ron Deposits (B3) Algal Mat or Crust (B- ron Deposits (B5) Surface Soil Cracks (nundation Visible on Sparsely Vegetated C vations: Present? Yes resent? Yes	's: of one req 2) 32) 4) (B6) Aerial Ima Concave S	uired; check all ti igery (B7) urface (B8) No No	hat apply)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron R Stunted or S Other (Expla (inches): (inches):	d Leaves (B9) I 4B) 11) tebrates (B13) ilfide Odor (C1) zospheres alon Reduced Iron (Reduction in Pla tressed Plants in in Remarks)	Except MLRA g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A) Wetland Hydr	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) rology Present?
HYDROLO Wetland Hyd Primary Indic S S S S S S S S S S S S S S S S S S S	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 ron Deposits (B5) Surface Soil Cracks (nundation Visible on Sparsely Vegetated O vations: Present? Yes resent? Yes resent? Yes resent? Yes resent? Yes	s: of one req 2) 32) 4) (B6) Aerial Ima Concave S	uired; check all ti igery (B7) urface (B8) No No No	hat apply)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron F Stunted or S Other (Expla (inches): (inches):	d Leaves (B9) I 4B) 11) tebrates (B13) Ilfide Odor (C1) zospheres alor Reduced Iron (Reduction in Pli tressed Plants in in Remarks)	Except MLRA g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A) Wetland Hydr	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hyd Primary Indic Primary Indic S Field Observ Surface Water Water Table Pr Saturation Pres (includes capillar) Describe Reco	GY drology Indicator sators (minimum o Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B Orift Deposits (B3) Algal Mat or Crust (B- ron Deposits (B5) Surface Soil Cracks (nundation Visible on Sparsely Vegetated C vations: Present? Yes resent? Yes sent? Yes y fringe) rded Data (stream ga	s: of one req 2) 32) 4) (B6) Aerial Ima Concave S auge, moni	uired; check all ti gery (B7) urface (B8) No No No itoring well, aerial pf	hat apply)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron F Stunted or S' Other (Expla (inches): (inches): uinches): ous inspectic	d Leaves (B9) I 4B) 11) tebrates (B13) Iffide Odor (C1) zospheres alon Reduced Iron (Reduction in Ple tressed Plants in in Remarks)	Except MLRA g Living Roots (C3) C4) wed Soils (C6) D1) (LRR A) Wetland Hyde	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hyd Primary Indic S H S S S S S S S S S S S S S S S S S	GY drology Indicator sators (minimum of Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- ron Deposits (B5) Surface Soil Cracks (nundation Visible on Sparsely Vegetated O vations: Present? Yes resent? Yes sent? Yes sent? Yes y fringe) rded Data (stream ga	rs: of one req 2) 32) 4) (B6) Aerial Ima Concave S	uired; check all ti gery (B7) urface (B8) No No No	hat apply)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi Presence of Recent Iron F Stunted or S Other (Expla (inches): (inches): ous inspection	d Leaves (B9) 4B) 11) tebrates (B13) Iffide Odor (C1) zospheres alon Reduced Iron (Reduction in Pli- tressed Plants - in in Remarks) in in Remarks)	Except MLRA g Living Roots (C3) C4) owed Soils (C6) D1) (LRR A) Wetland Hydr	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

v	VETLAND		TION DATA FO	RM - Weste	ern Mountains. Vall	evs. and Coas	PHS # st Region	7645
roject/Site:	N Peki	n Road	City/County:	Woo	odland/Cowlitz	Sampling Date:	11/23	8/2022
plicant/Owner:	Trammell C	row Company			State:	WA	Sampling Point:	3
estigator(s):	-	TF/MS	Section, T	ownship, Range:	Section	14, Township 5	- N, Range 1W	
ndform (hillslope, t	terrace, etc.:)	5	Slope	Local relief (co	ncave, convex, none):	none	Slope (%):	1%
bregion (LRR):	. ,	LRR A	Lat:	45.91	12 Long:	-122.7664	Datum:	WGS84
il Map Unit Name [.]		Ca	 oles silty clay loam		NWI Clas	sification.	none -	
e climatic/hydrolog	ric conditions on	the site typical for	this time of year?	Yes	X No	(if no exp	lain in Remarks)	
e vegetation N	Soil N	or Hydrology	N significantly dis	sturbed?	Are "Normal Circumstanc	es" present? (Y/N)	Y	
	SoilN	- or Hydrology	N naturally proble	matic? If needer	explain any answers in Re	marks)		
						nanto.)		
UMMARY OF	FINDINGS -	- Attach site	map showing sa	npling point	locations, transects,	important feat	ures, etc.	
drophytic Vegetati	ion Present?	Yes X	No	lo Sompled A	roo within			
dric Soil Present?		Yes	No X	a Wetla	nd? ^{Yes} _		No X	
etland Hydrology F	Present?	Yes	No X					
marks:								
EGETATION -	- Use scient	ific names of	plants.		1			
		abso % co	lute Dominant	Indicator Status	Dominance Test wor	ksheet:		
ee Stratum (ploi	t size:	30)			Number of Dominant Spec	cies		
Populus bals	amifera	^ ´ 7(b x	FAC	That are OBL. FACW, or F	FAC:	3	(A)
Salix lasiandı	ra		5	FACW				()
Acer macrop	hyllum	1	5	FACU	Total Number of Dominan	t		
	•				Species Across All Strata:		4	(B)
			0 = Total Cover					
apling/Shrub Stratu	ım (plot size:	15)			Percent of Dominant Spec	ies		
Cornus alba			x a	FACW	That are OBL, FACW, or	FAC:	75%	(A/B)
Ribes sp		1	0	(FAC)				
Symphoricar	pos albus	1	0	FACU	Prevalence Index Wo	rksheet:		
					Total % Cover of	Multiply by	<u>y:</u>	
					OBL Species	x 1 =	0	
		8	D = Total Cover		FACW species	x 2 =	0	
arb Stratum (ploi	t size:	5)			FAC Species	x 3 =		
Rubus ursinu		, 7	n x	FACU	UPL Species	x5=	0	
Urtica dioica		20		FAC	Column Totals	0 (A)	0	(B)
					-	()		
					Prevalence Index =B	/A = 4	#DIV/0!	
					Hydrophytic Vegetati	on Indicators:		
					1	- Rapid Test for Hyd	rophytic Vegetatior	ı
					X 2	- Dominance Test is	>50%	
		90	D = Total Cover		3	-Prevalence Index is	$\leq 3.0^{1}$	unnerting
	(nlot size:)			4	-iviorphological Adap	a apparate sheet)	upporting
and Vine Ctratum	<u> </u> (plot 5/26.	/			5	- Wetland Non-Vasc	ular Plants ¹	
oody Vine Stratum						Problematic Hydrophy	/tic Vegetation ¹ (F)	(plain)
oody Vine Stratum						- aloniado i iyalopii)		·
oody Vine Stratum			= Total Cover		¹ Indicators of hvdric soil ar	nd wetland hvdrologv	must be present.	unless
oody Vine Stratum		0	= Total Cover		¹ Indicators of hydric soil ar disturbed or problematic.	nd wetland hydrology	must be present, u	unless
oody Vine Stratum	ark Strater	0	= Total Cover		¹ Indicators of hydric soil ar disturbed or problematic. Hydrophytic	nd wetland hydrology	must be present, u	unless

SOIL			PHS #	7	645	_		Sampling Point: <u>3</u>
Profile Descri Depth	ption: (Describe to Matrix	the depth	needed to doc	ument the in Red	licator or co ox Features	onfirm the absen	ce of indicators.)	
(Inches)	Color (moist)	%	Color (mois	t) %	Type ¹	Loc ²	Texture	Remarks
0-11	10YR 2/2	100				_	Silty Clay Loam	
11-18	10YR 3/2	90	7.5YR 3/4	¥ 10	С	М	Silty Clay Loam	Medium
¹ Type: C=Cond	centration, D=Deplet	ion, RM=R	educed Matrix,	CS=Covered	or Coated Sa	nd Grains.		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (App	licable to	all LRRs, ur	less otherv	vise noted	.)	Indica	ators for Problematic Hydric Soils':
	Histosol (A1)				_Sandy Red	ox (S5)		2 cm Muck (A10)
	Histic Epipedon (A2)				_Stripped M	atrix (S6)		Red Parent Material (TF2)
	Black Histic (A3)				_Loamy Mud	cky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
	Hydrogen Sulfide (A	4)			Loamy Gle	yed Matrix (F2)		Other (explain in Remarks)
	Depleted Below Dar	k Surface (A11)		_ Depleted N	latrix (F3)		
	Thick Dark Surface ((A12)			_Redox Dar	k Surface (F6)		³ Indicators of hydrophytic vegetation and wetland
	Sandy Mucky Minera	al (S1)			_ Depleted D	ark Surface (F7)		hydrology must be present, unless disturbed or
	Sandy Gleyed Matrix	(S4)			_Redox Dep	ressions (F8)	-	problematic.
Restrictive	Layer (if present)):						
Туре:								
Depth (inches	s):				_		Hydric Soil Pres	ent? Yes NoX
HYDROLO	GY							
Wetland Hy	drology Indicato	rs:						
Primary Indie	cators (minimum o	of one req	uired; check	all that apply	()			Secondary Indicators (2 or more required)
	Surface Water (A1)				Water stair	ned Leaves (B9) (Except MLRA	Water stained Leaves (B9)
	High Water Table (A	2)			[–] 1, 2, 4A, ar	nd 4B)		(MLRA1, 2, 4A, and 4B)
	Saturation (A3)				Salt Crust ((B11)		Drainage Patterns (B10)
	Water Marks (B1)				_Aquatic Inv	ertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)			_Hydrogen S	Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9
	Drift Deposits (B3)				Oxidized R	hizospheres alon	g Living Roots (C3)	Geomorphic Position (D2)
	Algal Mat or Crust (E	34)			Presence c	of Reduced Iron (0	C4)	Shallow Aquitard (D3)
	Iron Deposits (B5)				Recent Iror	n Reduction in Plo	owed Soils (C6)	Fac-Neutral Test (D5)
	Surface Soil Cracks	(B6)			_Stunted or	Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
	Inundation Visible or Sparsely Vegetated	n Aerial Ima Concave S	igery (B7) urface (B8)		_Other (Exp	lain in Remarks)		Frost-Heave Hummocks (D7)
Field Obser	vations:							
Surface Water	Present? Yes		No X	Dept	h (inches):			
Water Table P	resent? Yes		No X	Dept	h (inches):	>18	Wetland Hyd	rology Present?
Saturation Pre	sent? Yes		No X	Dept	h (inches):	>18		Yes NoX
Describe Reco	rded Data (stream o	auge, mon	itoring well, aer	al photos, pre	vious inspect	tions), if available	:	
Remarks:								

oject/Site:	N Pek	kin Road	d City/County:			Woo	dland/Cowlitz	Sam	oling Date:	1	1/23/2022
oplicant/Owner	Trammell	Crow Cor	mpany	-	eng, eeung:		State [.]	WA	July Date.	Sampling Po	pint: 4
vestigator(s):		MS/TF			Section, Tc	wnship, Range:	Sectio	n 14. To	- wnship 5	N. Range 1	w
andform (hillslope, to	errace. etc.:)		Depr	essio	, n	Local relief (cor	ncave, convex, none):	со	ncave	Slope ((%): 1%
ubregion (LRR):	, ,				Lat:	45.91 ⁴	12 Long:	-12	2.7664	Dat	um: WGS84
oil Map Unit Name:			Cap	les sil	ty clay loam		NWI Cla	ssification	:	non	e
e climatic/hydrologi	ic conditions or	n the site ty	pical for th	nis time	e of year?	Yes	X No		(if no, exp	lain in Remar	ks)
e vegetation N	Soil N	or Hy	drology	Ν	significantly dist	urbed?	Are "Normal Circumstan	ces" prese	 nt? (Y/N)	Y	
e vegetation N	Soil N	– or Hy	drology	N	naturally proble	matic? If needed	, explain any answers in Re	emarks.)			
		-									
UMMARY OF	FINDINGS	– Attacl	<u>n site n</u>	nap s	howing sam	ipling point	locations, transects	, impor	tant feat	ures, etc.	
ydrophytic Vegetatio	on Present?	Yes _	<u> </u>	_ No		Is Sampled Ar	ea within	v			
ydric Soll Present?		Yes _	<u> </u>	- ^{NO}		a Wetlar	nd? Yes	X	-	No	
etland Hydrology P	resent?	Yes	<u> </u>	_ ^{No}							
∍marks:											
EGETATION -	Use scien	tific nam	nes of r	blants							
			absolu	ute	Dominant	Indicator	Dominance Test wor	rksheet:			
oo Stratum (plat		`	% cov	/er	Species?	Status	Number of Demission of Ore				
<u>ee stratum</u> (piot	size.)					That are OPL EACW or			2	(A)
				—			That are OBL, FACW, OF	FAC.			(A)
·							Total Number of Dominar	nt			
1				_			Species Across All Strata	:	_	2	(B)
			0		= Total Cover						
apling/Shrub Stratu	<u>m</u> (plot size	e: 15	_)				Percent of Dominant Spe	cies			
Cornus alba			80		<u> </u>	FACW	That are OBL, FACW, or	FAC:		100%	(A/B)
Rubus ursinu	<u>s</u>		10			FACU					
3							Prevalence Index We	orksheet	:		
• 							Total % Cover of		Multiply b	<u>y:</u>	
			90		- Total Covor				_ X1=	0	
				—			FAC Species		x3=	0	_
<u>erb Stratum</u> (plot	size:	5)					FACU Species		x 4 =	0	
Carex obnupt	a		30		X	OBL	UPL Species		x 5 =	0	
							Column Totals	0	(A)	0	(B)
3				—						"DN (/A)	
							Prevalence Index =	B/A =		#DIV/0!	
·				—			Hydrophytic Vegetat	ion India	ators:		
7				—				1- Rapid T	est for Hyd	rophytic Vege	tation
3							X	2- Domina	nce Test is	>50%	
			30		= Total Cover			3-Prevaler	nce Index is	$\leq 3.0^{1}$	
	(plat aiza)		`				· · · · · · · · · · · · · · · · · · ·	4-Morphol	ogical Adap	otations' (prov	ide supporting
oody Vine Stratum	(piot size:		_)					data in Re	marks or or	1 a separate s	heet)
				—				o- weiland Problemat	ic Hydrophy	ular Plants vtic Vegetation	1 ¹ (Evolain)
<u> </u>			0		= Total Cover		¹ Indicators of hydric soil a	ind wetlan	d hvdroloav	/ must be pres	ent. unless
				—			disturbed or problematic.		,3)	F. 30	, -
							Hydrophytic				
Poro Cround in Ho	rh Stratum	7	70				Vocatation	Voc	· · · · ·		No

SOIL			PHS #	76	645			Sampling Point:4				
Profile Descri	ption: (Describe to	the depth	needed to docume	nt the indi	icator or co	nfirm the absen	ce of indicators.)					
Depth (Inches)	Matrix	0/	Color (moint)	Redo	x Features	1 a a ²	Texture	Domorko				
		<u>%</u>	Color (moist)	%	Туре	LOC	Texture	Remarks				
0-4	101R 3/2											
4-15	10YR 3/1	90	7.5YR 4/6	10	<u> </u>	M,PL						
						·						
					·							
¹ Type: C=Con	centration, D=Deplet	tion, RM=R	educed Matrix, CS=	Covered or	r Coated Sar	nd Grains.		² Location: PL=Pore Lining, M=Matrix.				
Hydric Soil	Indicators: (App	licable to	all LRRs, unless	s otherw	ise noted.)	Indic	ators for Problematic Hydric Soils ³ :				
	Histosol (A1)				Sandy Red	ox (S5)		2 cm Muck (A10)				
	Histic Epipedon (A2))			Stripped Ma	atrix (S6)		Red Parent Material (TF2)				
	Black Histic (A3)				Loamy Muc	ky Mineral (F1) (e	except MLRA 1)	Very Shallow Dark Surface (TF12)				
	Hydrogen Sulfide (A	4)			Loamy Gley	ed Matrix (F2)		Other (explain in Remarks)				
	Depleted Below Dar	k Surface (A11)		Depleted M	atrix (F3)						
	Thick Dark Surface	(A12)			Redox Dark	Surface (F6)						
	Sandy Mucky Minera	al (S1)			Depleted Da	ark Surface (F7)		³ Indicators of hydrophytic vegetation and wetland				
	Sandy Gleyed Matrix	(S4)			Redox Dep	ressions (F8)		hydrology must be present, unless disturbed or problematic.				
Restrictive	Layer (if present):										
Type:												
Depth (inches	s):				_		Hydric Soil Pres	sent? Yes X No				
Remarks:					_							
HYDROLO	GY											
Wetland Hy	drology Indicato	rs:										
Primary Indi	cators (minimum	of one rec	uired; check all th	nat apply)			Secondary Indicators (2 or more required)				
	Surface Water (A1)				, Water stain	ed Leaves (B9) (Except MLRA	Water stained Leaves (B9)				
	High Water Table (A	(2)			, 2, 4A, an	d 4B)	•	(MLRA1, 2, 4A, and 4B)				
	Saturation (A3)	(2)			Salt Crust (B11)		Drainage Patterns (B10)				
	Water Marks (B1)					ertebrates (B13)		Dry-Season Water Table (C2)				
	Sediment Deposits ((B2)			Hydrogen S	Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)				
	Drift Deposits (B3)	02)		Y			a Living Roots (C3)	Catal ation visible on Achai magery (00				
	Algal Mat or Crust (E	24)			Drosonco o	f Poducod Iron ((Shallow Aquitard (D2)				
	Iron Denosite (B5)	(+(Recent Iron	Reduction in Plo	wed Soils (C6)	Eac-Neutral Test (D5)				
	Surface Soil Cracks	(B6)			Stunted or 9	Stressed Plants (Raised Ant Mounds (D6) (I BR A)				
		(DU)	acry (P7)		Othor (Evol	oin in Romarka)						
	Sparsely Vegetated		urface (B8)									
		Concave o										
Field Obser	vations:											
Surface Water	Present? Yes		No	Depth	(inches):							
Water Table P	resent? Yes		No	Depth	(inches):		Wetland Hyd	Irology Present?				
Saturation Pre (includes capilla	sent? Yes y fringe)		No	Depth	(inches):			Yes X No				
Describe Reco	rded Data (stream g	auge, mon	itoring well, aerial ph	otos, previ	ious inspect	ions), if available	:					
Remarks:												

	WETLAND	DETERMINATIO	ON DATA FOR	RM - Westei	rn Mountains, Vall	evs, and Coa	st Region	/645	
Project/Site:	N Pek	kin Road	City/County:	Wood	dland/Cowlitz	Sampling Date:	11/23	/2022	
Applicant/Owner:	Trammell	Crow Company			State:	WA	Sampling Point:	5	
Investigator(s):		MS/TF	Section, To	wnship, Range:	Section	n 14, Township 5	N, Range 1W		
Landform (hillslope,	, terrace, etc.:)	Flat		Local relief (con	cave, convex, none):	none	Slope (%):	1%	
Subregion (LRR):		LRR A	Lat:	45.911	8 Long:	-122.7648	Datum:	WGS84	
Soil Map Unit Name	e:	Cat	o silt loam		NWI Clas	ssification:	none		
Are climatic/hydrolo	gic conditions o	n the site typical for this ti	me of year?	Yes	X No	(if no, exp	lain in Remarks)		
Are vegetation	Soil N	or Hydrology	N_significantly dist	urbed?	Are "Normal Circumstanc	ces" present? (Y/N)	Y		
Are vegetation	N Soil N	or Hydrology	N naturally proble	matic? If needed,	explain any answers in Re	marks.)			
		Attach aita man		nling noint l	antiona transacta	important foot	uree ete		
		- Attach site map	showing san	iping point i	ocations, transects	, important lea	ures, etc.		
		Yes A		Is Sampled Are	ea within				
	f Dresent?	Yes N		a Wetlan	d? ^{res} _		NO <u>A</u>		
Vvellarid Hydrology	Present?								
Remarks:									
l									
VEGETATION	- Use scien	tific names of plar	nts.						
		absolute	Dominant	Indicator	Dominance Test wor	ksheet:			
Tree Stratum (pl	ot size:		Species?	Status	Number of Dominant Spe	cies			
1		,			That are OBL. FACW. or	FAC:	1	(A)	
2					- , - ,				
3					Total Number of Dominan	t			
4					Species Across All Strata:	·	1	(B)	
		0	= Total Cover						
Sapling/Shrub Strat	tum (plot size	e:)			Percent of Dominant Spec	cies			
1			·		That are OBL, FACW, or	FAC:	100%	(A/B)	
2									
3					Prevalence Index Wo	orksheet:			
45					OBL Species		<u>y:</u>		
5		0	= Total Cover		FACW species	x 2 =	0		
			-		FAC Species	x 3 =	0		
Herb Stratum (plo	ot size:	5)			FACU Species	x 4 =	0		
1 Lolium perei	nne	80	<u> </u>	FAC	UPL Species	x 5 =	0		
2			- <u> </u>		Column Totals	0 (A)	0	B)	
3					Durana la dan - D	N/A -	4DIV//01		
4			<u> </u>		Prevalence Index =E	3/A =			
6					Hydrophytic Vegetati	on Indicators:			
7						I- Rapid Test for Hyd	rophytic Vegetatior	I	
8					X 2	2- Dominance Test is	>50%		
		80	= Total Cover		3	3-Prevalence Index is	≤ 3.0 ¹		
	(plot cize:	\ \			4	I-Morphological Adap	otations' (provide s	upporting	
vvoody Vine Stratur	\underline{n} (plot size:)				ata in Remarks or or	n a separate sheet <u>)</u> ular Plants ¹		
2			<u> </u>				uiai Fiants /tic.Vegetation ¹ (Ev	nlain)	
-		0	= Total Cover		¹ Indicators of hydric soil a	nd wetland hydrology	must be present.	inless	
			-		disturbed or problematic.	,	,, ,		
% Baro Cround in 1	Jorh Stratum	20			Hydrophytic	Voc V	Ne		
	mularia orian	20			Procent2	185 <u>Å</u>	NO		
					Present?				

SOIL			PHS #	7645	_		Sampling Point:	5		
Profile Descri	ption: (Describe to	the depth r	eeded to docume	nt the indicator or co	onfirm the absen	ce of indicators.)				
Depth	Matrix			Redox Features						
(Inches)	Color (moist)	%	Color (moist)	% Туре		Texture	Remar	ks		
0-14	10YR 3/3	100				Silt Loam				
¹ Type: C=Conc	centration D=Depleti	ion RM=Re	duced Matrix CS=	Covered or Coated Sa	Ind Grains		² Location: PL =Pore Lining	√=Matrix		
Hydric Soil	Indicators: (Appl	icable to	all LRRs. unles	s otherwise noted	.)	Indica	ators for Problematic Hy	dric Soils ³ :		
	Histosol (A1)			Sandy Red	•) lox (S5)	indio	2 cm Muck (A1			
'	Histosof (A1)			Strippod M	otrix(S6)		2 Cill Muck (Al	o)		
·'	Ristic Epipedon (A2)				allix (50)					
'		4)		Loany Mu	cky Millerai (F1) (except MLRA 1)	Very Shallow L			
'	Hydrogen Suitide (A4	+) • Ourfaaa (A	44)	Loamy Gie			Other (explain	in Remarks)		
'		C Sunace (A	.11)							
	Thick Dark Surface (A12)		Redox Dar	k Surface (F6)		³ Indicators of hydrophytic ve	aetation and wetland		
	Sandy Mucky Minera	il (S1)		Depleted D	Dark Surface (F7)		hydrology must be present,	unless disturbed or		
	Sandy Gleyed Matrix	: (S4)		Redox Dep	pressions (F8)		problemat	iC		
Restrictive I	Layer (if present)	:								
Туре:										
Depth (inches	s):					Hydric Soil Pres	ent? Yes	No <u>X</u>		
Remarks:										
HYDROLO Wetland Hyd	GY drology Indicator	rs.								
Primary Indic	cators (minimum o	of one requ	uired; check all ti	nat apply)	(D0)		Secondary Indicators (2	or more required)		
	Surface Water (A1)				ned Leaves (B9) (EXCEPT MLRA	Water stained	Leaves (B9)		
I	High Water Table (A	2)		i, 2, 40, ai	iid 40)			<, and 40)		
	Saturation (A3)			Salt Crust ((B11)		Drainage Patte	rns (B10)		
	Water Marks (B1)	BO		Aquatic Inv	vertebrates (B13)		Dry-Season Water Table (C2)			
`	Sediment Deposits (I	B2)		Hydrogen s	Sulfide Odor (C1)	n Lining Drate (O2)	Geomorphic Position (D2)			
l	Drift Deposits (B3)	4)			nizospheres alon	g Living Roots (C3)	Shallow Aquitard (D3)			
′	Aigai Mat of Crust (B	94)		Presence c	Production in Pla	und Soils (C6)	Shallow Aquitard (D3)			
'	Surface Soil Cracks	(B6)		Recent Irol	Stressed Plants (Fac-Neutral Test (D5)			
`	Inundation Visible on	(D0) Δerial Imar	nerv (B7)	Other (Exp	lain in Remarks)		Erest Heave Hummerks (DZ)			
'	Sparsely Vegetated (Concave Su	rface (B8)	Outor (Exp	an in Kontarkoj					
Field Obser	vations:					1				
Surface Water	Present? Ves		No X	Denth (inches):	n/a					
Water Table P	recent? Ves			Depth (inches):	>14	Wetland Hvd	rology Present?			
Saturation Pres	cont? Vos			Depth (inches):	>14	Wettand Hyd	Yos	No X		
(includes capillar	y fringe)		<u> </u>	Deptri (mones).			103			
Describe Reco	rded Data (stream g	auge, monit	oring well, aerial pl	otos, previous inspect	tions), if available	:				
		-								
Remarks:										

v	VETLAND		RMINATIO	N DATA FOF	۲M - Westeı	rn Mountains, Val	leys, and Coa	st Region	7045	
Project/Site: N Pekin Road				City/County: Wo		dland/Cowlitz	Sampling Date:	11/2	/2022	
oplicant/Owner:	Trammell	Crow Co	mpany			State:	WA	Sampling Point:	6	
vestigator(s):		MS/TF		Section, To	wnship, Range:	Sectio	n 14, Township 5	N, Range 1W		
andform (hillslope, t	errace, etc.:)		Flat		Local relief (con	icave, convex, none):	none	Slope (%):	1%	
ubregion (LRR):		LRR A	۹	Lat:	45.901	9 Long:	-122.7636	Datum:	WGS84	
oil Map Unit Name:			Newberg f	ine sandy loam	1	NWI Cla	ssification:			
e climatic/hydrolog	ic conditions o	n the site ty	pical for this tin	ne of year?	Yes	<u>X</u> No	(if no, exp	olain in Remarks)		
re vegetation N	Soil N	_ or Hy	drology N	significantly dist	urbed?	Are "Normal Circumstan	ces" present? (Y/N)	Y		
re vegetation N	Soil N	or Hy	drology N	naturally problem	natic? If needed,	, explain any answers in Re	emarks.)			
UMMARY OF	FINDINGS	– Attac	h site map	showing sam	pling point l	locations, transects	, important fea	tures, etc.		
ydrophytic Vegetati	on Present?	Yes	X No	_			<u>· · · · · · · · · · · · · · · · · · · </u>			
ydric Soil Present?		Yes	No	> X	Is Sampled Are a Wetlan	ea within Id? Yes		No X		
/etland Hydrology P	Present?	Yes	No	> X		-				
emarks:										
EGETATION -	Use scien	tific nam	nes of plan	ts.	Indicator	Dominanco Tost wo	rkshoot:			
			% cover	Species?	Status	Dominance rest wor	Källeet.			
ree Stratum (plot	t size:)				Number of Dominant Spe	cies			
						That are OBL, FACW, or	FAC:	1	(A)	
3 						Lotal Number of Dominar	nt 	1	(B)	
·			0	= Total Cover		Species Across Air Strata		<u> </u>	(0)	
anling/Shrub Stratu	m (plot size	۵.)			Percent of Dominant Spe	ocies			
	<u></u> (p.ot 0.24		_/			That are OBL, FACW, or	r FAC:	100%	(A/B)	
2									. ,	
3						Prevalence Index We	orksheet:			
l						Total % Cover of	Multiply b	<u>y:</u>		
				- Total Cavar		OBL Species	x 1 =			
				= Total Cover		FAC Species	x 2 = x 3 =	0		
<u>erb Stratum</u> (plot	t size:	5)				FACU Species	x 4 =	0		
Lolium peren	ne		65	<u> </u>	FAC	UPL Species	x 5 =	0		
						Column Totals	0 (A)	0	(B)	
3						Dravalance Inday =		#DIV//01		
·						Prevalence index =	5/A =			
						Hydrophytic Vegetat	ion Indicators:			
7							1- Rapid Test for Hyd	rophytic Vegetatio	n	
3						<u> </u>	2- Dominance Test is	>50%		
			65	= Total Cover			3-Prevalence Index is	$s \leq 3.0^1$	upporting	
oody Vine Stratum	(plot size:)				data in Remarks or o	n a separate sheet)	
	ŭ		_'				5- Wetland Non-Vasc	cular Plants ¹	/	
2							Problematic Hydroph	ytic Vegetation ¹ (E	xplain)	
			0	= Total Cover		¹ Indicators of hydric soil a	and wetland hydrology	must be present,	unless	
						disturbed or problematic.				
Poro Cround in Ho	erb Stratum	;	35			Vegetation	Yes X	No		
Bare Ground III He										

SOIL			PH	s #	7645				Sampling Poi	nt:	6
Profile Descri	ption: (Describe to	the depth r	needed to	document t	he indicato	or or confi	rm the absen	ce of indicators.)			
Depth	Matrix				Redox Fe	atures	2				
(Inches)	Color (moist)		Color (I	noist)	%	Туре'	Loc	Texture	Ren	narks	
0-11	10YR 3/3	100						Silt Loam			
11-16	10YR 3/2	100						Fine Sandy Loam			
¹ Type: C=Con	centration D=Deple	tion RM=Re	educed Ma	trix CS=Cov	ered or Coa	ated Sand	Grains		² Location: PL=Pore Lining	M=Matrix	
Hydric Soil	Indicators: (App	licable to	all I RRs	unless of	therwise	noted)	Oranis.	Indica	ators for Problematic		s ³ .
	Histosol (A1)			, unicee e	San	dy Redox	(85)	indict	2 cm Muck	(A10)	
	Histosof (A1)	`			Oan		(00)		2 cill Muck	(ATU)	N N
)			Suip		X(30)) - (TE40)
	Black Histic (A3)	0			Loai	ту миску		except MLRA 1)	Very Shallo	W Dark Surfac	e (TF12)
	Hydrogen Sulfide (A	4)			Loai	my Gleyec	Matrix (F2)		Other (expla	ain in Remarks	5)
	Depleted Below Dar	k Surface (A	A11)		Dep	leted Matr	ix (F3)				
	Thick Dark Surface	(A12)			Red	ox Dark S	urface (F6)		³ Indicators of hydrophytic	vegetation and	d wetland
	Sandy Mucky Miner	al (S1)			Dep	leted Dark	Surface (F7)		hydrology must be prese	nt, unless dist	urbed or
	Sandy Gleyed Matri	x (S4)			Red	ox Depres	sions (F8)		probler	natic.	
Restrictive	Layer (if present):									
Type:											
Depth (inches	s):							Hydric Soil Pres	ent? Yes	No	Х
Remarks:											
HYDROLO	GY										
Wetland Hy	drology Indicato	ors:									
Primary India	cators (minimum	of one req	uired; che	eck all that	apply)				Secondary Indicators	(2 or more i	required)
	Surface Water (A1)				Wat	er stained	Leaves (B9) (Except MLRA	Water stain	ed Leaves (B9	9)
	High Water Table (A	\ 2)			1, 2,	4A, and	4B)		(MLRA1, 2	, 4A, and 4B)	
	Saturation (A3)				Salt	Crust (B1	1)		Drainage Pa	atterns (B10)	
	Water Marks (B1)				Aqu	atic Invert	ebrates (B13)		Dry-Season	Water Table	(C2)
	Sediment Deposits	(B2)			Hyd	rogen Sulf	fide Odor (C1)		Saturation \	/isible on Aeria	al Imagery (C9)
	Drift Deposits (B3)				Oxic	lized Rhiz	ospheres alon	g Living Roots (C3)	Geomorphi	Position (D2))
	Algal Mat or Crust (I	B4)			Pres	sence of R	educed Iron (C4)	Shallow Aq	uitard (D3)	
	Iron Deposits (B5)				Rec	ent Iron R	eduction in Plo	owed Soils (C6)	Fac-Neutral	Test (D5)	
	Surface Soil Cracks	(B6)			Stur	nted or Str	essed Plants ((D1) (LRR A)	Raised Ant	Mounds (D6)	(LRR A)
	Inundation Visible o	n Aerial Ima	gery (B7)		Othe	er (Explair	in Remarks)		Frost-Heave	e Hummocks (D7)
	Sparsely Vegetated	Concave Su	urface (B8)								
Field Obser	vations:										
Surface Water	Present? Yes		No	х	Depth (incl	nes):	n/a				
Water Table P	resent? Yes		No	x	Depth (incl	nes):	>16	Wetland Hvd	rology Present?		
Saturation Pre	sent? Yes		No	x	Depth (incl	nes):	>16		Yes	No	х
(includes capillar	ry fringe)				1 (,	-				
Describe Reco	orded Data (stream g	gauge, monit	toring well,	aerial photo	s, previous	inspection	ıs), if available	:			
Remarks:											

,	WETI AND DETER	νινατιον		RM - Wester	rn Mountains	Valle	ws and Coas	PHS # _	7645
Project/Site: N Pekin Road			Citv/Countv:	dland/Cowlitz	, vanc	Sampling Date:	12/6/	2022	
Applicant/Owner:	Trammell Crow Cor	mpany	,			State:	WA	Sampling Point:	7
Investigator(s):	CT/TF	. ,	Section. To	wnship, Range:			 Sect. 23. T 5N. F	R 1W -	
Landform (hillslope.	terrace. etc.:)	depressio	- ′ n	Local relief (cor	icave. convex. none	e):	concave	Slope (%):	1%
Subregion (LRR):			Lat:	45.908	5	Long:	-122.7624	Datum:	WGS84
Soil Map Unit Name	::	Caples si	- Ity clay loam		N	IWI Class	ification:	PFOA	
Are climatic/hydrolog	gic conditions on the site ty	pical for this time	e of year?	Yes	x	No	(if no, expl	ain in Remarks)	
Are vegetation N	I Soil N or Hy	drology N	significantly dist	urbed?	Are "Normal Circu	umstance	s" present? (Y/N)	Ŷ	
Are vegetation N	Soil N or Hy	drology N	naturally probler	matic? If needed	, explain any answei	rs in Rem	arks.)		
SUMMARY OF	FINDINGS – Attac	h site map s	howing sam	pling point l	locations, tran	sects,	important feat	ures, etc.	
Hydrophytic Vegetat	tion Present? Yes	X No							
Hydric Soil Present?	Yes	X No		a Wetlan	ea within id?	Yes	x	No	
Wetland Hydrology I	Present? Yes	X No							
Remarks:									
VEGETATION	 Use scientific nam 	nes of plants	S.				_		
		absolute % cover	Dominant Species?	Indicator Status	Dominance Te	st work	sheet:		
Tree Stratum (plo	ot size: 30)				Number of Domina	ant Specie	es		
1 Populus bals	samifera	30	X	FAC	That are OBL, FA	CW, or FA	AC:	2 (A)
2									
3					Total Number of D	Oominant			
4					Species Across Al	Il Strata:		2(B)
		30	= Total Cover						
Sapling/Shrub Stratu	um (plot size: 15)			Percent of Domina	ant Specie	es		
1 Cornus alba			<u> </u>	FACW	That are OBL, FA	CW, or F	AC:	100%	A/B)
2 Rubus armer	niacus	1		FAC	Brovalance Ind	lov Wor	kabaat:		
3					Total % Cover of		Multiply by	<i>.</i>	
5					OBL Species	s	<u>x 1 =</u>	<u> </u>	
		71	= Total Cover		FACW specie	es —	x 2 =	0	
					FAC Species	s _	x 3 =	0	
Herb Stratum (plc	ot size:)				FACU Specie	es	x 4 =	0	
1					UPL Species	s —	x 5 =		
2					Column Total	is	0 (A)	(В)
4					Prevalence I	ndex =B/	4 = 4		
5									
6					Hydrophytic Ve	egetatio	n Indicators:		
7						1-	Rapid Test for Hydr	ophytic Vegetation	
8					<u> </u>	2-	Dominance Test is	>50%	
		0	= Total Cover			3-1	Prevalence Index is	$\leq 3.0^{1}$	
Maadu Vina Stratum	, (plot size: 5)				4-I	Morphological Adap	tations' (provide si	ipporting
1 Rubus ursini		_′ 1		FACU		ua 5-	Wetland Non-Vasci	la separate sneet) Ilar Plants ¹	
2		<u> </u>				Pro	oblematic Hydrophy	tic Vegetation ¹ (Ex	plain)
		1	= Total Cover		¹ Indicators of hydr	ic soil and	l wetland hydrology	must be present, u	inless
					disturbed or proble	ematic.			
% Bare Ground in H	lerb Stratum 1	00			Vegetation		Yes X	No	
					Present?		····		
Remarks:									
SOIL			PHS #	764	45			Sampling Point: 7	
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Profile Descr	iption: (Describe to	the depth	needed to docume	nt the indic	ator or co	nfirm the abser	ce of indicators.)		
Depth (In share)	Matrix	0/		Redox	Features	1 2	Tautura	Demerke	
(incries)				70	Туре	LOC		Remarks	
/	7.51R 3/2	-100							
/-12	7.5YR 3/2	90	7.5YR 4/6				Silt Loam		
			7.5YR 4/6	5	<u> </u>	M	Silt Loam	Medium	
12-18	7.5YR 3/2	80	7.5YR 4/4	15	C	M	Silty Clay Loam	Coarse	
			7.5YR 4/6	5	C	M		Medium	
						·			
¹ Type: C=Con	centration, D=Deplet	on, RM=R	educed Matrix, CS=0	Covered or	Coated Sar	nd Grains.		² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators: (Appl	icable to	all LRRs, unless	s otherwis	se noted.)	Indica	ators for Problematic Hydric Soils ³ :	
	Histosol (A1)				Sandy Redo	ox (S5)		2 cm Muck (A10)	
	Histic Epipedon (A2)				Stripped Ma	ıtrix (S6)		Red Parent Material (TF2)	
	Black Histic (A3)			L	_oamy Mucl	ky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)	
	Hydrogen Sulfide (A	4)		ı	_oamv Glev	ed Matrix (F2)		Other (explain in Remarks)	
	Depleted Below Dark	, Surface (A11)	'	Depleted M	atrix (E3)			
			ATT)	'					
	INICK Dark Surface (A12)		^ _	Redox Dark	Surrace (F6)		³ Indicators of hydrophytic vegetation and wetland	
	Sandy Mucky Minera	l (S1)		[Depleted Da	ark Surface (F7)		hydrology must be present, unless disturbed or	
	Sandy Gleyed Matrix	(S4)		F	Redox Depr	essions (F8)		problematic.	
Restrictive	Layer (if present)	:							
Type [.]									
Denth (inche	z).				-		Hydric Soil Pres	ant? Yas X No	
Bopar (mono					-				
HYDROLC Wetland Hy	IGY drology Indicator	′s:							
Primary Indi	cators (minimum o	of one rec	quired; check all th	nat apply)				Secondary Indicators (2 or more required)	
	Surface Water (A1)			١	Water staine	ed Leaves (B9)	Except MLRA	Water stained Leaves (B9)	
	High Water Table (A	2)		1	1, 2, 4A, an	d 4B)		(MLRA1, 2, 4A, and 4B)	
	Saturation (A3)	,		S	Salt Crust (E	311)		Drainage Patterns (B10)	
	Water Marks (B1)				Aquatic Inve	ertebrates (B13)		Drv-Season Water Table (C2)	
	Sediment Deposits (B2)			Hydrogen S	ulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9	
	Drift Deposits (B3)	<i></i>)		<u> </u>	Dvidized Rh		a Livina Roots (C3)	Geomorphic Position (D2)	
	Algel Met er Cruet (P	4)				E Doducod Iron (Shallow Aquitard (D2)	
		4)		'		Reduced IIOII (04)	Shallow Aquitard (DS)	
	Iron Deposits (B5)	(5.0)		r					
	Surface Soil Cracks	(B6)			Stunted or S	stressed Plants	D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)	
	Inundation Visible on	Aerial Ima	agery (B7)	(Other (Expla	ain in Remarks)		Frost-Heave Hummocks (D7)	
	Sparsely Vegetated	Concave S	urface (B8)						
Field Obser	vations:								
Surface Wate	Present? Yes		NoX	Depth ((inches):	N/A			
Water Table F	Present? Yes		No X	Depth ((inches):	>18	Wetland Hvd	rology Present?	
Saturation Pre	sent? Yes		No X	Depth ((inches):	>18		Yes X No	
(includes capilla	iy ininge)								
Describe Reco	orded Data (stream g	auge, mon	itoring well, aerial ph	otos, previo	ous inspecti	ons), if available	:		
Remarks:									

Ň	VETI AND DET	FRMINATION		RM - Weste	rn Mountains, Vall	evs and Coas	PHS#_	7645
Proiect/Site:	N Pekin Ro	ad	Citv/Countv:	Woo	dland/Cowlitz	Sampling Date:	12/6/	2022
Applicant/Owner:	Trammell Crow	Company	- , - ,		State:	WA	Sampling Point:	8
nvestigator(s):	TF/C	<u>т</u>	Section. To	wnship, Range:		Sect. 23. T 5N. R	1W _	-
andform (hillslope	terrace etc.)	Slope	-	Local relief (cor	cave convex none).	none	Slope (%)	2%
Subregion (LRR):	LR	RA	Lat:	45.908		-122.7624	Datum:	WGS84
Soil Man I Init Name		Canles si	- Ity clay loam		NWI Clas	sification:		
		ite typical for this time	a of year?	Ves	No		in in Remarks)	
	Soil N	r Hydrology N	significantly dist	urbed?	Are "Normal Circumstanc	(II NO, explo	Y	
Are vegetation N	Soil N o	r Hydrology N	naturally probler	matic? If needed	, explain any answers in Re	marks.)	<u> </u>	
		tach sito man s	-	nling point	locations transacts	important foat	uros oto	
lydrophytic Vegetat	ion Present? Yes	X No	snowing san				1103, 610.	
lydric Soil Present?	Yes	No	X	Is Sampled Ar	ea within Magazian Yes	1	No X	
Vetland Hvdrology F	Present? Yes	No	X		_			
emarks:								
EGETATION	- Use scientific r	names of plants	s.					
		absolute	Dominant	Indicator	Dominance Test wor	ksheet:		
		% cover	Species?	Status				
ree Stratum (plo	ot size: 30)			Number of Dominant Spe	cies		
Populus bals	amifera	70	<u> </u>	FAC	That are OBL, FACW, or	FAC:	3(A)
3					Total Number of Dominan	t	F	D)
•			- Total Caver		Species Across All Strata:		5(D)
			= Total Cover					
apling/Shrub Stratu	<u>um</u> (plot size: <u>1</u>	5)			Percent of Dominant Spec	cies		
Cornus alba			<u> </u>		That are OBL, FACW, or	FAC:	60% (А/В)
<u>Crataegus do</u>	bugiasii	20	<u> </u>	FAC	Brovalance Index Wa	rkahaati		
, 1					Total % Cover of	Multiply by:		
5					OBL Species	<u>waapy by</u> . x 1 =	— o	
		50	= Total Cover		FACW species	x 2 =	0	
					FAC Species	x 3 =	0	
<u>erb Stratum</u> (plo	ot size: 5)			FACU Species	x 4 =	0	
Polystichum	munitum	5	<u> </u>	FACU	UPL Species	x 5 =	0	
					Column Totals	0 (A)	0 (В)
·					Prevalence Index =E	3/A = #	DIV/0!	
						on Indicators		
						- Rapid Test for Hydro	nhytic Vocatation	
3					X	- Dominance Test is >	50%	
		5	= Total Cover			- Prevalence Index is s	3.0 ¹	
					4	-Morphological Adapta	ations ¹ (provide su	upporting
oody Vine Stratum	n (plot size:	5)			c	lata in Remarks or on	a separate sheet)	
Rubus ursinu	us	80	<u> </u>	FACU	5	5- Wetland Non-Vascu	lar Plants ¹	
2 Hedera helix		10		FACU	F	Problematic Hydrophyt	c Vegetation ¹ (Ex	plain)
		90	= Total Cover		¹ Indicators of hydric soil and disturbed or problematic	nd wetland hydrology r	nust be present, ι	inless
					Invulopilyuc			
Bare Ground in H	erb Stratum	85			Vegetation	Yes X	No	

	PHS # _	7645		Sampling Point:	8
Profile Description: (Describe to the depth	needed to docume	nt the indicator or confirm t	the absence of indicators.)		
Depth Matrix		Redox Features	Lee ² Testure	Demeric	
	Color (moist)	<u>%</u> Type	Loc Texture	Remarks	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$					
$-\frac{10-16}{$	10YR 3/4				
		<u> </u>			
		<u> </u>			
		<u> </u>			
¹ Type: C=Concentration, D=Depletion, RM=Re	duced Matrix, CS=0	Covered or Coated Sand Grai	ins.	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators: (Applicable to	all LRRs, unless	s otherwise noted.)	Indica	ators for Problematic Hydric So	IIS":
Histosol (A1)		Sandy Redox (S5))	2 cm Muck (A10)	
Histic Epipedon (A2)		Stripped Matrix (S	6)	Red Parent Material (TF	2)
Black Histic (A3)		Loamy Mucky Min	eral (F1) (except MLRA 1)	Very Shallow Dark Surfa	ace (TF12)
Hydrogen Sulfide (A4)		Loamy Gleyed Ma	trix (F2)	Other (explain in Remar	ks)
Depleted Below Dark Surface (A	(11)	Depleted Matrix (F	-3)		
Thick Dark Surface (A12)		Redox Dark Surfac	ce (F6)	³ Indicators of hydrophytic vogotation a	and wotland
Sandy Mucky Mineral (S1)		Depleted Dark Su	rface (F7)	hydrology must be present, unless di	sturbed or
Sandy Gleyed Matrix (S4)		Redox Depression	ns (F8)	problematic.	
Restrictive Layer (if present):					
Туре:					
Depth (inches):			Hydric Soil Pres	sent? Yes No	х
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of one req	uirad, abaal, all th				
Surface Water (A1)	ulled, check all tr	at apply)		Secondary Indicators (2 or more	e required)
	uired, check all tr	at apply) Water stained Lea	ives (B9) (Except MLRA	Secondary Indicators (2 or more Water stained Leaves (I	e required) 39)
High Water Table (A2)		at apply) Water stained Lea 1, 2, 4A, and 4B)	ives (B9) (Except MLRA	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E	e required) 39) 3)
High Water Table (A2) Saturation (A3)	uneo, check an u	hat apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11)	ives (B9) (Except MLRA	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E) Drainage Patterns (B10)	e required) 39) 3)
High Water Table (A2) Saturation (A3) Water Marks (B1)	uneo, check an u	hat apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra	ives (B9) (Except MLRA ites (B13)	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E Drainage Patterns (B10 Dry-Season Water Tabl	e required) 39) 3)) e (C2)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ured, check an t	Mat apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (ives (B9) (Except MLRA ites (B13) Odor (C1)	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae	e required) 39) 3)) e (C2) erial Imagery (C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ured, check ar t	Mat apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph	ives (B9) (Except MLRA ites (B13) Odor (C1) neres along Living Roots (C3)	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D	e required) 39) 3)) e (C2) erial Imagery (C9) 2)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ured, check ar ti	Mat apply) Water stained Lea I, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide G Oxidized Rhizosph Presence of Redu	ttes (B9) (Except MLRA ttes (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4)	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E) Drainage Patterns (B10) Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D) Shallow Aquitard (D3)	e required) 39) 3) e (C2) erial Imagery (C9) 2)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ured, check ar ti	At apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduc	ttes (B9) (Except MLRA ttes (B13) Odor (C1) neres along Living Roots (C3) ced Iron (C4) ction in Plowed Soils (C6)	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) Fac-Neutral Test (D5)	e required) 39) 3)) e (C2) rial Imagery (C9) 2)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	ured, check ar t	At apply) Water stained Lea I, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide 0 Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse	ttes (B9) (Except MLRA ttes (B13) Odor (C1) neres along Living Roots (C3) ced Iron (C4) ction in Plowed Soils (C6) ed Plants (D1) (LRR A)	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6	e required) 39) 3) e (C2) erial Imagery (C9) 2) (LRR A)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima	jery (B7)	Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Redu Recent Iron Reduc Stunted or Stresse Other (Explain in F	ives (B9) (Except MLRA tes (B13) Odor (C1) neres along Living Roots (C3) ced Iron (C4) ction in Plowed Soils (C6) ed Plants (D1) (LRR A) Remarks)	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E) Drainage Patterns (B10) Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) Frost-Heave Hummocks	e required) 39) 3) e (C2) erial Imagery (C9) 2) (LRR A) s (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave So	gery (B7) Irface (B8)	At apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse Other (Explain in F	ives (B9) (Except MLRA ites (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) ction in Plowed Soils (C6) ed Plants (D1) (LRR A) Remarks)	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E) Drainage Patterns (B10) Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) Frost-Heave Hummocks	e required) 39) 3) e (C2) brial Imagery (C9) (LRR A) s (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave Su	gery (B7) Irface (B8)	At apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide 0 Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse Other (Explain in F	ives (B9) (Except MLRA Ites (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) ction in Plowed Soils (C6) ed Plants (D1) (LRR A) Remarks)	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6 Frost-Heave Hummocks	e required) 39) 3) e (C2) rial Imagery (C9) 2) (LRR A) s (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave St Field Observations: Surface Water Present? Yes	gery (B7) Irface (B8)	mat apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Stunted or Stresse Other (Explain in F Depth (inches):	ives (B9) (Except MLRA ites (B13) Odor (C1) neres along Living Roots (C3) ced Iron (C4) ction in Plowed Soils (C6) ed Plants (D1) (LRR A) Remarks)	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) Frost-Heave Hummocks	e required) 39) 3) e (C2) erial Imagery (C9) 2) (LRR A) s (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave So Field Observations: Surface Water Present? Yes Water Table Present? Yes	gery (B7) Irface (B8) No <u>X</u> No <u>X</u>	mat apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Stunted or Stresse Other (Explain in F Depth (inches): Depth (inches):	tes (B9) (Except MLRA tes (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) ction in Plowed Soils (C6) ad Plants (D1) (LRR A) Remarks) >16 Wetland Hyd	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E) Drainage Patterns (B10) Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) Frost-Heave Hummocks	e required) 39) 3) e (C2) arial Imagery (C9) 2) (LRR A) s (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave St Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes	gery (B7) Irface (B8) No <u>X</u> No <u>X</u>	mat apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Stunted or Stresse Other (Explain in F Depth (inches): Depth (inches): Depth (inches):	Aves (B9) (Except MLRA Ites (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) ction in Plowed Soils (C6) ed Plants (D1) (LRR A) Remarks) >16 >16 Wetland Hyd	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E) Drainage Patterns (B10) Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) Frost-Heave Hummocks	e required) 39) 3) e (C2) rial Imagery (C9) 2) (LRR A) s (D7) X
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave St Field Observations: Surface Water Present? Yes Water Table Present? Yes (includes capillary fringe)	gery (B7) Irface (B8) No <u>X</u> No <u>X</u> No <u>X</u>	Mater stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Stunted or Stresse Other (Explain in F Depth (inches): Depth (inches): Depth (inches):	Aves (B9) (Except MLRA tes (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) ction in Plowed Soils (C6) ad Plants (D1) (LRR A) Remarks) >16 >16 Yetland Hyd	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E) Drainage Patterns (B10) Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) Frost-Heave Hummocks	<u>e required)</u> 39) 3) e (C2) erial Imagery (C9) 2) (LRR A) s (D7) X
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave Su Field Observations: Surface Water Present? Yes Water Table Present? Yes Gaturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitication in the stream gauge, monitin the stream gauge, monitication in the stream gauge,	gery (B7) Irface (B8) No X No X No X oring well, aerial ph	mat apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Stunted or Stresse Other (Explain in F Depth (inches): Depth (inches): Depth (inches): State (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Aves (B9) (Except MLRA Ites (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) Ction in Plowed Soils (C6) ad Plants (D1) (LRR A) Remarks) >16 >16 State State S	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E Drainage Patterns (B10 Dry-Season Water Table Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) Frost-Heave Hummocks Yes Yes	<u>e required)</u> 39) 3) e (C2) brial Imagery (C9) (2) (LRR A) s (D7) X
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave St Field Observations: Surface Water Present? Yes Water Table Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monit	gery (B7) Irface (B8) No X No X No X oring well, aerial ph	mat apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduct Stunted or Stresse Other (Explain in F Depth (inches): Depth (inches): Depth (inches): Dotos, previous inspections), if	Aves (B9) (Except MLRA Ites (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) ction in Plowed Soils (C6) ad Plants (D1) (LRR A) Remarks) >16 >16 Yetland Hyd f available:	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E) Drainage Patterns (B10) Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) Frost-Heave Hummocks	<u>e required)</u> 39) 3) e (C2) brial Imagery (C9) (LRR A) s (D7) X
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave So Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, moni	gery (B7) Irface (B8) No X No X No X oring well, aerial ph	mat apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Stunted or Stresse Other (Explain in F Depth (inches):	Aves (B9) (Except MLRA Ites (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) ction in Plowed Soils (C6) ed Plants (D1) (LRR A) Remarks) >16 >16 >16 f available:	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) Frost-Heave Hummocks	<u>e required)</u> 39) 3) e (C2) rial Imagery (C9) 2) (LRR A) s (D7) X
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave Su Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monit Remarks:	gery (B7) Irface (B8) No <u>X</u> No <u>X</u> No <u>X</u> ioring well, aerial ph	mat apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Stunted or Stresset Other (Explain in F Depth (inches): Depth (inches): Depth (inches): Stores, previous inspections), it	Aves (B9) (Except MLRA Ates (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) Ction in Plowed Soils (C6) ad Plants (D1) (LRR A) Remarks) >16 >16 >16 f available:	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E) Drainage Patterns (B10) Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D) Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) Frost-Heave Hummocks	<u>e required)</u> 39) 3) e (C2) brial Imagery (C9) (2) (LRR A) s (D7) X
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Sparsely Vegetated Concave St Field Observations: Surface Water Present? Yes Water Table Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, moni Remarks:	gery (B7) urface (B8) No X No X No X ioring well, aerial ph	mat apply) Water stained Lea 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Invertebra Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Stunted or Stresse Other (Explain in F Depth (inches): Depth (inches): Depth (inches): Store, previous inspections), if	Aves (B9) (Except MLRA Ites (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) ction in Plowed Soils (C6) ad Plants (D1) (LRR A) Remarks) >16 >16 Yetland Hyd f available:	Secondary Indicators (2 or more Water stained Leaves (I (MLRA1, 2, 4A, and 4E) Drainage Patterns (B10) Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) Frost-Heave Hummocks	<u>e required)</u> 39) 3) e (C2) brial Imagery (C9) (2) (LRR A) s (D7) X

	WETLAND DETE	RMINATIO	N DATA FOR	RM - Weste	rn Mountains, Val	levs, and Coas	PHS # _	7645
Project/Site:	N Pekin Road		City/County:	Woo	dland/Cowlitz	Sampling Date:	12/6/	2022
Applicant/Owner:	Trammell Crow Co	mpany			State:	WA	Sampling Point:	9
Investigator(s):	CT/TF		Section, To	wnship, Range:		Sect. 13, T 5N, F	- 1W	
Landform (hillslope,	terrace, etc.:)	Swale/Depre	– ssion	Local relief (cor	ncave, convex, none):	concave	Slope (%):	3%
Subregion (LRR):	LRR	A .	Lat:	45.912	22 Long:	-122.7615	Datum:	WGS84
Soil Map Unit Name		Clato	silt loam		NWI Cla	ssification:	PFOA	
Are climatic/hydrolo	gic conditions on the site t	ypical for this tim	e of year?	Yes	X No	(if no, expl	ain in Remarks)	
Are vegetation	Soil N or H	ydrology N	significantly dist	urbed?	Are "Normal Circumstand	ces" present? (Y/N)	Y	
Are vegetation	Soil N or H	ydrology N	naturally probler	matic? If needed	, explain any answers in Re	marks.)		
SUMMARY OF	FINDINGS – Attac	ch site map	showing sam	pling point	locations, transects	, important feat	ures, etc.	
Hydrophytic Vegeta	tion Present? Yes	X No		ls Sampled Ar	oo within			
Hydric Soil Present	? Yes	X No		a Wetlar	nd? Yes_	x	No	
Wetland Hydrology	Present? Yes	X No						
Remarks:								
VEGETATION	- Use scientific na	mes of plant	S.	les d'a stan	Dentinen Test	J b 4.		
		absolute % cover	Dominant Species?	Status	Dominance Test wor	KSNeet:		
Tree Stratum (plo	ot size:)	<u> </u>		Number of Dominant Spe	cies		
1					That are OBL, FACW, or	FAC:	1 (A)
2								
3					Total Number of Dominar	nt		
4					Species Across All Strata	:	1(B)
		0	= Total Cover					
Sapling/Shrub Strat	um (plot size: 15	_)			Percent of Dominant Spe	cies		
1 Cornus alba		75	<u> </u>	FACW	That are OBL, FACW, or	FAC:	<u>100%</u> (A/B)
2					Prevalence Index W	orkshoot.		
4					Total % Cover of	Multiply by	:	
5					OBL Species	x 1 =	0	
		75	= Total Cover		FACW species	x 2 =	0	
					FAC Species	x 3 =	0	
Herb Stratum (plo)			FACU Species	x 4 =	0	
2					OPL Species -	x 5 =		B)
3					Column rotais	(A)	(5)
4					Prevalence Index =	3/A = #	DIV/0!	
5								
6					Hydrophytic Vegetat	ion Indicators:		
7					· · · · · · · · · · · · · · · · · · ·	1- Rapid Test for Hydr	ophytic Vegetation	
8					<u> </u>	2- Dominance Test is :	>50%	
		0	= Total Cover			3-Prevalence Index is 4-Morphological Adapt	≤ 3.0' ations ¹ (provide si	Innorting
Woody Vine Stratur	m (plot size:)				data in Remarks or on	a separate sheet)	pporung
1						5- Wetland Non-Vascu	llar Plants ¹	
2						Problematic Hydrophy	tic Vegetation ¹ (Ex	plain)
		0	= Total Cover		¹ Indicators of hydric soil a disturbed or problematic.	nd wetland hydrology	must be present, ι	Inless
					Hydrophytic			
% Bare Ground in F	lerb Stratum	100			Vegetation	Yes X	No	
Remarks:					וופסטוני			

SOIL			PHS #	764	5	_		Sampling Point: 9
Profile Descri	iption: (Describe to Matrix	the depth	needed to docume	ent the indica Redox	ator or co Features	nfirm the absen	ce of indicators.)	
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	7.5YR 2.5/2	100	i				Silt Loam	
2-4	7.5YR 3/2	98	7.5YR 4/4	2	с	M	Silt Loam	Fine
4-18	7.5YR 4/2	90	7.5YR 4/6	10	С	M	Silt Loam	Medium
¹ Type: C=Con	centration, D=Depleti	on, RM=R	educed Matrix, CS=	Covered or C	Coated Sa	nd Grains.		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appl	icable to	all LRRs, unles	s otherwis	e noted	.)	Indic	ators for Problematic Hydric Soils ³ :
	Histosol (A1)			S	andy Red	ox (S5)		2 cm Muck (A10)
	Histic Epipedon (A2)			S	tripped Ma	atrix (S6)		Red Parent Material (TF2)
	Black Histic (A3)			L	oamv Muo	kv Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
	Hydrogen Sulfide (A4	1)			, namy Glev	ved Matrix (F2)	,	Other (explain in Remarks)
	Depleted Below Dark	· / : Surface ()	A11)		enleted M	atrix (E3)		
	Thick Dark Surface (A 12)		v	odov Dor	(FG)		
		A 12)						³ Indicators of hydrophytic vegetation and wetland
		(84)		D				hydrology must be present, unless disturbed or
	Sandy Gleyed Matrix	(54)		R	edox Dep	ressions (F8)	1	problematic.
Restrictive	Layer (if present)	:						
Type:								
Depth (inches	s):						Hydric Soil Pre	sent? Yes X No
Remarks:								
HYDROLO	IGY							
wetland Hy	drology indicator	'S:						
Primary Indi	cators (minimum c	of one req	uired; check all t	hat apply)				Secondary Indicators (2 or more required)
	Surface Water (A1)			N	/ater stain	ed Leaves (B9) (Except MLRA	Water stained Leaves (B9)
	High Water Table (A	2)		1,	2, 4A, ar	id 4B)		(MLRA1, 2, 4A, and 4B)
	Saturation (A3)			S	alt Crust (B11)		Drainage Patterns (B10)
X	Water Marks (B1)			A	quatic Inv	ertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B	32)		н	ydrogen S	Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9
	Drift Deposits (B3)			0	xidized R	hizospheres alon	g Living Roots (C3)	X Geomorphic Position (D2)
	Algal Mat or Crust (B	4)		P	resence o	f Reduced Iron (0	24)	Shallow Aquitard (D3)
	Iron Deposits (B5)			R	ecent Iror	Reduction in Plo	owed Soils (C6)	X Fac-Neutral Test (D5)
	Surface Soil Cracks ((B6)		S	tunted or	Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
	Inundation Visible on	Aerial Ima	agery (B7)	0	ther (Expl	ain in Remarks)		Frost-Heave Hummocks (D7)
<u> </u>	Sparsely Vegetated (Concave S	urface (B8)					
Field Obser	vations:							
Surface Water	Present? Yes		No <u>X</u>	Depth (ii	nches):	N/A		
Water Table P	resent? Yes		No X	Depth (ii	nches):	>18	Wetland Hyd	drology Present?
Saturation Pre (includes capilla	sent? Yes ry fringe)		No <u>X</u>	Depth (ii	nches):	>18		Yes X No
Describe Reco	orded Data (stream ga	auge, mon	itoring well, aerial pl	notos, previou	us inspect	ions), if available	:	
Remarks:								

	WETLAND DETI		I DATA FOR	RM - Weste	rn Mountains. Vall	evs. and Coas	PHS # t Region	7645
Project/Site:	N Pekin Roa	d	City/County:	Woo	dland/Cowlitz	Sampling Date:	12/6	/2022
pplicant/Owner:	Trammell Crow 0	Company			State:	WA	Sampling Point:	10
vestigator(s):	TF/CT		Section. To	wnship. Range:		 Sect. 13. T 5N. R	1W	
andform (hillslope	terrace etc.)	Slope	-	Local relief (cor	cave convex none).	none	Slope (%):	5%
ubregion (LRR):		2 A	Lat [.]	45 912		-122 7615	— Datum:	WGS84
ablegion (Errit).		Clata	- Lui					
on Map Onit Name	3					(if a sum la		
e climatic/nydrolo		e typical for this time	e or year?	Yes		(If no, expla	ain in Remarks)	
e vegetation			-	urbed ?	Are Normal Circumstance	ces present? (Y/N)		
e vegetation	Soil or	Hydrology	_ naturally probler	natic? If needed	, explain any answers in Re	marks.)		
UMMARY OF	FINDINGS – Atta	ach site map s	showing sam	pling point	locations, transects	, important featu	ures, etc.	
drophytic Vegeta	tion Present? Yes	No	X					
dric Soil Present?	7 Yes	No		Is Sampled Ar	ea within Yes		No X	
etland Hydrology	Present? Yes	No	X	a vvetiai	iur			
		10	<u> </u>					
marks:								
EGETATION	- Use scientific na	ames of plants	s.					
		absolute	Dominant	Indicator	Dominance Test wor	ksheet:		
		% cover	Species?	Status				
ee Stratum (plo	ot size: 30	_)			Number of Dominant Spe	cies		
Populus bals	samifera	65	<u> </u>	FAC	That are OBL, FACW, or	FAC:	3	(A)
					Total Number of Dominar	t		
					Species Across All Strata	: 	6	(B)
		65	= Total Cover					
pling/Shrub Strat	um (plot size: 15)			Percent of Dominant Spe	cies		
Crataegus de	ouglasii	25	<u> </u>	FAC	That are OBL, FACW, or	FAC:	50%	(A/B)
Symphorical	rpos albus	20	<u> </u>	FACU				
Cornus alba		15	<u> </u>	FACW	Prevalence Index Wo	orksheet:		
					Total % Cover of	Multiply by:		
					OBL Species	x 1 =	0	
		60	= Total Cover		FACW species	x 2 =	0	
erb Stratum (pl	ot size: 5)			FACU Species	x 4 =		
Hedera helix		_′ 	x	FACU	UPL Species	x 5 =	0	
Pteridium ad	nuilinum	20	<u> </u>	FACU	Column Totals	0 (A)	0	(B)
						(*)		(-)
					Prevalence Index =	3/A = #	DIV/0!	
					Hydrophytic Vegetat	ion Indicators:		
						1- Rapid Test for Hydro	phytic Vegetation	n
i					2	2- Dominance Test is >	•50%	
		100	= Total Cover			3-Prevalence Index is s	≤ 3.0 ¹	
	<i></i>	<u>`</u>			4	1-Morphological Adapt	ations' (provide s	upporting
oody Vine Stratun	<u>n</u> (plot size:)			0	data in Remarks or on	a separate sheet)
						5- Wetland Non-Vascu	lar Plants '	
					F	Problematic Hydrophyt	ic Vegetation ¹ (E	xplain)
		0	= Total Cover		'Indicators of hydric soil a disturbed or problematic	nd wetland hydrology r	nust be present,	unless
					Hydrophytic			
Bare Ground in H	lerb Stratum	0			Vegetation	Yes	No	Х

SOIL			PHS #	7	645	_		Sampling Point:	10
Profile Descri Depth	ption: (Describe to Matrix	the depth	needed to docu	iment the inc	licator or co ox Features	onfirm the absen	ce of indicators.)		
(Inches)	Color (moist)	%	Color (moist) %	Type ¹	Loc ²	Texture	Remark	S
0-10	10YR 2/2	100					Silty Clay Loam		
10-16	10YR 3/2	90	10YR 3/4	10	С	м	Silt Loam	Medium	
17 0.0								2	
Type: C=Cond	centration, D=Deplet	ion, RM=Re	all LPRs up		or Coated Sa	and Grains.	Indica	² Location: PL=Pore Lining, N	l=Matrix.
Hyune Son			all LKK5, ull		Sandy Pod	h y lov (85)	muice	2 cm Muck (A1)	
	Histic Eninedon (A2)				- Stripped M	lotrix (S6)		2 Chi Muck (Ah	J) terial (TE2)
	Black Histic (A3)				_ Loamy Mu	cky Mineral (E1) (Avcent MI RA 1)		ark Surface (TE12)
	Hydrogen Sulfide (A	4)			– Loamy Gle	oved Matrix (F2)	ACCEPT MERA T	Other (explain i	n Remarks)
	Depleted Below Darl	· <i>)</i> k Surface (<i>)</i>	A11)		- Depleted N	/Journautix (F2)			in tomanoy
	Thick Dark Surface ((A12)	,		- Redox Dar	k Surface (F6)			
	Sandv Muckv Minera	al (S1)			- Depleted D	Dark Surface (F7)		³ Indicators of hydrophytic veg	etation and wetland
	Sandy Gleyed Matrix	(S4)			– ' Redox Dep	pressions (F8)		hydrology must be present, i problemation	Inless disturbed or C.
Restrictive	Layer (if present)):			-				
Type [.]									
Depth (inches	s):				_		Hvdric Soil Pres	ent? Yes	No X
Pomarka:	, <u> </u>						.,		
HYDROLO	GY								
Wetland Hy	drology Indicato	rs:							
Primary Indi	cators (minimum o	of one req	uired; check a	all that apply	/)			Secondary Indicators (2	or more required)
	Surface Water (A1)				Water stair	ned Leaves (B9) (I nd 4B)	Except MLRA	Water stained L	eaves (B9)
	High Water Table (A	.2)			014 Omi-tu	(044)		(meixer, 2, 4/	(, and 40)
	Saturation (AS)				- Aquatic Inv	(DII) (ertebrates (B13)		Drainage Palle	$\frac{115}{100} (D10)$
	Sediment Deposits (B2)			- Hvdrogen S	Sulfide Odor (C1)		Saturation Visit	ble on Aerial Imagery (C9)
	Drift Deposits (B3)	,			Oxidized R	hizospheres along	g Living Roots (C3)	X Geomorphic Po	sition (D2)
	Algal Mat or Crust (E	34)			Presence of	of Reduced Iron (C	24)	Shallow Aquitar	⁻ d (D3)
	Iron Deposits (B5)				Recent Iron	n Reduction in Plo	wed Soils (C6)	Fac-Neutral Te	st (D5)
	Surface Soil Cracks	(B6)			_Stunted or	Stressed Plants (I	D1) (LRR A)	Raised Ant Mou	unds (D6) (LRR A)
	Inundation Visible or	n Aerial Ima	igery (B7)		_Other (Exp	lain in Remarks)		Frost-Heave Hu	ımmocks (D7)
	Sparsely Vegetated	Concave S	urface (B8)						
Field Obser	vations:								
Surface Water	Present? Yes		No <u>X</u>	Dept	h (inches):				
Water Table P	resent? Yes		No X	Depti	h (inches):	>16	Wetland Hydr	rology Present?	
(includes capillar	sent? Yes y fringe)			Depti	n (Inches):	>16		res	
Describe Reco	rded Data (stream g	auge, moni	toring well, aeria	al photos, pre	vious inspec	tions), if available:			
Remarks:									

v		RMINATION		RM - Weste	rn Mountains, Val	levs and Coa	PHS # st Region	7645
Project/Site:	N Pekin Road		City/County:	Woo	dland/Cowlitz	Sampling Date	: 12/6/	2022
Applicant/Owner:	Trammell Crow Co	ompany			State:	WA	Sampling Point:	11
Investigator(s):	TF/CT		Section, To	wnship, Range:		Sect. 14, T 5N,	R 1W	
Landform (hillslope,	terrace, etc.:)	Slope	_	Local relief (co	ncave, convex, none):	concave	Slope (%):	3%
Subregion (LRR):	LRR	A	Lat:	45.91	21 Long:	-122.7626	Datum:	WGS84
Soil Map Unit Name:	:	Clato	- silt loam		NWI Cla	ssification:	PFOA	
Are climatic/hydrolog	gic conditions on the site t	ypical for this time	e of year?	Yes	X No	(if no, ex	plain in Remarks)	
Are vegetation N	Soil N or H	ydrology N	significantly dist	urbed?	Are "Normal Circumstand	ces" present? (Y/N)	Y	
Are vegetation N	Soil N or H	ydrology N	naturally probler	matic? If needed	l, explain any answers in Re	emarks.)		
SUMMARY OF	FINDINGS - Attac	ch site map s	showing sam	pling point	locations, transects	, important fea	itures, etc.	
Hydrophytic Vegetati	ion Present? Yes	X No		lo Sompled A	roo within			
Hydric Soil Present?	Yes	X No		a Wetla	nd? Yes	x	No	
Wetland Hydrology F	Present? Yes	X No						
Remarks:								
VEGETATION -	 Use scientific nar 	mes of plants	S.					
		absolute % cover	Dominant Species?	Indicator Status	Dominance Test wor	Ksheet:		
Tree Stratum (plo	t size: 30)	<u> </u>		Number of Dominant Spe	cies		
1 Salix lasiand	ra	25	X	FACW	That are OBL, FACW, or	FAC:	2	(A)
2								
3					Total Number of Dominar	nt		
4					Species Across All Strata	:	2	(B)
		25	= Total Cover					
Sapling/Shrub Stratu	<u>ım</u> (plot size: 15	_)			Percent of Dominant Spe	cies		
1 Cornus alba		60	<u> </u>	FACW	That are OBL, FACW, or	FAC:	100%	(A/B)
2 Rubus armen	nacus	10			Prevalence Index Wo	orksheet:		
4					Total % Cover of	Multiply I	ov:	
5					OBL Species	x 1 =	= 0	
		70	= Total Cover		FACW species	x 2 =	= 0	
<i>.</i>					FAC Species	x 3 =	= 0	
Herb Stratum (plo)			FACU Species	x 4 =	=	
2					UPL Species	X5=	= <u> </u>	D)
3					- Column Totals	(<)		0)
4					Prevalence Index =	B/A =	#DIV/0!	
5								
6					Hydrophytic Vegetat	ion Indicators:		
7					· · · · · · · · · · · · · · · · · · ·	1- Rapid Test for Hy	drophytic Vegetation	
8					<u> </u>	2- Dominance Test i	s >50%	
		0	= Total Cover			3-Prevalence Index i 4-Morphological Ada	s ≤ 3.0' intations ¹ (provide si	innorting
Woody Vine Stratum	(plot size:)				data in Remarks or c	on a separate sheet)	apporting
1						5- Wetland Non-Vas	cular Plants ¹	
2						Problematic Hydroph	nytic Vegetation ¹ (Ex	plain)
		0	= Total Cover		¹ Indicators of hydric soil a	nd wetland hydrolog	y must be present, ι	inless
					aisturbed or problematic.			
1								
% Bare Ground in He	erb Stratum	100			Vegetation	Yes X	No	

SOIL			PHS #	764	5	-		Sampling Point: 11
Profile Descri	iption: (Describe to Matrix	the depth	needed to docume	nt the indica	ator or co	nfirm the absen	ce of indicators.)	
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	10YR 2/1	100		·			Silt Loam	
7-12	10YR 4/1	90	10YR 3/6	10	c	M	Silty Clay Loam	Medium
12-16	10VR 4/1	75	10YR 3/6	25	<u>с</u>	M	Silty Clay Loam	Medium-Coarse
			10110 3/0		•			Medium-oourse
				<u> </u>				
				·				
				<u> </u>				
				·				
				·				
¹ Type: C=Con	centration, D=Deplet	ion, RM=R	educed Matrix, CS=0	Covered or C	Coated Sa	nd Grains.		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (App	licable to	all LRRs, unless	s otherwis	e noted	.)	Indica	ators for Problematic Hydric Soils ³ :
	Histosol (A1)			s	andy Red	ox (S5)		2 cm Muck (A10)
	Histic Epipedon (A2))		s	tripped Ma	atrix (S6)		Red Parent Material (TF2)
	Black Histic (A3)			L	oamy Muc	ky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
	Hydrogen Sulfide (A	4)		L	oamy Gley	ed Matrix (F2)		Other (explain in Remarks)
	Depleted Below Dar	k Surface (/	A11)	XD	epleted M	atrix (F3)		
	Thick Dark Surface	(A12)		R	ledox Darl	(Surface (F6)		
	Sandy Mucky Minera	al (S1)		D	epleted D	ark Surface (F7)		³ Indicators of hydrophytic vegetation and wetland
	Sandy Gleved Matrix	(S4)		R	ledox Dep	ressions (F8)		nydrology must be present, unless disturbed or problematic.
Postrictivo	l aver (if present)	· ·				. ,	1	
-	Layer (ii present,).						
Type:								
Depth (inches	s):						Hydric Soil Pres	ent? Yes <u>X</u> No
Remarks:								
	A)/							
HYDROLO								
wetland Hy	drology indicato	rs:						
Primary Indi	cators (minimum o	of one req	uired; check all th	nat apply)				Secondary Indicators (2 or more required)
	Surface Water (A1)			V	Vater stain	ed Leaves (B9) (Except MLRA	Water stained Leaves (B9)
	High Water Table (A	2)		1	, 2, 4A, ar	nd 4B)		(MLRA1, 2, 4A, and 4B)
	Saturation (A3)			s	alt Crust (B11)		Drainage Patterns (B10)
	Water Marks (B1)			A	quatic Inv	ertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		н	lydrogen S	Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)			C	xidized R	hizospheres alon	g Living Roots (C3)	X Geomorphic Position (D2)
	Algal Mat or Crust (E	34)		P	resence o	f Reduced Iron (0	C4)	Shallow Aquitard (D3)
	Iron Deposits (B5)			R	ecent Iron	Reduction in Plo	owed Soils (C6)	X Fac-Neutral Test (D5)
	Surface Soil Cracks	(B6)		s	tunted or	Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
	Inundation Visible or	n Aerial Ima	igery (B7)	c	ther (Expl	ain in Remarks)		Frost-Heave Hummocks (D7)
X	Sparsely Vegetated	Concave S	urface (B8)					
Field Obser	vations:							
Surface Water	Present? Yes		No X	Depth (i	nches):			
Water Table P	Present? Yes		No X	Denth (i	nches).	>16	Wetland Hvd	rology Present?
Saturation Pre	sent? Ves			Depth (i	nches):	>16		
(includes capilla	ry fringe)			Deptil (i	nones).			
Describe Reco	orded Data (stream o	auge. mon	itoring well. aerial ph	iotos. previo	us inspect	ions), if available	<u>.</u>	
			aona pr	,		,,		
Remarks [.]								
n cilian 3.								

Ň		TERMINATION		RM - Weste	rn Mountains, Vall	levs and Coast	PHS#_	7645
Project/Site:	N Pekin R	oad	City/County:	Woo	dland/Cowlitz	Sampling Date:	12/6/	2022
Applicant/Owner:	Trammell Crov	v Company	- , - ,		State:	WA s	Sampling Point:	12
nvestigator(s):	CT/	TF	Section. To	wnship, Range:		Sect. 14. T 5N. R	1W _	
andform (hillslope	terrace etc.)	Slope	-	Local relief (cor	cave convex none).	none	Slope (%):	5%
Subregion (I RR):	L	RR A	Lat.	45.912		-122.7626	– Datum:	WGS84
Soil Man Linit Nama		Clato	- silt loam		NWI Clar		- none	110004
			sint iodili	Vaa			n in Romarka)	
			oignificantly dist	res		(II NO, explai		
re vegetation N	Soil N	or Hydrology N	naturally probler	natic? If needed	, explain any answers in Re	marks.)	<u> </u>	
		ttach site man s	-	nling noint	locations transacts	important foatu	ras ata	
	rindings – A		nowing san		iocations, transects	, important leatu	ies, elc.	
ludio Coll Dresser	ion Present? Tes			Is Sampled Ar	ea within		- V	
iyaric Soli Present?		s No	<u> </u>	a Wetlar	nd? res_	N	0	
Vetland Hydrology F	Present? Yes	s No	<u> </u>					
≀emarks:								
	- lleo sciontific	names of plants						
LOLIATION	- Ose scientific	absolute	Dominant	Indicator	Dominance Test wor	ksheet [.]		
		% cover	Species?	Status		Noneet.		
ree Stratum (plo	ot size: 30)			Number of Dominant Spe	cies		
1 Populus bals	samifera	30	<u> </u>	FAC	That are OBL, FACW, or	FAC:	4 (A)
Quercus gar	ryana	20	<u> </u>	FACU				
Salix lasiand	lra	10		FACW	Total Number of Dominan	t		
4					Species Across All Strata	: 	5 (B)
		60	= Total Cover					
apling/Shrub Stratu	um (plot size:	15)			Percent of Dominant Spec	cies		
Cornus alba		25	<u> </u>	FACW	That are OBL, FACW, or	FAC: 8	:0% (A/B)
<u>Rubus armer</u>	niacus	10	<u> </u>	FAC				
3					Prevalence Index Wo	orksheet:		
+					Total % Cover of	Multiply by:		
,			- Total Cover		EACW species	X 1 -		
					FAC Species	x 2 =	0	
<u>erb Stratum</u> (plo	ot size: 5)			FACU Species	x 4 =	0	
Urtica dioica		50	<u> </u>	FAC	UPL Species	x 5 =	0	
2					Column Totals	0 (A)	0 (В)
3								
l					Prevalence Index =E	3/A = #	0IV/0!	
。					Hydrophytic Vegetati	ion Indicators:		
7						1- Rapid Test for Hydro	phytic Vegetation	
3					X	2- Dominance Test is >	50%	
		50	= Total Cover		3	3-Prevalence Index is ≤	3.0 ¹	
	(-1-4:	E \			4	1-Morphological Adapta	tions ¹ (provide su	ipporting
oody Vine Stratum	<u>1</u> (piot size:	<u>ت</u>)		F 4011		data in Remarks or on a	separate sheet)	
Rubus ursinu	us	2		FACU		o- wetland Non-Vascula	ar Plants'	
<u>ــــــــــــــــــــــــــــــــــــ</u>			- Total Carra			-roblematic Hydrophytic	vegetation' (Ex	piain) ploss
			- Total Cover		disturbed or problematic.	na weliana nyarology m	usi pe present, u	111855
					Hydrophytic			
					Vegetation	Yes X	No	
Bare Ground in H	lerb Stratum	50			Present?			

SOIL			PH	S #	7645				Sampling Poir	nt:	12
Profile Descri	iption: (Describe to	the depth r	needed to	document t	he indicator of	or confir	m the absen	ce of indicators.)			
Depth	Matrix				Redox Featu	ures					
(Inches)	Color (moist)	%	Color (n	noist)	% Ту	pe'	Loc ²	Texture	Ren	narks	
0-3	7.5YR 3/2	100						Silt Loam			
3-20	7.5YR 4/2	100						Silt Loam			
									. <u> </u>		
									- <u></u>		
									- <u></u>		
¹ Type: C=Con	centration, D=Deple	tion, RM=Re	educed Mat	rix, CS=Cov	ered or Coate	d Sand (Grains.		² Location: PL=Pore Lining	, M=Matrix.	
Hydric Soil	Indicators: (App	licable to	all LRRs	, unless of	therwise no	oted.)		India	cators for Problematic	Hydric Soils	³ :
	Histosol (A1)				Sandy	Redox (S5)		2 cm Muck	(A10)	
	Histic Epipedon (A2)			Strippe	ed Matrix	(S6)		Red Parent	Material (TF2))
	Black Histic (A3)				Loamy	/ Mucky I	Mineral (F1) (except MLRA 1)	Very Shallow	w Dark Surface	e (TF12)
	Hydrogen Sulfide (A	4)			Loamy	/ Gleyed	Matrix (F2)		Other (expla	in in Remarks	;)
	Depleted Below Dar	k Surface (A	A11)		Deplet	ed Matrix	x (F3)				
	Thick Dark Surface	(A12)			Redox	Dark Su	urface (F6)				
	Sandy Mucky Minera	al (S1)			Deplet	ed Dark	Surface (F7)		³ Indicators of hydrophytic	vegetation and	d wetland urbed or
	Sandy Gleyed Matrix	x (S4)			Redox	Depress	sions (F8)		problem	natic.	
Restrictive	Layer (if present):									
Type:											
Depth (inches	s):							Hydric Soil Pre	sent? Yes	No	х
Remarks:	·							,			
rtomanto.											
HYDROLO	GY										
Wetland Hy	drology Indicato	ors:									
Primary Indi	cators (minimum	of one requ	uired; che	ck all that	apply)				Secondary Indicators	(2 or more r	equired)
	Surface Water (A1)				Water	stained	Leaves (B9) (Except MLRA	Water staine	ed Leaves (B9)
	High Water Table (A	\ 2)			1, 2, 4	A, and 4	В)		(MLRA1, 2	4A, and 4B)	
	Saturation (A3)				Salt C	rust (B11	1)		Drainage Pa	atterns (B10)	
	Water Marks (B1)				Aquati	c Inverte	brates (B13)		Dry-Season	Water Table ((C2)
	Sediment Deposits	(B2)			Hydrog	gen Sulfi	de Odor (C1)		Saturation V	isible on Aeria	al Imagery (C9)
	Drift Deposits (B3)				Oxidiz	ed Rhizo	spheres along	g Living Roots (C3)	Geomorphic	Position (D2)	
	Algal Mat or Crust (I	34)			Preser	nce of Re	educed Iron (C	24)	Shallow Aqu	uitard (D3)	
	Iron Deposits (B5)				Recen	t Iron Re	duction in Plo	wed Soils (C6)	Fac-Neutral	Test (D5)	
	Surface Soil Cracks	(B6)			Stunte	d or Stre	essed Plants (D1) (LRR A)	Raised Ant	Mounds (D6) (
	Inundation Visible of	n Aeriai Imaç	gery (B7)		Other	(Explain	in Remarks)		Frost-Heave	e Hummocks (D7)
	Sparsely vegetated	Concave SL	Inace (B8)								
Field Obser	vations:										
Surface Water	Present? Yes		No	<u>x</u>	Depth (inches	s):					
Water Table P	Present? Yes		No	<u>x</u>	Depth (inches	s):	>20	Wetland Hyd	drology Present?		
Saturation Pre (includes capilla	esent? Yes ry fringe)		No	<u>x</u>	Depth (inches	s):	>20		Yes	No	<u>x</u>
Describe Reco	orded Data (stream g	gauge, monit	toring well,	aerial photos	s, previous ins	spections	s), if available	:			
Remarks:											

N		RMINATION		RM - Weste	rn Mountains, Val	levs and Coa	PHS #	7645
Project/Site:		1	City/County:	Woo	dland/Cowlitz	Sampling Date	· 12/6	2022
Applicant/Owner:	Trammell Crow C	ompany	ony, oounty.		State:	WA	Sampling Point:	13
Investigator(s):	TF/CT	•	Section To	wnship Range		Sect. 13. T 5N.	R 1W	
Landform (billslope	terrace etc.)	Flat		l ocal relief (cor		none	Slope (%):	1%
Subregion (LRR):		A	Lat:	45.911	10 Long [.]	-122.7601	Datum:	WGS84
Soil Man Unit Name		Clato	 silt loam		NWI Cla	ssification:		
Are climatic/hydrolog	aic conditions on the site	typical for this tim	e of year?	Yes	X No.	(if no, ex	rolain in Remarks)	
Are vegetation N	Soil N or F	lydrology N	significantly dist	urbed?	Are "Normal Circumstan	ces" present? (Y/N)	Y	
Are vegetation N	Soil N or H	lydrology N	naturally proble	matic? If needed	, explain any answers in Re	emarks.)		
SUMMARY OF	FINDINGS – Atta	ch site map	showing san	pling point	locations, transects	, important fea	atures, etc.	
Hydrophytic Vegetat	ion Present? Yes	X No	•	1	· · · · · ·	•		
Hydric Soil Present?	Yes	No	x	Is Sampled Ar	rea within Yes		No X	
Wetland Hydrology F	Present? Yes	No	X					
Remarks:								
/EGETATION	 Use scientific na 	mes of plant	S.					
		absolute % cover	Dominant Species?	Indicator Status	Dominance Test wor	rksheet:		
<u>Free Stratum</u> (plo	ot size:)	<u> </u>		Number of Dominant Spe	ecies		
1					That are OBL, FACW, or	FAC:	1	(A)
2								
3		. <u> </u>			Total Number of Dominar	nt		
4					Species Across All Strata		1	(B)
		0	= Total Cover					
Sapling/Shrub Stratu	um (plot size:	_)			Percent of Dominant Spe	cies		
1					That are OBL, FACW, or	FAC:	100%	(A/B)
2		·			Drevelan as Index W			
3		·			Total % Cover of	Multiply	b <i>y</i> :	
+ 5					OBL Species	x 1	= 0	
		0	= Total Cover		FACW species	x 2 :	= 0	
					FAC Species	x 3 :	= 0	
lerb Stratum (plo	ot size: 5)			FACU Species	x 4 :	= <u> </u>	
1 <u>Schedonorus</u>	s arundinaceus	90	<u> </u>	FAC	UPL Species	x 5 :	= <u>0</u>	-
2		·			Column Totals	(A)	0	В)
۵		·			Prevalence Index =	B/A =	#DIV/01	
5								
6					Hydrophytic Vegetat	ion Indicators:		
7						1- Rapid Test for Hy	drophytic Vegetatior	1
8					<u> </u>	2- Dominance Test i	s >50%	
		90	= Total Cover			3-Prevalence Index	is ≤ 3.0 ¹	
	, (plot size:)			· · · · · · · · · · · · · · · · · · ·	4-Morphological Ada	aptations' (provide s	upporting
1	<u> (piot size:</u>)				5- Wetland Non-Vas	scular Plants ¹	
•		·				Problematic Hvdrop	hytic Vegetation ¹ (E)	(plain)
2		0	= Total Cover		¹ Indicators of hydric soil a	ind wetland hydrolog	y must be present, i	, inless
2					disturbed or problematic	, ,	. ,	
2								
2	erh Stratum	10			Hydrophytic Vegetation	Yee V	No	

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SOIL		PHS #	764	45	_		Sampling Point:	13	
Profile Descri Depth	ption: (Describe to Matrix	the depth	needed to docume	nt the indic Redox	ator or co Features	nfirm the absen	ce of indicators.)		
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-16	10YR 3/2	100					Silt Loam		
16-18	10YR 5/2	95	7.5YR 5/6	5	С	М	Silt Loam	Fine	
						. <u> </u>			
¹ Type: C=Con	centration, D=Deplet	ion, RM=R	educed Matrix, CS=0	Covered or	Coated Sa	nd Grains.		² Location: PL=Pore Lining, M=	Matrix.
Hydric Soil	Indicators: (App	icable to	all LRRs, unless	s otherwis	se noted.	.)	Indic	ators for Problematic Hydr	ic Soils ³ :
	Histosol (A1)				Sandy Rede	ox (S5)		2 cm Muck (A10)	
	Histic Epipedon (A2)				Stripped Ma	atrix (S6)		Red Parent Mater	ial (TF2)
	Black Histic (A3)			^L	oamy Muc	ky Mineral (F1) (except MLRA 1)	Very Shallow Dar	k Surface (TF12)
	Hydrogen Sulfide (A	4)		l	oamy Gley	ed Matrix (F2)		Other (explain in	Remarks)
	Depleted Below Darl	s Surface (A	A11)		Depleted M	atrix (F3)			
	Thick Dark Surface (A12)		F	Redox Dark	(Surface (F6)			
	Sandy Mucky Minera	ıl (S1)			Depleted D	ark Surface (F7)		³ Indicators of hydrophytic veget	ation and wetland
	Sandy Gleyed Matrix	: (S4)		F	Redox Dep	ressions (F8)		problematic.	
Restrictive	Layer (if present)	:							
Туре:					-				
Depth (inches	s):				-		Hydric Soil Pres	sent? Yes	No X
HYDROLO	GY								
Wetland Hy	drology Indicato	rs:							
Primary Indi	cators (minimum o	of one req	uired; check all th	nat apply)				Secondary Indicators (2 or	more required)
	Surface Water (A1)			1	Water stain	ed Leaves (B9) (Except MLRA	Water stained Le	aves (B9)
	High Water Table (A	2)		1	l, 2, 4A, an	id 4B)		(MLRA1, 2, 4A, a	and 4B)
	Saturation (A3)				Salt Crust (B11)		Drainage Patterns	s (B10)
	Water Marks (B1)				Aquatic Inv	ertebrates (B13)		Dry-Season Wate	er Table (C2)
	Sediment Deposits (B2)		H	Hydrogen S	Sulfide Odor (C1)		Saturation Visible	on Aerial Imagery (C9
	Drift Deposits (B3)				Dxidized RI	hizospheres alon	g Living Roots (C3)	Geomorphic Posi	tion (D2)
	Algal Mat or Crust (E	34)		F	Presence o	f Reduced Iron (C	C4)	Shallow Aquitard	(D3)
	Iron Deposits (B5)			F	Recent Iron	Reduction in Plo	owed Soils (C6)	Fac-Neutral Test	(D5)
	Surface Soil Cracks	(B6)			Stunted or S	Stressed Plants (D1) (LRR A)	Raised Ant Moun	ds (D6) (LRR A)
	Inundation Visible or	Aerial Ima	igery (B7)	0	Other (Expl	ain in Remarks)		Frost-Heave Hum	mocks (D7)
	Sparsely Vegetated	Concave S	urface (B8)						
Field Obser	vations:								
Surface Water	Present? Yes		No <u>X</u>	Depth (inches):				
Water Table P	resent? Yes		No <u>X</u>	Depth (inches):	>18	Wetland Hyd	rology Present?	
Saturation Pre (includes capilla	sent? Yes y fringe)		No X	Depth (inches):	>18		Yes	No X
Describe Reco	rded Data (stream g	auge, mon	toring well, aerial ph	iotos, previo	ous inspect	ions), if available	:		
Remarks:									

		RMINATION		RM - Weste	rn Mountains, Val	levs and Coas	PHS #	7645
Project/Site:	N Pekin Road		City/County:	Woo	dland/Cowlitz	Sampling Date:	12/6	/2022
Applicant/Owner:	Trammell Crow Co	mpany	j, j.		State:	WA	Sampling Point:	14
Investigator(s):	TF/CT		Section. To	wnship, Range:	·	Sect. 24. T 5N. F	. 1W	
Landform (hillslope.	terrace, etc.;)	Slope		Local relief (co	ncave, convex, none):	none	Slope (%):	2%
Subregion (LRR):		4	Lat:	45.909	93 Long:	-122.7609	Datum:	WGS84
Soil Map Unit Name	e:	Caples si	- Itv clav loam		NWI Cla	ssification:	none -	
Are climatic/hvdrolo	paic conditions on the site to	pical for this time	e of vear?	Yes	X No	(if no. expl	ain in Remarks)	
Are vegetation	N Soil N or Hy	drology N	significantly dis	turbed?	Are "Normal Circumstan	ces" present? (Y/N)	Ŷ	
Are vegetation	N Soil N or Hy	vdrology N	naturally proble	matic? If needed	l, explain any answers in Re	emarks.)		
SUMMARY OF	FINDINGS – Attac	h site map s	showing san	npling point	locations, transects	s, important feat	ures, etc.	
Hydrophytic Vegeta	tion Present? Yes	X No						
Hydric Soil Present	? Yes	No	x	Is Sampled Ar a Wetlar	rea within nd? ^{Yes}		No X	
Wetland Hydrology	Present? Yes	No	X					
Remarks:	-							
VEGETATION	- Use scientific nam	nes of plants	s.		-			
		absolute	Dominant	Indicator	Dominance Test wo	rksheet:		
Tree Stratum (pl	ot size.	% cover	Species?	Status	Number of Dominant Spe			
1	,				That are OBL_FACW_or	FAC [.]	1	(A)
2								(**)
3					Total Number of Domina	nt		
4					Species Across All Strata	i:	1	(B)
		0	= Total Cover					
Sapling/Shrub Strat	tum (plot size:	_)			Percent of Dominant Spe	cies		
1					That are OBL, FACW, or	r FAC:	100%	(A/B)
2								
3					Prevalence Index W	orksheet:		
4					Total % Cover of	Multiply by	<u>:</u>	
5					OBL Species	x 1 =	0	
			= Total Cover		FACW species	x 2 = x 3 =	0	
<u>Herb Stratum</u> (pl	ot size: 5)				FACU Species	x 4 =	0	
1 Schedonoru	s arundinaceus	95	X	FAC	UPL Species	x 5 =	0	
2					Column Totals	0 (A)	0	(B)
3								
4					Prevalence Index =	B/A = #	DIV/0!	
5								
6					Hydrophytic Vegetat	tion Indicators:		
8					<u> </u>	2 Dominance Test for Hydr	opnytic vegetatior	1
·		95	= Total Cover			3-Prevalence Index is	≤ 3.0 ¹	
						4-Morphological Adapt	tations ¹ (provide s	upporting
Woody Vine Stratur	m (plot size:)				data in Remarks or on	a separate sheet	1
1						5- Wetland Non-Vascu	ular Plants ¹	
2					1	Problematic Hydrophy	tic Vegetation ¹ (Ex	xplain)
		0	= Total Cover		'Indicators of hydric soil a disturbed or problematic.	and wetland hydrology	must be present, i	Inless
	Lash Otractions	F			Hydrophytic	Vee Y	NJ -	
™ Bare Ground in F	Herd Stratum	5			Present?	res X	NO	
Remarks:								
Remarks:								

			-	7043				Sampling Point.	14
Profile Descri	ption: (Describe to	the depth	needed to docume	ent the indicat	tor or con	firm the abse	nce of indicators.)		
(Inches)	Color (moist)	%	Color (moist)	%			Texture	Remarks	
0-16	7 5YR 3/2	100			Турс		Silt Loam	Remarks	
16 10	10VR 4/1	72				M	Silty Clay Loam	Madium	
10-10	101K 4/1		101R 4/4			N		Medium Cooreo	
			10TR 3/4		<u> </u>	N		Medium-Coarse	
			10YR 5/1		<u>R</u>	M		Coarse	
¹ Type: C=Cono	centration, D=Depleti	ion, RM=R	educed Matrix, CS=	Covered or Co	pated San	d Grains.		² Location: PL=Pore Lining, M=M	latrix.
Hydric Soil	Indicators: (Appl	icable to	all LRRs, unles	s otherwise	e noted.)		Indica	ators for Problematic Hydri	c Soils³:
	Histosol (A1)			Sar	ndy Redo	x (S5)		2 cm Muck (A10)	
	Histic Epipedon (A2)			Stri	ripped Mat	rix (S6)		Red Parent Materi	al (TF2)
	Black Histic (A3)			Loa	amy Muck	y Mineral (F1)	except MLRA 1)	Very Shallow Dark	Surface (TF12)
	Hydrogen Sulfide (A4	4)		Loa	amy Gleve	ed Matrix (F2)		Other (explain in R	emarks)
	Depleted Below Dark	Surface ()	A11)	Dei	pleted Ma	trix (F3)			,
	' Thick Dark Surface (A12)	,	'	' dox Dark	Surface (E6)			
	Sandy Musky Minara	1 (01)						³ Indicators of hydrophytic vegeta	tion and wetland
		(01)		Del				hydrology must be present, unle	ess disturbed or
	Sandy Gleyed Matrix	(S4)		Ree	aox Depre	essions (F8)		problematic.	
Restrictive I	Layer (if present)	:							
Type:									
Depth (inches	s):						Hydric Soil Pres	ent? Yes	No X
Pomorko:									
HYDROLO Wetland Hy	IGY drology Indicator	rs:							
HYDROLO Wetland Hyd Primary India	GY drology Indicator cators (minimum c	r s: of one req	uired; check all ti	hat apply)				Secondary Indicators (2 or	more required)
HYDROLO Wetland Hyd Primary Indid	GY drology Indicator cators (minimum c Surface Water (A1)	r s: of one req	uired; check all ti	hat apply) Wa	ater staine	d Leaves (B9)	(Except MLRA	Secondary Indicators (2 or Water stained Lea	more required)ves (B9)
HYDROLO Wetland Hy Primary India	GY drology Indicator cators (minimum c Surface Water (A1) High Water Table (A	r s: of one req 2)	uired; check all t	hat apply) Wa 1, 2	ater staine 2, 4A, and	d Leaves (B9) 1 4B)	(Except MLRA	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a	more required) ves (B9) nd 4B)
HYDROLO Wetland Hy Primary India	GY drology Indicator cators (minimum c Surface Water (A1) High Water Table (A Saturation (A3)	r s: of one req 2)	uired; check all ti	hat apply) Wa 1, 2 Sal	ater staine 2, 4A, anc It Crust (B	d Leaves (B9) 1 4B) 11)	(Except MLRA	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns	more required) ves (B9) nd 4B) (B10)
HYDROLO Wetland Hy Primary India	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1)	r s: of one req 2)	uired; check all tl	hat apply) Wa 1, 2 Sal Aq	ater staine 2, 4A, anc It Crust (B uatic Inve	rd Leaves (B9) i 4B) i11) rtebrates (B13)	(Except MLRA	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns Dry-Season Water	more required) ves (B9) nd 4B) (B10) Table (C2)
HYDROLO Wetland Hy Primary India	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (I	r s: of one req 2) B2)	juired; check all t	hat apply) Wa Sal Aqu Hyo	ater staine 2, 4A, anc It Crust (B uatic Inve drogen Su	d Leaves (B9) I 4B) i11) rtebrates (B13) ulfide Odor (C1	(Except MLRA	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns Dry-Season Water Saturation Visible	more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C
HYDROLO Wetland Hy Primary India	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (I Drift Deposits (B3)	r s: of one req 2) B2)	uired; check all t	hat apply) Wa 1, 2 Sal Aqu Hyo Oxi	ater staine 2, 4A, anc It Crust (B uatic Inve drogen Su idized Rhi	d Leaves (B9) 1 4B) 111) rtebrates (B13) Ilfide Odor (C1 zospheres alor	(Except MLRA	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi	more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2)
HYDROLO Wetland Hy Primary India	drology Indicator cators (minimum c Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (I Drift Deposits (B3) Algal Mat or Crust (B	r s: of one req 2) B2)	uired; check all t	hat apply) 	ater staine 2, 4A, anc It Crust (B uatic Inver drogen Su idized Rhi esence of	d Leaves (B9) 1 4B) 11) rtebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron ((Except MLRA	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3)
HYDROLO Wetland Hy Primary India	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (I Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5)	r s: of one req 2) B2) H4)	uired; check all t	hat apply) Wa Sal Aqu Hyo Oxi Pre Rev	ater staine 2, 4A, and It Crust (B uatic Inver drogen Su idized Rhi esence of ecent Iron I	d Leaves (B9) i 4B) i11) rtebrates (B13) ilfide Odor (C1 izospheres alor Reduced Iron (Reduction in Pl	(Except MLRA) Ig Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3)
HYDROLO Wetland Hy Primary India	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (I Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks (rs: of one req 2) B2) 44) (B6)	juired; check all t	hat apply) — Wa 1, 2 _ Sal _ Aqu _ Oxi _ Oxi _ Pre _ Reu Stu	ater staine 2, 4A, and It Crust (B uatic Inve drogen Su idized Rhi esence of scent Iron I unted or S	d Leaves (B9) 1 4B) 11) rtebrates (B13) Ilfide Odor (C1 izospheres alor Reduced Iron (Reduction in Pl tressed Plants	(Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (Raised Ant Mound	more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A)
HYDROLO Wetland Hy Primary India	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks of Inundation Visible on	rs: of one req 2) B2) B2) (B6) Aerial Ima	juired; check all t	hat apply) — Wa 1, 2 _ Sal _ Aqu Hyc _ Oxi _ Pre _ Rea _ Stu _ Oth	ater staine 2, 4A, and It Crust (B uatic Inve drogen Su idized Rhi esence of scent Iron I unted or S her (Expla	d Leaves (B9) I 4B) (11) rtebrates (B13) ulfide Odor (C1) izospheres alor Reduced Iron (Reduced Iron (Reduction in Pl tressed Plants in in Remarks)	(Except MLRA ing Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (Raised Ant Mound Frost-Heave Hum	more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A) nocks (D7)
HYDROLO Wetland Hy Primary India	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks of Inundation Visible on Sparsely Vegetated (rs: of one req 2) B2) 4) (B6) Aerial Ima Concave S	uired; check all ti gery (B7)	hat apply) Wa 1, 2 Sal Aqu Hyo Oxi Pre Ret Stu Oth	ater staine 2, 4A, and lt Crust (B uatic Inver drogen Su idized Rhi esence of scent Iron I unted or S her (Expla	d Leaves (B9) 1 4B) 111) rtebrates (B13) ulfide Odor (C1 zospheres alor Reduced Iron (Reduced Iron (Reduction in Pl tressed Plants in in Remarks)	(Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a) Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (Raised Ant Mound Frost-Heave Humr	more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A) nocks (D7)
HYDROLO Wetland Hy Primary India	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks of Inundation Visible on Sparsely Vegetated (r s: 2) B2) (B6) (B6) Aerial Ima Concave S	juired; check all ti igery (B7) urface (B8)	hat apply) — Wa 1, 2 Sal — Aqu — Hyo Oxi — Pre — Reu Stu — Oth	ater staine 2, 4A, anc It Crust (B uatic Inver drogen Su drogen Su	d Leaves (B9) 1 4B) I11) Itebrates (B13) Ilfide Odor (C1 izospheres alor Reduced Iron (Reduced Iron (Reduction in Pl tressed Plants in in Remarks)	(Except MLRA) Ing Living Roots (C3) (C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (I Raised Ant Mound Frost-Heave Humr	more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A) nocks (D7)
HYDROLO Wetland Hy Primary India	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks of Inundation Visible on Sparsely Vegetated of vations:	r s: 2) B2) (B6) (B6) Aerial Ima Concave S	uired; check all t gery (B7) urface (B8)	hat apply) Sal Sal Aqu Oxi Pre Stu Oth	ater staine 2, 4A, and It Crust (B uatic Inver drogen Su idized Rhi esence of scent Iron I unted or S her (Expla	d Leaves (B9) i 4B) i11) rtebrates (B13) ilfide Odor (C1 izospheres alor Reduced Iron (Reduced Iron (Reduction in Pl tressed Plants in in Remarks)	(Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (I Raised Ant Mound Frost-Heave Humr	more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A) nocks (D7)
HYDROLO Wetland Hy Primary India	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (I Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks of Inundation Visible on Sparsely Vegetated of vations: Present? Yes	rs: of one req 2) B2) (B6) (B6) (Aerial Ima Concave S	uired; check all ti igery (B7) urface (B8) No <u>X</u>	hat apply) Wa 1, 2 Sal Aqu Hyc Oxi Oxi Stu Stu Oth	ater staine 2, 4A, and 2, 4A, and 2, 4A, and 1, and	d Leaves (B9) i 4B) i11) rtebrates (B13) ilfide Odor (C1 izospheres alor Reduced Iron (Reduction in Pl tressed Plants in in Remarks)	(Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A)	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (I Raised Ant Mound Frost-Heave Humr	more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A) nocks (D7)
HYDROLO Wetland Hy Primary India	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (I Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks of Inundation Visible on Sparsely Vegetated (vations: Present? Yes	rs: of one req 2) B2) 44) (B6) Aerial Ima Concave S	ujired; check all t ngery (B7) urface (B8) No X No X	hat apply) Wa 1, 2 Sal Aqu Hyc Oxi Oxi Oxi Depth (inc Depth (inc	ater staine 2, 4A, and 2, 4A, and 1t Crust (B uatic Inve drogen Su idized Rhi esence of scent Iron I unted or S her (Expla ches): ches):	ed Leaves (B9) I 4B) (11) rtebrates (B13) ulfide Odor (C1) izospheres alor Reduced Iron (Reduced Iron (Reduction in Pl tressed Plants in in Remarks) >18	(Except MLRA) ng Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A) Wetland Hydr	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (Raised Ant Mound Frost-Heave Humr	more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A) nocks (D7)
HYDROLO Wetland Hy Primary India	Cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (I Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks of Inundation Visible on Sparsely Vegetated (C Vations: Present? Yes resent? Yes sent? Yes ry fringe)	rs: of one req 2) B2) 4) (B6) Aerial Ima Concave S	ujired; check all t ngery (B7) urface (B8) No X No X No X	hat apply) Wa 1, 2 Sal Aqu Hyc Oxi Pre Rec Stu Oth Depth (inc Depth (inc Depth (inc	ater staine 2, 4A, and 1t Crust (B uatic Invei drogen Su idized Rhi esence of scent Iron I unted or S her (Expla ches): ches):	ed Leaves (B9) 1 4B) 111) rtebrates (B13) ulfide Odor (C1) izospheres alor Reduced Iron (Reduced Iron (Reduction in Pl tressed Plants in in Remarks) >18 >18 >18	(Except MLRA ing Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A) Wetland Hydr	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a) Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (Raised Ant Mound Frost-Heave Humr rology Present? Yes	more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A) nocks (D7)
HYDROLO Wetland Hy Primary India	GY drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks of Inundation Visible on Sparsely Vegetated (C vations: Present? Yes Sent? Yes ry fringe) proded Data (stream geter the second stream	rs: of one req 2) B2) 4) (B6) Aerial Ima Concave S	ujired; check all ti ngery (B7) urface (B8) No X No X No X itoring well, aerial ph	hat apply) Wa 1, 2 Sal Aqu Hyc Oxi Pre Red Stu Oth Depth (inc Depth (inc Depth (inc Depth (inc	ater staine 2, 4A, anc It Crust (B uatic Inver drogen Su idized Rhi esence of cent Iron I unted or S her (Expla ches): ches): ches): s inspectio	d Leaves (B9) 1 4B) 111) rtebrates (B13) ulfide Odor (C1) izospheres alor Reduced Iron (Reduction in Pl tressed Plants in in Remarks) >18 >18 ons), if available	(Except MLRA ing Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A) Wetland Hydr	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a) Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (Raised Ant Mound Frost-Heave Humr rology Present? Yes	<u>more required)</u> ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A) nocks (D7) No X
HYDROLO Wetland Hy Primary India	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated (vations: Present? Yes sent? Yes sent? Yes ry fringe) orded Data (stream ga	rs: of one req 2) B2) 44) (B6) Aerial Ima Concave S auge, moni	ujired; check all t ngery (B7) urface (B8) No X No X No X itoring well, aerial ph	hat apply) Wa 1, 2 Sal Aqu Dysection Notes	ater staine 2, 4A, anc It Crust (B uatic Inver drogen Su idized Rhi esence of cont Iron I unted or S her (Expla ches): ches): ches): s inspectic	ed Leaves (B9) 1 4B) 111) rtebrates (B13) ulfide Odor (C1 izospheres alor Reduced Iron (Reduction in Pl tressed Plants in in Remarks) >18 >18 ons), if available	(Except MLRA) 1 g Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A) Wetland Hydr	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a) Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (I Raised Ant Mound Frost-Heave Humr rology Present? Yes I	more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A) nocks (D7)
HYDROLO Wetland Hy Primary India	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible on Sparsely Vegetated of vations: Present? Yes resent? Yes resent? Yes resent? Yes resent? Yes rorded Data (stream ga	rs: of one req 2) B2) 44) (B6) Aerial Ima Concave S auge, moni	ujuired; check all t ngery (B7) urface (B8) No X No X No X itoring well, aerial ph	hat apply) Wa 1, 2 Sal Aqu Hyo Oxi Or Pre Ret Stu Oth Depth (inc Depth (inc Depth (inc Depth (inc	ater staine 2, 4A, anc 2, 4A, anc 2, 4A, anc 2, 4A, anc 3, 40, 40, 40, 40, 40, 40, 40, 40, 40, 40	d Leaves (B9) 1 4B) 111) rtebrates (B13) ulfide Odor (C1 zospheres alor Reduced Iron (Reduced Iron (Reduction in Pl tressed Plants in in Remarks) >18 >18 ons), if available	(Except MLRA) Ing Living Roots (C3) C4) owed Soils (C6) (D1) (LRR A) Wetland Hydri States of the second se	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a) Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (I Raised Ant Mound Frost-Heave Humr rology Present? Yes I	<u>more required)</u> ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A) mocks (D7)
HYDROLO Wetland Hy Primary India	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible on Sparsely Vegetated of vations: Present? Yes Present? Yes Present? Yes Sent? Yes Sent? Yes Sent? Yes Proded Data (stream gates)	rs: of one req 2) B2) 44) (B6) Aerial Ima Concave S auge, moni	igery (B7) urface (B8) No X No X No X itoring well, aerial pt	hat apply) Wa 1, 2 Sal Aqu Hyo Oxi Or Pre Ret Stu Oth Depth (inc Depth (inc Depth (inc Depth (inc	ater staine 2, 4A, anc 2, 4A, anc 2, 4A, anc 2, 4A, anc 4 drogen SL drogen S	d Leaves (B9) 1 4B) 111) rtebrates (B13) Ilfide Odor (C1 izospheres alor Reduced Iron (Reduced Iron (Reduced Iron Pl tressed Plants in in Remarks) >18 >18 ons), if available	(Except MLRA) Ing Living Roots (C3) (C4) owed Soils (C6) (D1) (LRR A) Wetland Hydri ::	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a) Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (I Raised Ant Mound Frost-Heave Humr rology Present? Yes I	<u>more required)</u> ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A) nocks (D7)
HYDROLO Wetland Hy Primary India 	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated of vations: Present? Yes Present? Yes Sent? Yes sent? Yes sent? Yes ry fringe)	rs: of one req 2) B2) 44) (B6) Aerial Ima Concave S auge, moni	igery (B7) urface (B8) No X No X No X itoring well, aerial ph	hat apply) Wa 1, 2 Sal Aqu Hyo Oxi Orre Stu Oth Depth (inc Depth (inc Depth (inc	ater staine 2, 4A, anc 2, 4A, anc 1t Crust (B uatic Inver drogen Su idized Rhi esence of sence of sence of seches is ches): - ches): - s inspectic	ed Leaves (B9) 1 4B) 111) rtebrates (B13) 1fide Odor (C1 izospheres alor Reduced Iron (Reduced Iron (Reduced Iron Pl tressed Plants in in Remarks) >18 >18 >18 ons), if available	(Except MLRA) Ing Living Roots (C3) (C4) owed Soils (C6) (D1) (LRR A) Wetland Hydr 2:	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (I Raised Ant Mound Frost-Heave Humr	<u>more required)</u> ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A) nocks (D7)
HYDROLO Wetland Hy Primary India 	drology Indicator cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (I Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on Sparsely Vegetated (vations: Present? Yes tresent? Yes sent? Yes sent? Yes ry fringe) orded Data (stream ga	rs: of one req 2) B2) 44) (B6) Aerial Ima Concave S auge, moni	Igery (B7) urface (B8) No X No X No X Itoring well, aerial pf	hat apply) Wa 1, 2 Sal Aqu Hyo Oxi Ori Pre Stu Oth Depth (inc Depth (inc Depth (inc	ater staine 2, 4A, anc It Crust (B uatic Inver drogen Su idized Rhi esence of sence	d Leaves (B9) 1 4B) 111) rtebrates (B13) Ilfide Odor (C1 izospheres alor Reduced Iron (Reduction in Pl tressed Plants in in Remarks) >18 >18 >18 ons), if available	(Except MLRA) Ing Living Roots (C3) (C4) owed Soils (C6) (D1) (LRR A) Wetland Hydr S:	Secondary Indicators (2 or Water stained Lea (MLRA1, 2, 4A, a Drainage Patterns Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard (Fac-Neutral Test (I Raised Ant Mound Frost-Heave Humr rology Present? Yes I	more required) ves (B9) nd 4B) (B10) Table (C2) on Aerial Imagery (C on (D2) D3) D5) s (D6) (LRR A) nocks (D7)

v		ρμινατιών	Ι ΠΑΤΑ ΕΩΕ	RM - Weste	rn Mountains, Vall	evs and Coast	PHS # _	7645
■ Project/Site:	N Pekin Road		City/County:	Woo	dland/Cowlitz	Sampling Date	12/6/	2022
Applicant/Owner	Trammell Crow Co	mpany	ony, oounty.		State:	WA S	Sampling Point:	15
Investigator(s):	CT/TE		Section To	wnshin Range		Sect 24 T 5N R	1W	
Landform (billslope t		Swale	-	Local relief (cor	cave convex none).	concave	Slope (%):	2%
Subregion (LRR):			Lat [.]	45 909		-122 7609		WGS84
Soil Man Unit Name:		Canles si	- Ity clay loam		NIWI Clas	sification:	- none	
Are climatic/bydrolog	ic conditions on the site tw	voical for this time	a of year?	Ves	No	/if no evola	n in Remarks)	
Are vegetation N	Soil N or Hy	drology N	significantly dist	urbed?	Are "Normal Circumstance	ces" present? (Y/N)	Y	
Are vegetation N	Soil N or Hy	rdrology N	naturally probler	matic? If needed	, explain any answers in Re	marks.)	<u> </u>	
SUMMARY OF	FINDINGS – Attac	h site map s	howing sam	pling point	locations, transects	, important featu	res, etc.	
Hydrophytic Vegetatio	on Present? Yes	X No		le Sampled Ar	oo within			
Hydric Soil Present?	Yes	X No		a Wetlar	nd? ^{Yes}	X N	o	
Wetland Hydrology P	resent? Yes	X No						
Remarks:								
	Liso scientific nan	nos of plante						
		absolute	Dominant	Indicator	Dominance Test wor	ksheet [.]		
		% cover	Species?	Status				
<u>Tree Stratum</u> (plot	size:)				Number of Dominant Spe	cies		
1					That are OBL, FACW, or	FAC:	1 (A)
2								
3					Total Number of Dominan	t		
4					Species Across All Strata		1(В)
		0	= Total Cover					
Sapling/Shrub Stratu	m (plot size:	_)			Percent of Dominant Spec	cies		
1					That are OBL, FACW, or	FAC: 1	00% (A/B)
2								
3					Trevalence index wo	orksneet:		
4					OBL Species		- 0	
J		0	= Total Cover		EACW species	x 2 =		
					FAC Species	x 3 =	0	
<u>Herb Stratum</u> (plot	t size: 5)				FACU Species	x 4 =	0	
1 Phalaris arun	dinacea	100	Χ	FACW	UPL Species	x 5 =	0	
2 Carex sp		2		(FAC)	Column Totals	0 (A)	(3)
3 Cirsium arver	nse	2		FAC				
4					Prevalence Index =	3/A = #	0IV/0!	
5					Lludrophutia Vagatati	on Indiantara		
0 						Ion Indicators:	abutia Vagatatian	
8					×	- Rapiu Test iol Hydro 2- Dominance Test is >	50%	
·		104	= Total Cover			3 -Prevalence Index is \leq	3.0 ¹	
						I-Morphological Adapta	tions ¹ (provide su	pporting
Woody Vine Stratum	(plot size:)				data in Remarks or on a	separate sheet)	
1						5- Wetland Non-Vascul	ar Plants ¹	
2					F	Problematic Hydrophytic	vegetation ¹ (Ex	olain)
		0	= Total Cover		¹ Indicators of hydric soil a	nd wetland hydrology m	iust be present, u	nless
					usuived or proplematic.			
					Hydrophytic			
% Bare Ground in He	erb Stratum	0			Hydrophytic Vegetation	Yes X	No	

The unidentified Carex is presumed to have an indicator status of FAC or wetter.

SOIL			PHS #	7645	;	-		Sampling Point: 1	5
Profile Descri Depth	iption: (Describe to Matrix	the depth	needed to docume	ent the indicat Redox F	t or or co eatures	nfirm the absen	ce of indicators.)		
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	7.5YR 3/2	100					Silt Loam		
8-18	7.5YR 3/2	95	7.5YR 4/6	5	С	М	Silt Loam	Medium	
¹ Type: C=Con	centration, D=Deplet	ion, RM=Re	educed Matrix, CS=	Covered or Co	oated Sar	nd Grains.	lu ali a	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soli	Indicators: (App	licable to	all LRRS, unles	s otnerwise	notea.	.)	Indic	ators for Problematic Hydric Solis :	
	Histosol (A1)			Sa	ndy Redo	ox (S5)		2 cm Muck (A10)	
	Histic Epipedon (A2)			Str	ipped Ma	atrix (S6)		Red Parent Material (TF2)	
	Black Histic (A3)			Lo:	amy Muc	ky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (T	F12)
	Hydrogen Sulfide (A	4)		Lo:	amy Gley	/ed Matrix (F2)		Other (explain in Remarks)	
	Depleted Below Dar	k Surface (<i>I</i>	A11)	De	pleted M	atrix (F3)			
	Thick Dark Surface	(A12)		Re	dox Dark	surface (F6)		³ Indicators of hydrophytic vegetation and we	tland
	Sandy Mucky Minera	al (S1)		De	pleted Da	ark Surface (F7)		hydrology must be present, unless disturbe	ed or
	Sandy Gleyed Matrix	(S4)		Re	dox Depi	ressions (F8)	1	problematic.	
Restrictive	Layer (if present)):							
Type:									
Depth (inches	s):						Hydric Soil Pres	sent? Yes <u>X</u> No	
HYDROLO	GY								
Wetland Hy	drology Indicato	rs:							
Primary Indi	cators (minimum	of one req	uired; check all t	hat apply)				Secondary Indicators (2 or more requ	uired)
	Surface Water (A1)			Wa	ater stain	ed Leaves (B9) (Except MLRA	Water stained Leaves (B9)	
	High Water Table (A	2)		1,	2, 4A, an	ia 4B)		(MLRA1, 2, 4A, and 4B)	
	Saturation (A3)			Sa	lt Crust (I	B11)		Drainage Patterns (B10)	
	Water Marks (B1)			Aq	uatic Inve	ertebrates (B13)		Dry-Season Water Table (C2)	1
	Sediment Deposits (B2)		Ну	drogen S	Sulfide Odor (C1)	- Liniar Deete (O2)	Saturation Visible on Aerial Im	hagery (C9)
	Algol Mat or Crust (E3)	24)		Ox		f Reduced Iron (Shallow Aquitard (D2)	
	Iron Deposits (B5)) 		FR	cent Iron	Reduction in Plo	owed Soils (C6)	X Fac-Neutral Test (D5)	
	Surface Soil Cracks	(B6)		Stu	unted or S	Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LR	RA)
	Inundation Visible or	n Aerial Ima	gery (B7)	Otl	her (Expl	ain in Remarks)		Frost-Heave Hummocks (D7)	,
	Sparsely Vegetated	Concave S	urface (B8)						
Field Obser	vations:								
Surface Water	Present? Yes		No X	Depth (in	ches):	N/A			
Water Table P	resent? Yes		No X	Depth (in	ches):	>18	Wetland Hyd	rology Present?	
Saturation Pre (includes capilla	sent? Yes ry fringe)		No <u>X</u>	Depth (in	ches):	>18		Yes X No	
Describe Reco	orded Data (stream g	auge, moni	toring well, aerial pl	hotos, previous	s inspecti	ions), if available	:		
Remarks:									

Ň	WETLAND	DETERM		I DATA FOR	RM - Weste	rn Mountains. V	/allevs. a	nd Coas	PHS # t Region	7645
Project/Site:	N Peki	n Road		City/County:	Woo	dland/Cowlitz	San	pling Date:	12/	6/2022
Applicant/Owner:	Trammell C	row Compa	any			Sta	te: WA		Sampling Point:	16
Investigator(s):		CT/TF		Section, To	wnship, Range:		Sect.		1W	
Landform (hillslope,	terrace, etc.:)		Slope	-	Local relief (cor	ncave, convex, none):		none	Slope (%):	2%
Subregion (LRR):	, ,	LRR A		Lat:	45.909)3 Lor	na: -1	22.7609	Datum:	WGS84
Soil Map Unit Name			Clato	- silt loam			Classification	ı.	 none	
Are climatic/hydrolog	nic conditions on	the site typica	al for this time	e of vear?	Yes	X	No	(if no expla	ain in Remarks)	
Are vegetation N	Soil N	or Hydrol	oav N	significantly dist	urbed?	Are "Normal Circums	tances" pres	(, e, e, e), e,	Y	
Are vegetation N	Soil N	or Hydrol	ogy <u>N</u>	_ naturally proble	matic? If needed	, explain any answers ir	n Remarks.)			-
SUMMARY OF	FINDINGS -	- Attach s	ite map s	howing sam	pling point	locations, transe	cts, impo	rtant featu	ıres, etc.	
Hydrophytic Vegetat	ion Present?	Yes	X No		le Sampled Ar	oa within				
Hydric Soil Present?)	Yes	No	Χ	a Wetlar	nd? Y	es	_ '	No <u>X</u>	-
Wetland Hydrology F	Present?	Yes	No	X						
Remarks:										
VEGETATION	- Use scient	ific names	of plants	S.						
		a	absolute % cover	Dominant Species?	Indicator Status	Dominance Test v	worksheet			
Tree Stratum (plo	ot size:) —				Number of Dominant	Species			
1						That are OBL, FACW	, or FAC:		3	(A)
2							,			,
3						Total Number of Dom	inant			
4						Species Across All St	rata:		3	(B)
			0	= Total Cover						-
Sapling/Shrub Stratu	um (plot size:)				Percent of Dominant	Species			
1		,				That are OBL, FACW	, or FAC:	1	100%	(A/B)
2										• • •
3						Prevalence Index	Workshee	t:		
4						Total % Cover of		Multiply by:	_	
5						OBL Species		x 1 =	0	-
		_	0	= Total Cover		FACW species		x 2 =	0	-
Llark Strature (plo	nt sizo:	5)				FAC Species		_ x3=		-
1 Phalarie arur	ndinacea	/	40	¥	FACW			X4= 	0	-
2 Carex sn			25	<u> </u>	(FAC)		0	(A)	0	- (B)
3 Agrostis sp			25	<u> </u>	(FAC)					(-)
4 Cirsium arve	nse		5		FAC	Prevalence Inde	ex =B/A =	#	DIV/0!	
5 						Hydrophytic Vege	tation Indi	cators:		
7							1- Rapid	Test for Hydro	phytic Vegetatio	on
8							2- Domin	ance Test is >	•50%	
			95	= Total Cover			3-Prevale 4-Morpho	nce Index is ≤ logical Adapta	≤ 3.0 ¹ ations ¹ (provide	supporting
Woody Vine Stratum	<u>n</u> (plot size:	5)					data in R	emarks or on	a separate shee	t)
1 Rubus ursinu	us		2		FACU		5- Wetlar	id Non-Vascu	lar Plants ¹	
2							Problema	tic Hydrophyt	ic Vegetation ¹ (E	Explain)
			2	= Total Cover		¹ Indicators of hydric so disturbed or problema	oil and wetlar ttic.	nd hydrology r	nust be present	unless
% Bare Ground in H	erb Stratum	5				Vegetation Present?	Ye	s <u>X</u>	No	
Remarks:						1 1030111:				

The unidentified Carex and Agrostis are presumed to have an indicator status of FAC or wetter.

SOIL	PH	S #	764	15	_		Sampling	g Point:	16		
Profile Description: Depth	(Describe to Matrix	the depth	needed to	document	t the indic Redox	ator or co Features	nfirm the absen	ce of indicators.)			
(Inches) C	olor (moist)	%	Color (n	noist)	%	Type ¹	Loc ²	Texture		Remarks	
0-10 7	.5YR 3/2	100						Silt Loam			
10-20 7	7.5YR 3/2	95	7.5YR	4/6	5	С	М	Silt Loam	Medium		
¹ Type: C=Concentra	ion. D=Deplet	tion. RM=Re	educed Mat	rix. CS=C	overed or (Coated Sa	nd Grains.		² Location: PL=Pore	Lining, M=Mat	rix.
Hydric Soil Indic	ators: (App	licable to	all LRRs	. unless	otherwis	se noted.	.)	Indic	ators for Problem	atic Hvdric S	Soils ³ :
Histos	ol (A1)			•	S	andv Red	, ox (S5)		2 cm I	Muck (A10)	
Histic	Epipedon (A2))		-		stripped Ma	atrix (S6)		Red P	arent Material	(TF2)
Black	Histic (A3)	, ,		-		.oamv Muc	kv Mineral (F1) (except MLRA 1)	Verv S	Shallow Dark S	urface (TF12)
Hvdro	nen Sulfide (A	4)		-		oamy Glev	ved Matrix (F2)		Other	(explain in Ren	narks)
Deplet	ed Below Dar	k Surface (/	A11)	-		epleted M	atrix (F3)		0	(explain in ten	iano)
Thick	Dark Surface	(A12)	,	-	F	Redox Dark	(Surface (F6)				
Sandy	Mucky Miner	al (S1)		-	 		ark Surface (F7)		³ Indicators of hydrop	ohytic vegetatio	n and wetland
Sandy	Gleved Matrix	(S4)		-	F	Redox Dep	ressions (F8)		hydrology must be	present, unless	disturbed or
					<u> </u>			1	P		
	(ii present):									
Туре:											
Depth (inches):								Hydric Soil Pres	sent? Yes	No	×
HYDROLOGY											
Wetland Hydrolo	gy Indicato	rs:									
Primary Indicators	(minimum	of one req	uired; che	ck all tha	at apply)				Secondary Indic	ators (2 or m	ore required)
Surfac	e Water (A1)			_	v	Vater stain	ed Leaves (B9) (Except MLRA	Water	stained Leave	s (B9)
High V	Vater Table (A	(2)			1	, 2, 4A, an	id 4B)		(MLR	A1, 2, 4A, and	4B)
Satura	tion (A3)			_	s	Salt Crust (B11)		Draina	age Patterns (B	10)
Water	Marks (B1)			_	A	quatic Inv	ertebrates (B13)		Dry-Se	eason Water Ta	able (C2)
Sedim	ent Deposits ((B2)		_	F	lydrogen S	Sulfide Odor (C1)		Satura	ation Visible on	Aerial Imagery (C9)
Drift D	eposits (B3)			-	0	Dxidized RI	hizospheres alon	g Living Roots (C3)	Geom	orphic Position	(D2)
Algal M	Mat or Crust (E	34)		-	F	Presence o	f Reduced Iron (C	C4)	Shallo	w Aquitard (D3)
Iron D	eposits (B5)			-	F	Recent Iron	Reduction in Plo	owed Soils (C6)	X Fac-N	leutral Test (D5	
Surfac	e Soll Cracks	(B6)	aom ((DZ)	-		otunted or a	Stressed Plants (D1) (LRR A)		a Ant Mounds (D6) (LRR A)
Illulua Sparse			urface (B8)	-		uiei (⊏xpi	an in Remarks)		FIOSI-		CKS(DT)
Opais		Concave of						1			
Field Observatio	ns:		No	v	Danth (NI/A				
Surface water Prese	ent? Yes			<u>×</u>		incnes):	<u>N/A</u>	Matlenal Live			
Vvater Table Present	? Yes			×	Depth (incnes):	>20	vvetland Hyd	rology Present?	No	v
(includes capillary fringe	e)			<u> </u>	Depth (inches):	~20		Tes		<u> </u>
Describe Recorded	Data (stream g	jauge, moni	toring well,	aerial pho	tos, previo	us inspect	ions), if available	:			
Remarks:											

Ň	WETLAND DETER			RM - Weste	rn Mountains, Vall	evs. and Coas	PHS # st Region	7645
Project/Site:	N Pekin Road		City/County:	Woo	dland/Cowlitz	Sampling Date:	12/6	/2022
Applicant/Owner:	Trammell Crow Co	mpany			State:	WA	Sampling Point:	17
Investigator(s):	TF/CT		Section, To	wnship, Range:		Sect. 24, T 5N, F	R 1W	
Landform (hillslope,	terrace, etc.:)	Slope	•	Local relief (cor	ncave, convex, none):	none	Slope (%):	2%
Subregion (LRR):		· · ·	Lat:	45.908	35 Long:	-122.7612	Datum:	WGS84
Soil Map Unit Name	:	Newbera fir	ne sandv loarr	,	NWI Clas	ssification:	PFOA	
Are climatic/hvdrolog	aic conditions on the site ty	pical for this time	of year?	Yes	X No.	(if no expl	ain in Remarks)	
Are vegetation N	Soil N or Hv	drology N	significantly dist	urbed?	Are "Normal Circumstance	es" present? (Y/N)	Y	
Are vegetation N	Soil N or Hy	drology N	naturally probler	natic? If needed	, explain any answers in Re	marks.)		
		h site man s	howing sam	nolina point	locations transects	important feat	ures etc	
lydrophytic Vegetat	ion Present? Yes	X No				, important roat		
lydric Soil Present?	Yes -	X No		Is Sampled Ar a Wetlar	rea within nd? Yes	х	No	
Vetland Hydrology F	Present? Yes	X No			-			
Remarks:								
EGETATION	- Use scientific nan	nes of plants	6.					
		absolute % cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:		
ree Stratum (plo	ot size:)				Number of Dominant Spe	cies		
1					That are OBL, FACW, or	FAC:	2	(A)
2								
3					Total Number of Dominan	t		
4					Species Across All Strata:		2	(B)
		0	= Total Cover					
apling/Shrub Stratu	um (plot size: 15)			Percent of Dominant Spec	cies		
Salix sp		90	<u> </u>	(FAC)	That are OBL, FACW, or	FAC:	100%	(A/B)
Cornus alba		10		FACW				
3					Prevalence Index Wo	orksheet:		
۰ ۱					Total % Cover of	Multiply by	<u>r:</u>	
5					OBL Species	x 1 =		
		100	= Total Cover		FACW species	x 2 =	0	
erb Stratum (plo	ot size: 5)				FACU Species	x c x 4 =	0	
Urtica dioica		10	х	FAC	UPL Species	x 5 =	0	
2					Column Totals	0 (A)	0	(B)
3					-			
۱ <u> </u>					Prevalence Index =E	3/A =#	DIV/0!	
5								
3					Hydrophytic Vegetati	on Indicators:		
					1	- Rapid Test for Hydr	ophytic Vegetation	ı
3					<u> </u>	2- Dominance Test is	>50%	
		10	= Total Cover		3	B-Prevalence Index is	≤ 3.0' tations ¹ (provide a	upporting
loody Vine Stratum	n (plot size: 5)				lata in Remarks or on	a separate sheet	abbor mið
1 Rubus ursini	us	_' 2		FACU	E	5- Wetland Non-Vasci	ular Plants ¹	,
2					F	Problematic Hydrophy	tic Vegetation ¹ (E:	(plain)
		2	= Total Cover		¹ Indicators of hydric soil and disturbed or problematic.	nd wetland hydrology	must be present,	unless
b Bare Ground in H	lerb Stratum	90			Hydrophytic Vegetation	Yes X	No	

The unidentified Salix is presumed to have an indicator status of FAC or wetter.

Profile Descri Depth						-		
Dopui	ption: (Describe to Matrix	the depth	needed to docu	ment the indi Redo	cator or co	nfirm the abser	nce of indicators.)	
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 3/1	100	· · · · ·				Silty Clay Loam	
10-16	10YR 3/1	70	10YR 3/6		С	M	Silty Clay Loam	Medium
			10YR 5/2		D	M	Silty Clay Loam	Medium-Coarse
							<u>,,</u>	
						·		
¹ Type: C=Conc	centration, D=Depleti	on, RM=Re	educed Matrix, C	S=Covered or	Coated Sa	nd Grains.		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	Indicators: (Appl	icable to	all LRRs, unl	ess otherw	ise noted	.)	Indica	tors for Problematic Hydric Soils ³ :
I	Histosol (A1)				Sandy Red	ox (S5)		2 cm Muck (A10)
ŀ	Histic Epipedon (A2)				Stripped Ma	atrix (S6)		Red Parent Material (TF2)
F	Black Histic (A3)				Loamy Muc	ky Mineral (F1)	except MLRA 1)	Very Shallow Dark Surface (TF12)
	Hvdrogen Sulfide (A4	4)			Loamv Glev	ved Matrix (F2)		Other (explain in Remarks)
	Depleted Below Dark	, Surface (/	A11)	X	Depleted M	atrix (F3)		
	' Thick Dark Surface (Δ12) [`]	,		' Redox Darl	(Surface (E6)		
	Sandy Musky Minora	1 (81)				ork Surfage (F7)		³ Indicators of hydrophytic vegetation and wetland
°	Sandy Mucky Millera	(84)			Bodox Dop	rossions (E9)		hydrology must be present, unless disturbed or
<u> </u>		(34)			Redux Dep		1	problematic.
	Layer (if present)	:						
Туре:					_			
Depth (inches	s):				_		Hydric Soil Pres	ent? Yes X No
HYDROLO Wetland Hyd	GY drology Indicator	's:						
	cators (minimum c	f and rad	uirad, abaak a	ll that apply)				Seconders Indicators (2 or more required)
	Curfage Mater (A1)	of one req	juired; check a	ll that apply)	Water stain	od Logyos (RQ)	(Except MI DA	Secondary Indicators (2 or more required)
	Surface Water (A1)	of one req	luired; check a	ll that apply)	Water stain 1. 2. 4A. ar	ed Leaves (B9) Id 4B)	(Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9)
i	Surface Water (A1) High Water Table (A)	of one req 2)	uired; check a	ll that apply)	Water stair 1, 2, 4A, ar	ed Leaves (B9) 1 d 4B)	(Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
I	Surface Water (A1) High Water Table (A: Saturation (A3)	of one req 2)	juired; check a	ll that apply)	Water stair 1, 2, 4A, ar Salt Crust (ed Leaves (B9) id 4B) B11)	(Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Drainage Michae Table (20)
ł	Surface Water (A1) High Water Table (A: Saturation (A3) Water Marks (B1)	of one req	uired; check a	ll that apply) 	Water stair 1, 2, 4A, ar Salt Crust (Aquatic Inv	ed Leaves (B9) Id 4B) B11) ertebrates (B13)	(Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
ł	Surface Water (A1) High Water Table (A: Saturation (A3) Water Marks (B1) Sediment Deposits (I	of one req 2) 32)	uired; check a	II that apply) 	Water stair 1, 2, 4A, ar Salt Crust (Aquatic Inv Hydrogen S	ed Leaves (B9) Id 4B) B11) ertebrates (B13) Sulfide Odor (C1)	(Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
۱ ؟ ۷ ع ع	Surface Water (A1) High Water Table (A: Saturation (A3) Water Marks (B1) Sediment Deposits (B Drift Deposits (B3)	of one req 2) 32)	uired; check a	ll that apply)	Water stair 1, 2, 4A, ar Salt Crust (Aquatic Inv Hydrogen S Oxidized R	ed Leaves (B9) ad 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres alor	(Except MLRA	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2)
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	Surface Water (A1) High Water Table (A: Saturation (A3) Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5)	one req 2) 32) 4)	<u>uired; check a</u>	ll that apply)	Water stair 1, 2, 4A, ar Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence o Recent Iror	ed Leaves (B9) Id 4B) B11) ertebrates (B13) Sulfide Odor (C1) hizospheres alor f Reduced Iron (Reduction in Pl	(Except MLRA ing Living Roots (C3) C4) owed Soils (C6)	Secondary Indicators (2 or more required) Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C X Geomorphic Position (D2) Shallow Aquitard (D3) X Fac-Neutral Test (D5)
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١	VETI AND DETE	RMINATION		RM - Wester	rn Mountains, Va	llevs and Coas	PHS # _	7645
Project/Site:	N Pekin Road		City/County:	Woo	dland/Cowlitz	Sampling Date:	12/6/	2022
Applicant/Owner:	Trammell Crow Co	ompany	, ,		State:	WA	Sampling Point:	18
Investigator(s):	CT/TF		Section, To	wnship, Range:		 Sect. 24, T 5N, F	R 1W	
Landform (hillslope.	terrace. etc.;)	Slope	- , ,	Local relief (cor	ncave. convex. none):	none	Slope (%):	2%
Subregion (LRR):	LRR	A	Lat:	45.908	15 Lona:	-122.7612	Datum:	WGS84
Soil Man Unit Name		Newberg fi	- ne sandv loam		NWI CI	assification:		
Are climatic/bydrolog	ic conditions on the site	typical for this time	of year?	Ves	Y No.	(if no evo	lain in Remarks)	
Are vegetation N	Soil N or H	lydrology N	significantly dist	urbed?	Are "Normal Circumstar	(ii no, exp	Y	
Are vegetation N	Soil N or H	lydrology <u>N</u>	naturally probler	natic? If needed	, explain any answers in R	emarks.)	<u> </u>	
SUMMARY OF	FINDINGS - Atta	ch site map s	howing sam	pling point	locations, transect	s, important feat	ures, etc.	
lydrophytic Vegetat	ion Present? Yes	X No						
Hydric Soil Present?	Yes	No	X	Is Sampled Ar	eawithin Magaa Yes		No X	
Vetland Hydrology I	Present? Yes	 No	X	a wettan				
Zemarke:								
Centarks.								
/EGETATION	- Use scientific na	mes of plants	6.					
		absolute	Dominant	Indicator	Dominance Test wo	orksheet:		
		<u>% cover</u>	Species?	Status				
ree Stratum (plo	t size:)			Number of Dominant Sp	ecies	•	• `
1					That are OBL, FACW, of	r FAC:	(A)
2					Total Number of Domina	unt		
۵ 					Species Across All Strat	a.	3 (B)
-		0	= Total Cover		Opecies Across Air Otrat	a.	(0)
Capling/Chruh Ctrat	um (minteine) 4 5	<u> </u>			Demonst of Deminent Co.			
1 Salix sp	<u>im</u> (piot size: 15) 100	Y	(EAC)	That are OBL EACW of		67%	۵/B)
2 Rubus armei	niacus	100	<u> </u>				0778	~0)
3					Prevalence Index W	orksheet:		
4					Total % Cover of	Multiply by	/:	
5					OBL Species	x 1 =	0	
		110	= Total Cover		FACW species	x 2 =	0	
					FAC Species	x 3 =	0	
<u>lerb Stratum</u> (plc	t size: 5)			FACU Species	x 4 =	0	
1 Urtica dioica		20	<u> </u>	FAC	UPL Species	x 5 =	0	
2					Column Totals	(A)	(В)
3					Drevelence Index			
4 5					Frevalence index -	-B/A - 7		
6 					Hvdrophytic Vegeta	tion Indicators:		
7						1- Rapid Test for Hvdi	ophytic Vegetation	
8					X	2- Dominance Test is	>50%	
		20	= Total Cover			3-Prevalence Index is	≤ 3.0 ¹	
						4-Morphological Adap	tations ¹ (provide su	ipporting
Voody Vine Stratum	1 (plot size: 5)				data in Remarks or or	a separate sheet)	
1 Rubus ursin	IS	5	<u> </u>	FACU		5- Wetland Non-Vasc	ular Plants'	
2					1	Problematic Hydrophy	tic Vegetation' (Ex	plain)
		5	= 1 otal Cover		disturbed or problematic	and wetland hydrology	must de present, t	niess
					Hydrophytic			
		~~			Vegetation	Vac V	No	
6 Bare Ground in H	erb Stratum	80			Procession			

SOIL			PHS #	764	45			Sampling Poin	t:	18
Profile Descri	iption: (Describe to Matrix	the depth	needed to docume	nt the indic Redox	ator or cor	nfirm the absen	ce of indicators.)			
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rema	arks	
0-8	7.5YR 3/2	100					Silt Loam			
8-12	7.5YR 4/2	100					Silt Loam	· · · · · · · · · · · · · · · · · · ·		
12-20	7.5YR 5/2	90	7.5YR 4/6	10		M	Silt Loam			
						·	-	·		
¹ Type: C=Con	centration, D=Deplet	ion, RM=Re	educed Matrix, CS=0	Covered or	Coated Sar	nd Grains.		² Location: PL=Pore Lining,	M=Matrix.	
Hydric Soil	Indicators: (Appl	icable to	all LRRs, unless	s otherwis	se noted.))	Indic	cators for Problematic H	lydric Soils':	
	Histosol (A1)			5	Sandy Redo	ox (S5)		2 cm Muck (/	A10)	
	Histic Epipedon (A2)				Stripped Ma	trix (S6)		Red Parent M	Aaterial (TF2)	
	Black Histic (A3)			L	oamy Mucl	ky Mineral (F1) (except MLRA 1)	Very Shallow	/ Dark Surface (TF12)
	Hydrogen Sulfide (A	4)		L	oamy Gley	ed Matrix (F2)		Other (explai	n in Remarks)	
	Depleted Below Dark	k Surface (A	A11)		Depleted Ma	atrix (F3)				
	Thick Dark Surface ((A12)		F	Redox Dark	Surface (F6)		2		
	Sandy Mucky Minera	al (S1)		[Depleted Da	ark Surface (F7)		Indicators of hydrophytic v	egetation and w t_unless disturb	etland ed or
	Sandy Gleyed Matrix	: (S4)		F	Redox Depr	essions (F8)		problema	atic.	
Restrictive	Layer (if present)):								
Type										
Depth (inches	s). 				-		Hydric Soil Pre	sent? Yes	No	x
Demonstration					-					
Itemarks.										
HYDROLO	GY									
Wetland Hy	drology Indicato	rs:								
Primary Indi	cators (minimum d	of one rea	uired: check all th	nat annly)				Secondary Indicators	(2 or more rec	wired)
	Surface Water (A1)				Vater staine	ed Leaves (B9) (Except MLRA	Water staine	d Leaves (B9)	uncu)
	High Water Table (A	2)		1	, 2, 4A, an	d 4B)		(MLRA1, 2,	4A, and 4B)	
	Saturation (A3)	2)		ç	Salt Crust (F	311)		Drainage Pat	tterns (B10)	
	Water Marks (B1)				Aquatic Inve	ertebrates (B13)		Drv-Season	Water Table (C:	2)
	Sediment Deposits (B2)		·'	lydrogen S	ulfide Odor (C1)		Saturation Vi	sible on Aerial I	·/ magery (C9)
	Drift Deposits (B3)	/			Dxidized Rh	izospheres alon	a Livina Roots (C3)	Geomorphic	Position (D2)	
	Algal Mat or Crust (B	34)		`	Presence of	Reduced Iron (24)	Shallow Aqui	itard (D3)	
	Iron Deposits (B5)	,		F	Recent Iron	Reduction in Plo	wed Soils (C6)	Fac-Neutral	Test (D5)	
	Surface Soil Cracks	(B6)			Stunted or S	Stressed Plants (D1) (LRR A)	Raised Ant M	/lounds (D6) (LF	(RA)
	Inundation Visible on	Aerial Ima	gery (B7)		Other (Expla	ain in Remarks)		Frost-Heave	Hummocks (D7)
	Sparsely Vegetated	Concave Si	urface (B8)							
Field Obser	vations:						1			
Surface Water	Present? Yes		ΝοΧ	Denth (inches):	N/A				
Water Table P	Present? Ves			Depth (inches):	>20	Wetland Hw	drology Present?		
Saturation Pre	sent? Ves			Depth (inches):	>20	Wettand Hy	Vos	No	x
(includes capilla	ry fringe)			Deptil(inches).	- 20		103	_ 110	<u></u>
Describe Reco	orded Data (stream q	auge, moni	toring well, aerial ph	otos, previc	ous inspecti	ons), if available	:			
Remarks:										

Appendix C

Study Area Photos (ground level)





Photo A

Looking northeast at Sample Points 8 and 7 on the southwestern boundary of Wetland A.

Photo taken December 6, 2022.

Photo B

Looking southwest at Sample Points 18 and 17 on the southeastern boundary of Wetland A

Photo taken December 6, 2022.







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Photo C

Looking south at Sample Points 14, 15, and 16, which characterize the northwestern boundary of Wetland A.

Photo taken December 6, 2022.

Photo D

Looking west at Sample Points 15 and 16 in the northeastern portion of Wetland A.

Photo taken December 6, 2022.







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Photo E

Looking west along the northern boundary of Wetland A.

Photo taken December 6, 2022.

Photo F

Looking southeast across the southeastern portion of the study area.

Photo taken December 6, 2022.







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Photo G

Looking northwest at Sample Points 9 and 10.

Photo taken December 6, 2022.

Photo H

Looking south at Sample Points 11 and 12.

Photo taken December 6, 2022.







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Photo I

Looking westat sample Point 6.

Photo taken November 23, 2022.

Photo J

Looking south at Sample Points 13.

Photo taken December 6, 2022.







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Photo K

Looking northwest at Sample Point 2.

Photo taken November 23, 2022.

Photo L

Looking west at Sample Points 4.

Photo taken November 23, 2022.







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Photo M

Looking west at Sample Point 5.

Photo taken November 23, 2022.

7645 3/20/2023



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Appendix D

Wetland Rating Forms



RATING SUMMARY – Western Washington

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

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 - 27

Category II – Total score = 20 - 22

X Category III – Total score = 16 - 19

Category IV – Total score = 9 - 15

FUNCTION	Improving Hydrologic Habitat Water Quality									
	Circle the appropriate ratings									
Site Potential	Н	Μ	L	Н	Μ	L	Н	Μ	L	
Landscape Potential	Н	Μ	L	Н	Μ	L	Н	М	L	
Value	Н	Μ	L	н	М	L	Н	Μ	L	TOTAL
Score Based on Ratings		6			5			5		16

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

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

3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

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	6A
Hydroperiods	D 1.4, H 1.2	n/a
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	n/a
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	7
Map of the contributing basin	D 4.3, D 5.3	n/a
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	9
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	n/a

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 (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	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 (can be added to another figure)	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 (can be added to figure above)	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

NO – go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts perthousand)?

NO - Saltwater Tidal Fringe (Estuarine) *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.*

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

o 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**.

<mark>NO</mark> – 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 <u>A</u>

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

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.
DEPRESSIONAL AND FLATS WETLANDS		
Water Quality Functions - Indicators that the site functions to improve wa	ter 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	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing	g outlet.	2
	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	s = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cow	vardin classes):	
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > $\frac{1}{2}$ of area	points = 3	5
Wetland has persistent, ungrazed plants > $\frac{1}{10}$ of area	points = 1	
Wetland has persistent, ungrazed plants <1/10 of area	points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:		
This is the area that is ponded for at least 2 months. See description in manual.		
Area seasonally ponded is > $\frac{1}{2}$ total area of wetland	points = 4	0
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 l	ooxes above	7

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

Record the rating on the first page

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

Rating of Landscape Potential If score is: <u>3 or 4 = H X 1 or 2 = M</u> 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	1
D 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 the unit is found</i>)? Yes = 2 No = 0	
Total for D 3 Add the points in the boxes above	1
Rating of Value If score is: 2-4 = H_X_1 = M_0 = L Record the rating on the first page	

DEPRESSIONAL AND FLATS WETLANDS			
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradati	on		
D 4.0. Does the site have the potential to reduce flooding and erosion?			
D 4.1. <u>Characteristics of surface water outflows from the wetland</u> : Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 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	2		
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 outletpoints = 7Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	0		
D 4.3. <u>Contribution of the wetland to storage in the watershed</u> : <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i> The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	0		
Total for D 4 Add the points in the boxes above	2		
Rating of Site Potential If score is: $12-16 = H$ $6-11 = M$ X $0-5 = L$ Record the rating on the	first page		
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?			
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0		
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	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.)? Yes = 1 No = 0	1		
Total for D 5Add the points in the boxes above	2		
Rating of Landscape PotentialIf score is:3 = H_X_1 or 2 = M0 = LRecord the rating on the	first page		
D 6.0. Are the hydrologic functions provided by the site valuable to society?			
 D 6.1. <u>The unit is in a landscape that has flooding problems</u>. <i>Choose the description that best matches conditions around the wetland unit being rated. Do not add points</i>. <u>Choose the highest score if more than one condition is met</u>. 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 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 	0		
water stored by the wetland cannot reach areas that flood. <i>Explain why</i> points = 0			
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 6Add the points in the boxes above	0		
Rating of Value If score is:2-4 = H1 = MX0 = LRecord the rating on the	first page		

These questions apply to wetlands of all HGM classes.	
HABITAT FUNCTIONS - Indicators that site functions to provide importanthabitat	
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 X Emergent 3 structures: points = 2 X Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 X Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: X 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 10 structures	4
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).	0
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft ² . 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 5 - 19 species <pre></pre>	2
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. <i>If you</i> <i>have four or more plant classes or three classes and open water, the rating is always high.</i> None = 0 points All three diagrams in this row are HIGH = 3points	2

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
X Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
Standing snags (dbh > 4 in) within the wetland	
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)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	1
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)	
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>	
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>)	
Total for H 1Add the points in the boxes above	9

Rating of Site Potential If score is: ___15-18 = H__X_7-14 = M___0-6 = L

Record the rating on the first page

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).	
Calculate: % undisturbed habitat+ [(% moderate and low intensity land uses)/2]=%	
If total accessible habitat is:	
$> 1/_{3}$ (33.3%) of 1km Polygon points = 3	0
20-33% of 1 km Polygon points = 2	
10-19% of 1 km Polygon points = 1	
< 10% of 1 km Polygon points = 0	
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	0
Undisturbed habitat 10-50% and in 1-3 patches points = 2	0
Undisturbed habitat 10-50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3. Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (- 2)	-2
≤ 50% of 1 km Polygon is high intensity points = 0	
Total for H 2Add the points in the boxes above	-2
Rating of Landscape Potential If score is:4-6 = H1-3 = MX < 1 = L	he first page

H 3.0. Is the habitat provided by the site valuable to society?		
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose onl	ly the highest score	
that applies to the wetland being rated.		
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 st 	ate or federal lists)	
 It is mapped as a location for an individual WDFW priority species 		1
 It is a Wetland of High Conservation Value as determined by the Department of Natura 	l Resources	
 It has been categorized as an important habitat site in a local or regional comprehensiv 	re plan, in a	
Shoreline Master Plan, or in a watershed plan		
Site has 1 or 2 priority habitats (listed on next page) within 100 m	points = 1	
Site does not meet any of the criteria above	points = 0	
Rating of Value If score is: 2 = H X 1 = M 0 = L	Record the rating on th	ne first page

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (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. <u>http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</u> or access the list from here: <u>http://wdfw.wa.gov/conservation/phs/list/</u>)

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: <u>Old-growth west of Cascade crest</u> 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. <u>Mature forests</u> 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.

RATING SUMMARY – Western Washington

 Name of wetland (or ID #):
 Wetland B
 Date of site visit:
 12/6/23

 Rated by
 Craig Tumer
 Trained by Ecology?__Yes___No Date of training_____

HGM Class used for rating <u>Depressional</u> Wetland has multiple HGM classes? Y X N

NOTE: Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map _____

OVERALL WETLAND CATEGORY _____(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

X Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality		Hydrologic			Habita				
		Circle the appropriate ratings								
Site Potential	Н	Μ	L	Н	Μ	L	Н	Μ	L	
Landscape Potential	Н	Μ	L	Н	Μ	L	Н	Μ	L	
Value	н	Μ	L	н	М	L	Н	Μ	L	TOTAL
Score Based on Ratings		6			5			4		15

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

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

3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

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	6B
Hydroperiods	D 1.4, H 1.2	n/a
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	n/a
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	7
Map of the contributing basin	D 4.3, D 5.3	n/a
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	9
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	n/a

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 (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	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	H 2.1, H 2.2, H 2.3	
Screen canture of man of 202(d) listed waters in basin (from Ecology website)	P 2 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 (can be added to another figure)	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 (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

NO – go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts perthousand)?

NO - Saltwater Tidal Fringe (Estuarine) *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.*

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

yesYes - 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**.

<mark>NO</mark> – 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 <u>B</u>

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

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

DEPRESSIONAL AND FLATS WETLANDS							
water Quality Functions - Indicators that the site functions to improve water quality							
D 1.0. Does the site have the potential to improve water quality?							
D 1.1. 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						
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing	g outlet.	3					
	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	s = 4 No = 0	0					
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cow	vardin classes):						
Wetland has persistent, ungrazed, plants > 95% of area	points = 5						
Wetland has persistent, ungrazed, plants > $\frac{1}{2}$ of area	points = 3	5					
Wetland has persistent, ungrazed plants > $\frac{1}{10}$ of area	points = 1						
Wetland has persistent, ungrazed plants $<^{1}/_{10}$ of area	points = 0						
D 1.4. Characteristics of seasonal ponding or inundation:							
This is the area that is ponded for at least 2 months. See description in manual.							
Area seasonally ponded is $> \frac{1}{2}$ 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 b	ooxes above	10					

Rating of Site Potential If score is: ___12-16 = H_X_6-11 = M___0-5 = L

Record the rating on the first page

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

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

D 3.0. Is the water quality improvement provided by the site valuable to society?					
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0					
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					
D 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 the unit is found</i>)? Yes = 2 No = 0					
Total for D 3Add the points in the boxes above	0				
Rating of Value If score is: 2-4 = H X 1 = M 0 = L Record the rating on the first page					

DEPRESSIONAL AND FLATS WETLANDS					
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradati	on				
D 4.0. Does the site have the potential to reduce flooding and erosion?					
D 4.1. <u>Characteristics of surface water outflows from the wetland</u> : Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 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	4				
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 outletpoints = 7Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	7				
D 4.3. <u>Contribution of the wetland to storage in the watershed</u> : <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i> The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	0				
Total for D 4Add the points in the boxes above	11				
Rating of Site Potential If score is: 12-16 = H X 6-11 = M 0-5 = L Record the rating on the provided	first page				
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?					
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0				
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	0				
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	1				
Total for D 5Add the points in the boxes above	1				
Rating of Landscape Potential If score is:3 = H_X_1 or 2 = M0 = L Record the rating on the provided of the state of the	first page				
D 6.0. Are the hydrologic functions provided by the site valuable to society?					
 D 6.1. <u>The unit is in a landscape that has flooding problems</u>. <i>Choose the description that best matches conditions around the wetland unit being rated. Do not add points. <u>Choose the highest score if more than one condition is met.</u> 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):</i> Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 Surface flooding problems are in a sub basin father down gradient 	0				
 Surface flooding problems are in a sub-basin farther down-gradient. Flooding from groundwater is an issue in the sub-basin. points = 1 	0				
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. <i>Explain why</i> points = 0 There are no problems with flooding downstream of the wetland.					
P(G) lies the site been identified as important for flood starses or flood services in a matrix flood starses of flood starses of flood starses in a matrix flood starses of					
V 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 6Add the points in the boxes above	0				
Rating of Value If score is: 2-4 = H 1 = M X 0 = L Record the rating on the provided	first page				

These questions apply to wetlands of all HGM classes.				
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat				
H 1.0. Does the site have the potential to provide habitat?				
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.				
H 1 2 Hydroneriods				
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 2 points Seasonally flowing stream in, or adjacent to, the wetland 2 points Seasonally flowing stream in, or adjacent to, the wetland 2 points	1			
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft ² . 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	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. <i>If you</i> <i>have four or more plant classes or three classes and open water, the rating is always high.</i> None = 0 points All three diagrams in this row are HIGH = 3points	0			

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
X_Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
Standing snags (dbh > 4 in) within the wetland	
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)	
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 (cut shrubs or trees that have not yet weathered where wood is exposed)	3
 X At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) X Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata) 	
Tatal for 111	-
Add the points in the boxes above	5

Rating of Site Potential If score is: ___15-18 = H____7-14 = M__X_0-6 = L

Record the rating on the first page

H 2.0. Does the landscape have the potential to support the habitat functions of the site?		
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).		
Calculate: % undisturbed habitat+ [(% moderate and low intensity land uses)/2]=%		
If total accessible habitat is:		
$> 1/_{3}$ (33.3%) of 1 km Polygon points = 3	0	
20-33% of 1 km Polygon points = 2		
10-19% of 1 km Polygon points = 1		
< 10% of 1 km Polygon points = 0		
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	0	
Undisturbed habitat 10-50% and in 1-3 patches points = 2	0	
Undisturbed habitat 10-50% and > 3 patches points = 1		
Undisturbed habitat < 10% of 1 km Polygon points = 0		
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		
Total for H 2 Add the points in the boxes above	-2	
Rating of Landscape Potential If score is:4-6 = H1-3 = MX < 1 = L Record the rating on the second secon	he first page	

H 3.0. Is the habitat provided by the site valuable to society?	_
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score	
that applies to the wetland being rated.	
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 	1
 It is a Wetland of High Conservation Value as determined by the Department of Natural Resources 	
— It has been categorized as an important habitat site in a local or regional comprehensive plan, in a	
Shoreline Master Plan, or in a watershed plan	
Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1	
Site does not meet any of the criteria above points = 0	
Rating of Value If score is: 2 = H X 1 = M 0 = L Record the rating on	the first page

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (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. <u>http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</u> or access the list from here: <u>http://wdfw.wa.gov/conservation/phs/list/</u>)

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: <u>Old-growth west of Cascade crest</u> 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. <u>Mature forests</u> 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.

RATING SUMMARY – Western Washington

 Name of wetland (or ID #):
 Wetland C
 Date of site visit: 12/6/23

 Rated by
 Craig Tumer
 Trained by Ecology? Yes No Date of training

HGM Class used for rating <u>Depressional</u> Wetland has multiple HGM classes? Y X N

NOTE: Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map _____

OVERALL WETLAND CATEGORY _____ (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

X Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality		Hydrologic			Habita				
		Circle the appropriate ratings					tings			
Site Potential	Н	Μ	L	Н	Μ	L	Н	Μ	L	
Landscape Potential	Н	Μ	L	Н	Μ	L	Н	Μ	L	
Value	н	Μ	L	н	М	L	Н	Μ	L	TOTAL
Score Based on Ratings		6			5			4		15

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

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

3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

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	6C
Hydroperiods	D 1.4, H 1.2	n/a
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	n/a
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	7
Map of the contributing basin	D 4.3, D 5.3	n/a
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	9
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	n/a

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 (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	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	H 2.1, H 2.2, H 2.3	
Screen canture of man of 202(d) listed waters in basin (from Ecology website)	P 2 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 (can be added to another figure)	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 (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

NO – go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts perthousand)?

NO - Saltwater Tidal Fringe (Estuarine) *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.*

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

yesYes - 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**.

<mark>NO</mark> – 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 <u>C</u>

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

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

DEPRESSIONAL AND FLATS WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. <u>Characteristics of surface water outflows from the wetland</u> : Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	3
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	0
D 1.3. <u>Characteristics and distribution of persistent plants</u> (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area Wetland has persistent, ungrazed, plants > ½ of area Wetland has persistent, ungrazed plants > $\frac{1}{10}$ of area Wetland has persistent, ungrazed plants < $\frac{1}{10}$ of area Points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation: This is the area that is ponded for at least 2 months. See description in manual. Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is > ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland	0
Total for D 1 Add the points in the boxes above	8

Rating of Site Potential If score is: ___12-16 = H_X_6-11 = M___0-5 = L

Record the rating on the first page

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	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	0
Total for D 2Add the points in the boxes above	1

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

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	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	1
D 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 the unit is found</i>)? Yes = 2 No = 0	0
Total for D 3Add the points in the boxes above	0
Rating of Value If score is: 2-4 = H_X_1 = M_0 = L Record the rating on the first page	

DEPRESSIONAL AND FLATS WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradati	on
D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. <u>Characteristics of surface water outflows from the wetland</u> : Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 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	4
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 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 = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	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 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	0
Total for D 4 Add the points in the boxes above	4
Rating of Site Potential If score is: $12-16 = H_6-11 = M_X_0-5 = L$ Record the rating on the	first page
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = $1 \text{ No} = 0$	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.)? Yes = 1 No = 0	1
Total for D 5Add the points in the boxes above	2
Rating of Landscape Potential If score is:3 = HX 1 or 2 = M0 = L Record the rating on the J	first page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	
 D 6.1. <u>The unit is in a landscape that has flooding problems</u>. <i>Choose the description that best matches conditions around the wetland unit being rated. Do not add points</i>. <u>Choose the highest score if more than one condition is met</u>. 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 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 wotland capnet reach areas that flood. <i>Explain why</i> 	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 6Add the points in the boxes above	0
Rating of Value If score is: 2-4 = H 1 = M X 0 = L Record the rating on the provided	first page

These questions apply to wetlands of all HGM classes.	
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
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 Berregent 3 structures: points = 2 Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 X Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: X 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 1	1
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). 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 X_Saturated only 1 type present: points = 0 Permanently flowing stream or river in, or adjacent to, the wetland 2 points = 0	0
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft ² . 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	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. <i>If you</i> <i>have four or more plant classes or three classes and open water, the rating is always high.</i> None = 0 points All three diagrams in this row are HIGH = 3points	0

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
X Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
Standing snags (dbh > 4 in) within the wetland	
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)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	1
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)	
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>)	
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>)	
Total for H 1Add the points in the boxes above	3

Rating of Site Potential If score is: ___15-18 = H____7-14 = M__X_0-6 = L

Record the rating on the first page

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).	
Calculate: % undisturbed habitat+ [(% moderate and low intensity land uses)/2]=	%
If total accessible habitat is:	_
$> 1/_{3}$ (33.3%) of 1km Polygon points =	3 0
20-33% of 1 km Polygon points =	2
10-19% of 1 km Polygon points =	1
< 10% of 1 km Polygon points =	0
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 0
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
H 2.3. Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-2	2) -2
≤ 50% of 1 km Polygon is high intensity points =	0
Total for H 2Add the points in the boxes above	e -2
Rating of Landscape Potential If score is:4-6 = H1-3 = MX_<1 = L Record the rating	on the first page

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score	
that applies to the wetland being rated.	
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 	1
 It is a Wetland of High Conservation Value as determined by the Department of Natural Resources 	
— It has been categorized as an important habitat site in a local or regional comprehensive plan, in a	
Shoreline Master Plan, or in a watershed plan	
Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1	
Site does not meet any of the criteria above points = 0	
Rating of Value If score is: 2 = H X 1 = M 0 = L Record the rating of Value If score is:	n the first page

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RATING SUMMARY – Western Washington

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 Wetland D
 Date of site visit: 12/6/23

 Rated by
 Craig Tumer
 Trained by Ecology?
 Yes
 No Date of training

HGM Class used for rating <u>Depressional</u> Wetland has multiple HGM classes? Y X N

NOTE: Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map _____

OVERALL WETLAND CATEGORY _____ (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

X Category IV – Total score = 9 - 15

FUNCTION	l Wa	mprov ater Qu	ving uality	H	ydrolc	ogic		Habita	at	
					Circle t	the ap	propr	riate ra	tings	
Site Potential	Н	Μ	L	Н	Μ	L	Н	Μ	L	
Landscape Potential	Н	Μ	L	Н	Μ	L	Н	Μ	L	
Value	н	Μ	L	н	М	L	Н	Μ	L	TOTAL
Score Based on Ratings		6			5			4		15

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

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

3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

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	6C
Hydroperiods	D 1.4, H 1.2	n/a
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	n/a
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	7
Map of the contributing basin	D 4.3, D 5.3	n/a
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	9
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	n/a

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 (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	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 (can be added to another figure)	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 (can be added to figure above)	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

NO – go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts perthousand)?

NO - Saltwater Tidal Fringe (Estuarine) *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.*

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).

<mark>NO</mark> – go to 4

o 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**.

<mark>NO</mark> – 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 <u>D</u>

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

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

DEPRESSIONAL AND FLATS WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. <u>Characteristics of surface water outflows from the wetland</u> : Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2	3
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 sail 2 in below the surface (or duff layer) is true clay or true errors (use NRCC definitions) Yes = 4 No = 0	0
D 1.2. <u>Ine soil 2 in below the surface (or dull layer)</u> is true clay or true organic (<i>use NRCS definitions</i>). Yes = 4 No = 0 D 1.3. <u>Characteristics and distribution of persistent plants</u> (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 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	5
D 1.4. Characteristics of seasonal ponding or inundation: This is the area that is ponded for at least 2 months. See description in manual. Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is < ½ total area of wetland	0
Total for D 1Add the points in the boxes above	8

Rating of Site Potential If score is: ___12-16 = H_X_6-11 = M___0-5 = L

Record the rating on the first page

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	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? SourceYes = 1 No = 0	
Total for D 2Add the points in the boxes above	1

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

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	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	1
D 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 the unit is found</i>)? Yes = 2 No = 0	
Total for D 3 Add the points in the boxes above	0
Rating of Value If score is: 2-4 = H_X_1 = M_0 = L Record the rating on the first page	

DEPRESSIONAL AND FLATS WETLANDS			
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation			
D 4.0. Does the site have the potential to reduce flooding and erosion?			
D 4.1. <u>Characteristics of surface water outflows from the wetland</u> : Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 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	4		
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 outletpoints = 7Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	0		
D 4.3. <u>Contribution of the wetland to storage in the watershed</u> : <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i> The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	0		
Total for D 4Add the points in the boxes above	4		
Rating of Site Potential If score is: 12-16 = H 6-11 = M X 0-5 = L Record the rating on the standard term of t	first page		
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?			
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0		
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	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.)? Yes = 1 No = 0			
Total for D 5Add the points in the boxes above	2		
Rating of Landscape Potential If score is:3 = HX_1 or 2 = M0 = L Record the rating on the provided on t	first page		
D 6.0. Are the hydrologic functions provided by the site valuable to society?			
 D 6.1. <u>The unit is in a landscape that has flooding problems</u>. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. <u>Choose the highest score if more than one condition is met</u>. 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 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 	0		
water stored by the wetland cannot reach areas that flood. <i>Explain why</i> points = 0			
There are no problems with flooding downstream of the wetland. points = 0			
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 6Add the points in the boxes above	0		
Rating of Value If score is: 2-4 = H 1 = M X 0 = L Record the rating on the provided	first page		

These questions apply to wetlands of all HGM classes.	
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
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 Berregent 3 structures: points = 2 Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 X Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: X 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 1	1
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). 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 X_Saturated only 1 type present: points = 0 Permanently flowing stream or river in, or adjacent to, the wetland 2 points = 0	0
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft ² . 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	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. <i>If you</i> <i>have four or more plant classes or three classes and open water, the rating is always high.</i> None = 0 points Low = 1 point All three diagrams in this row are HIGH = 3points	0

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
X_Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
Standing snags (dbh > 4 in) within the wetland	
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)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	1
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)	
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>)	
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>)	
Total for H 1Add the points in the boxes above	3

Rating of Site Potential If score is: ___15-18 = H____7-14 = M__X_0-6 = L

Record the rating on the first page

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).	
Calculate: % undisturbed habitat+ [(% moderate and low intensity land uses)/2]=%	
If total accessible habitat is:	
$> 1/_{3}$ (33.3%) of 1km Polygon points = 3	0
20-33% of 1 km Polygon points = 2	
10-19% of 1 km Polygon points = 1	
< 10% of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate: % undisturbed habitat+ [(% moderate and low intensity land uses)/2]=_%	0
Undisturbed habitat > 50% of Polygon points = 3	
Undisturbed habitat 10-50% and in 1-3 patches points = 2	0
Undisturbed habitat 10-50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3. Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (- 2)	-2
≤ 50% of 1 km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above	-2
Rating of Landscape Potential If score is:4-6 = H1-3 = MX< 1 = LRecord the rating on the second the seco	ne first page

H 3.0. Is the habitat provided by the site valuable to society?		
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the h that applies to the wetland being rated.</i>	nighest score	
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 		1
 It is a Wetland of High Conservation Value as determined by the Department of Natural Resource 	urces	
 It has been categorized as an important habitat site in a local or regional comprehensive plan, 	, ina	
Shoreline Master Plan, or in a watershed plan		
Site has 1 or 2 priority habitats (listed on next page) within 100 m	points = 1	
Site does not meet any of the criteria above	points = 0	
Rating of Value If score is: 2 = H X 1 = M 0 = L Record	d the rating on	the first page

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (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. <u>http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</u> or access the list from here: <u>http://wdfw.wa.gov/conservation/phs/list/</u>)

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: <u>Old-growth west of Cascade crest</u> 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. <u>Mature forests</u> 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.