



# ATTACHMENT G3-4

## **Wetland Data Determination Forms**

Table G3.4-1 Wetland Determination Sample Points

Sample Point	Wetland Determination (wetland/upland)	USFWS Wetland Classification	Vegetation	Soils	Hydrology	Report Notes
SP WFW 1-1	Wetland	PFO	Dominance Test	A12	Secondary: D2, D5	
SP WFW 1-2	Wetland	PFO	Dominance Test	A12	Secondary: D2, D5	
SP WFW 1-3	Upland	n/a	none	none	none	
SP WFW 1-4	Wetland	PEM	Dominance Test	other	Secondary: D2, D5	Hydric Soils rationale: Sample plot nearly meets indicator for F6, Redox Dark Surface. Dark surface layers may have redox that is difficult to see. Given presence of hydrophytic vegetation and geomorphic position below OHWM of East Fork Hylebos Creek, soil is likely seasonally flooded for 14 or more consecutive days during the growing season, and therefore hydric soils presumed to exist.
SP WFW 1-5	Upland	n/a	none	none	none	
SP WFW 1-6	Wetland	PFO	Dominance Test	F6	Primary: B1 Secondary: B9, D2	
SP WFW 1-7	Upland	n/a	none	none	none	
SP WFW 1-8	Wetland	PFO	Dominance Test	Other	Primary: B1 Secondary: D5	Hydric Soils rationale: Sample plot nearly meets redox dark surface. Given presence of water marks in the area and presence of hydrophytic vegetation, it is assumed that the area is inundated for 14 or more consecutive days during growing season and therefore hydric soil is present.
SP WFW 2-1	Wetland	PFO	Rapid Test for Hydrophytic Vegetation	A1	Primary: A1, A2, A3, B1 Secondary: D5	
SP WFW 2-2	Upland	n/a	Dominance Test	none	none	
SP WFW 2-3	Wetland	PFO	Dominance Test	A4, A12	Primary: A2, A3, C1	
SP WFW 2-4	Upland	n/a	none	none	none	
SP WFW 3-1	Wetland	PSS	Dominance Test	F6	Primary: A2, A3	
SP WFW 3-2	Upland	n/a	Dominance Test	none	none	
SP WFW 4-1	Wetland	PSS	Dominance Test	F6	Primary: A2, A3 Secondary: D5	
SP WFW 4-2	Upland	n/a	Dominance Test	none	none	
SP WFW 5-1	Wetland	PFO	Dominance Test	A12	Primary: A1, A2, A3	
SP WFW 5-2	Upland	n/a	none	none	none	
SP WFW 6-1	Wetland	PSS	Dominance Test	F6	Primary: A1, A2, A3	
SP WFW 6-2	Upland	n/a	none	none	none	
WFW-07-SP1	Wetland	PEM	Dominance Test	Other	Primary: A2, A3 Secondary: D2, D5	Hydric Soil Rationale: Soils appear to be a fluvial entisol with an aquic moisture regime. Hydric soils supported by hydrophytic vegetation and strong hydrology indicators.
WFW-07-SP2	Upland	n/a	Dominance Test	none	none	
WFW-07-SP3	Wetland	PSS	Dominance Test	A11, F3	Primary: A3, B2, B3 Secondary: D2, D5	
WFW-07-SP4	Upland	n/a	none	none	none	

Table G3.4-1 Wetland Determination Sample Points (continued)

Sample Point	Wetland Determination (wetland/upland)	USFWS Wetland Classification	Vegetation	Soils	Hydrology	Report Notes
WFW-08-SP1	Wetland	PSS	Dominance Test	Other	Primary: A1, A2, A3, B1 Secondary: D2, D5	Hydric Soil Rationale: Stream has been heavily modified, evidenced by quarry spalls at 4.5 inches below ground surface, and appears to be used as a constructed stormwater facility. Soil appears to be a fluvial entisol with aquic moisture regime. Supported by strong hydrophytic vegetation, geomorphic position on stream bench, significant organics in soils, and strong wetland hydrology indicators
WFW-08-SP2	Upland	n/a	none	none	none	
WFW-08-SP3	Wetland	PEM	Dominance Test	Other	Primary: A2, A3, B1 Secondary: D2, D5	Hydric Soil Rationale: Stream has been heavily modified, evidenced by quarry spalls at 7 inches below ground surface, and appears to be used as a constructed stormwater facility. Soil appears to be a fluvial entisol with aquic moisture regime. Supported by strong hydrophytic vegetation, geomorphic position on stream bench, and strong wetland hydrology indicators.
WFW-09-SP1	Wetland	PSS	Dominance Test	A11 and F3	Primary: A2, A3, C3 Secondary: D2, D5	
WFW-09-SP2	Upland	n/a	Dominance Test	none	Secondary: D5	
WFW-10-SP01	Wetland	PFO	Dominance Test	Other	Primary: A2, A3 Secondary: D2, D5	Hydric Soil Rationale: Soils appear to be a fluvial entisol with an aquic moisture regime. Hydric soils supported by hydrophytic vegetation and strong hydrology indicators.
WFW-10-SP10	Upland	n/a	None	none	none	
WFW-10-SP11	Upland	n/a	none	none	none	
WFW-10-SP12	Wetland	PFO	Dominance Test	Other	Primary: A2, A3 Secondary: D2, D5	Hydric Soil Rationale: Soils appear to be a fluvial entisol with an aquic moisture regime. Hydric soils supported by strong hydrophytic vegetation and strong hydrology indicators.
WFW-10-SP13	Wetland	PFO	Dominance Test	F6	A2, A3	
WFW-10-SP02	Upland	n/a	Dominance Test	none	none	
WFW-10-SP03	Wetland	PFO	Dominance Test	A4, A11	Primary: A2, A3 Secondary: D2	
WFW-10-SP04	Upland	n/a	none	none	none	
WFW-10-SP05	Wetland	PFO	Dominance Test	F6	Primary: A3 Secondary: D2	
WFW-10-SP06	Upland	n/a	Dominance Test	none	none	

Table G3.4-1 Wetland Determination Sample Points (continued)

Sample Point	Wetland Determination (wetland/upland)	USFWS Wetland Classification	Vegetation	Soils	Hydrology	Report Notes
WFW-10-SP07	Wetland	PFO	Dominance Test	F6	Primary: A2, A3 Secondary: D5	
WFW-10-SP08	Upland	n/a	Dominance Test	none	Secondary: D5	
WFW-10-SP09	Wetland	PFO	Dominance Test	A11	Primary: A3	
WFW-11-SP1	Wetland	PFO	Dominance Test	A11, F3	Primary: A2, A3 Secondary: D2, D5	
WFW-11-SP2	Upland	n/a	none	none	none	
WFW-11-SP3	Wetland	PEM	Dominance Test	F6	Primary: A2, A3 Secondary: D5	
WFW-11-SP4	Upland	n/a	Dominance Test	none	none	
WFW-12-SP1	Wetland	PEM	Dominance Test	other	Primary: A2, A3, B1 Secondary: D2, D5	Hydric Soil Rationale: Sample point is approximately 2m from wetted stream and is within the floodplain. The stream has been highly modified. Soils are a fluvial entisol with aquic moisture regime. Soils have high organic content that may also mask redox. Supported by strong hydrophytic vegetation and wetland hydrology
WFW-12-SP2	Upland	n/a	Dominance Test	none	none	
WFW-13-SP1	Wetland	PSS	Dominance Test	A11, F3	Primary: A3, B8 Secondary: D2	
WFW-13-SP2	Upland	n/a	none	none	none	
WFW-14-SP1	Wetland	PEM	Dominance Test	F3	Primary: C3 Secondary: D2	
WFW-14-SP2	Upland	n/a	Dominance Test	none	none	
WFW-14-SP3	Upland	n/a	Dominance Test	none	none	
WFW-15-SP1	Wetland	PFO	Dominance Test	A11	A3	
WFW-15-SP2	Upland	n/a	none	none	none	
WFW-15-SP3	Wetland	PFO	Dominance Test	F6	Primary: A2, A3 Secondary: D2, D5	
WFW-15-SP4	Upland	n/a	none	none	none	
WFW-15-SP5	Wetland	PFO	Dominance Test	F6	Primary: A2, A3 Secondary: D2	
WFW-16-SP1	Wetland	PEM	Dominance Test	A11, F3	Primary: A3 Secondary: B10, D5	
WFW-16-SP2	Upland	n/a	none	A11, F3	none	
WFW-16-SP3	Wetland	PSS	Dominance Test	A11, F3	Primary: A2, A3 Secondary: D5	
WFW-16-SP4	Upland	n/a	Dominance Test	A11, F3	none	
SP WFW 17-1	Wetland	PFO	Dominance Test	A11	Primary: A2, A3	
SP WFW 17-2	Upland	n/a	Dominance Test	none	Primary: A2, A3	
SP WFW 18-1	Wetland	PFO	Dominance Test	F3	Primary: A1, A2, A3 Secondary: D5	
SP WFW 18-2	Upland	n/a	Dominance Test	none	Primary: A2, A3	

Table G3.4-1 Wetland Determination Sample Points (continued)

Sample Point	Wetland Determination (wetland/upland)	USFWS Wetland Classification	Vegetation	Soils	Hydrology	Report Notes
WFW-21-SP1	Wetland	PSS	Dominance Test	F6	Primary: A2, A3, B1, B2, B3 Secondary: D2, D5	
WFW-21-SP2	Upland	n/a	none	A11, F3	none	
WFW-22-SP1	Wetland	PSS	Dominance Test	A11, F3	Primary: A1, A2, A3, B4 Secondary: D2, D5	
WFW-22-SP2	Upland	n/a	Dominance Test	F3	none	
WFW-32-SP1	Wetland	PSS	Dominance Test	F3, A11	Primary: A2, A3 Secondary: D2	
WFW-32-SP2	Upland	n/a	Dominance Test	F3, A11	none	
SP FW V1	Upland	n/a	Dominance Test	none	none	
SP FW V2	Upland	n/a	none	none	none	
SP FW V3	Upland	n/a	none	none	none	
SP FW V4	Upland	n/a	none	none	none	
SP FW V5	Upland	n/a	none	none	Primary: A1, A2, A3	
SP FW V6	Upland	n/a	Dominance Test	none	Primary: A2, A3	
SP FW V7	Upland	n/a	Dominance Test	none	Primary: A2, A3	
SP FW V8	Upland	n/a	Dominance Test	n/a	none	

Notes:

1 Wetland determinations based on the U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0 (Corps 2010).

2 PEM = palustrine emergent; PFO = palustrine forested; PSS= palustrine scrub-shrub (Cowardin et al. 1979, FGDC 2013).

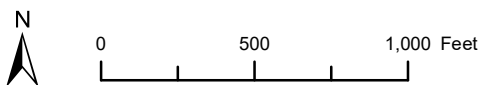


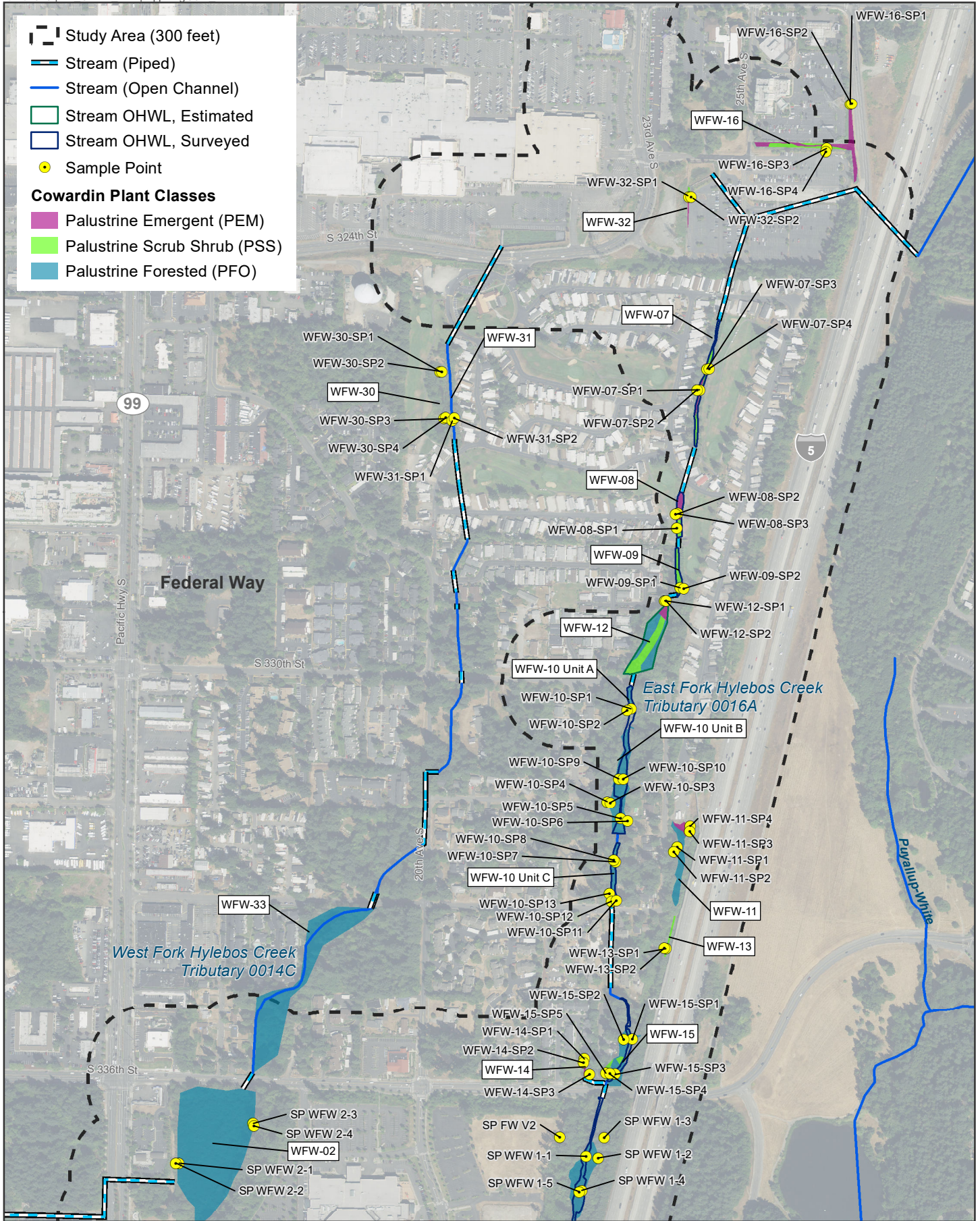
Data Sources: Valtus (2017); WDFW (2020); King County; Cities of Des Moines, Federal Way, Kent (2019).

**FIGURE G3-4.1**

**Wetland Determination Sample Points  
Midway Landfill Alternative**

OMF South

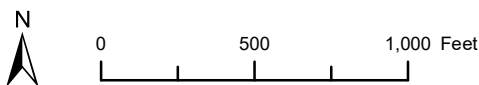


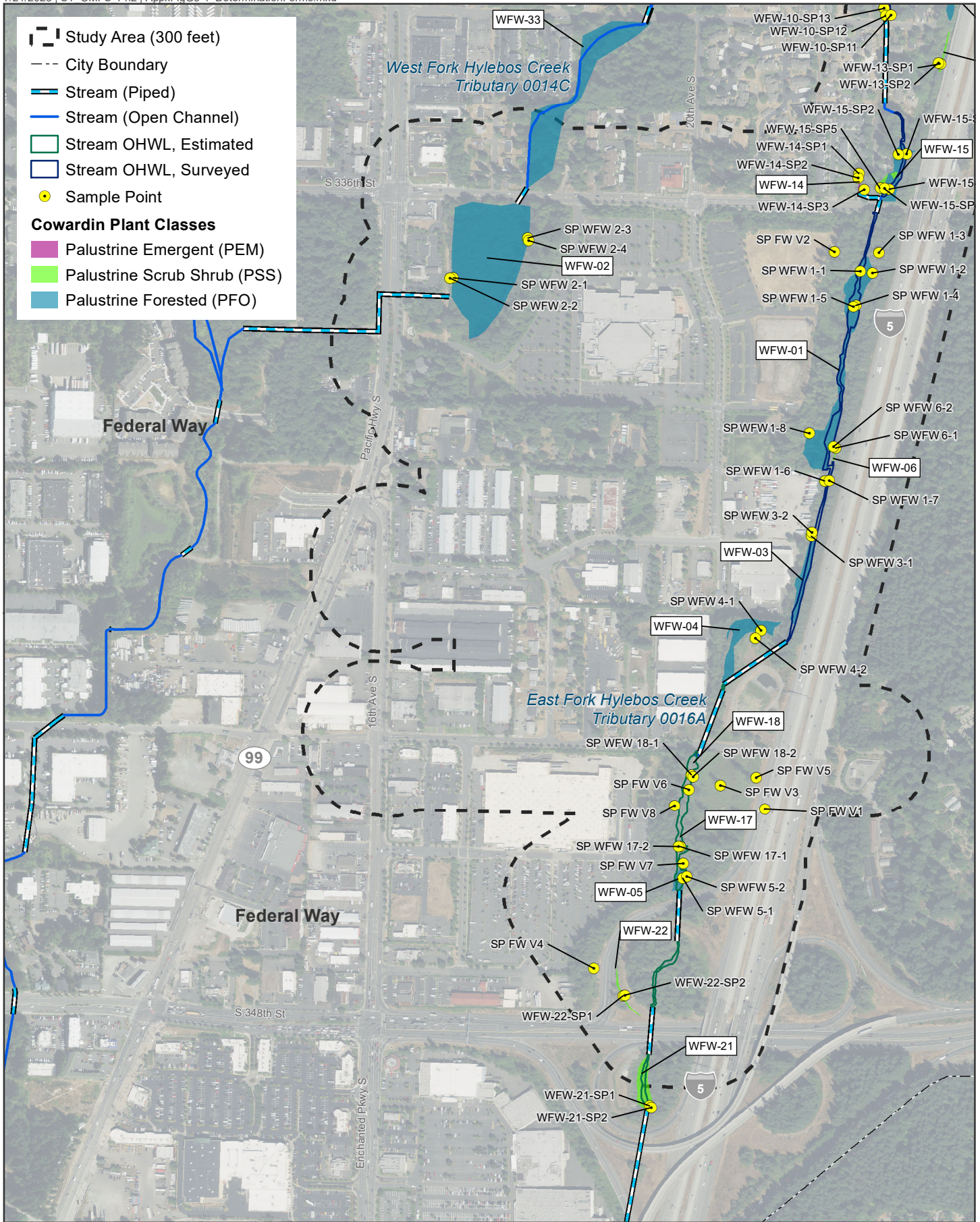


Data Sources: Valtus (2017); WDFW (2020); King County; Cities of Des Moines, Federal Way, Kent (2019).

**FIGURE G3-4.2**

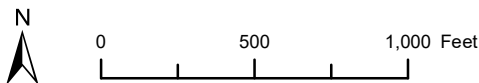
**Wetland Determination Sample Points  
Mainline Track Options**





Data Sources: Valtus (2017); WDFW (2020); King County; Cities of Des Moines, Federal Way, Kent (2019).

**FIGURE G3-4.3**  
Wetland Determination Sample Points  
South 336th Street and South 344th Street Alternatives





**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/9/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP FW V1  
 Investigators: DANIELSKI Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope(%): 0  
 Subregion (LRR): A Lat: 47.292610 Long: -122.305954 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u>	No <u>X</u>		
Wetland Hydrology Present?	Yes <u>    </u>	No <u>X</u>		

Remarks:  
 Verification plot in salmonberry dominated swale. Sample plot has 1 of 3 wetland indicators, is not located in a wetland. The preceding three months were wetter than normal; however, site visit occurred at end of the dry season so dry season conditions were still considered when evaluating hydrology.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
= Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> Total % Cover of: <u>85</u> Multiply by: OBL species <u>    </u> x1= <u>    </u> FACW species <u>    </u> x2= <u>0</u> FAC species <u>85</u> x3= <u>255</u> FACU species <u>10</u> x4= <u>40</u> UPL species <u>    </u> x5= <u>0</u> Column Totals: <u>95</u> (A) <u>295</u> (B)  <i>Prevalence Index = B/A= 3.11</i>
1. <u>Rubus spectabilis</u>	<u>70</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Oemleria cerasiformis</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
3. <u>Rubus ursinus</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
= Total Cover				
<u>Herb Stratum</u> (Plot size: 1m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Tolmiea menziesii</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
9. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
10. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
11. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
= Total Cover				
<u>Woody Vine Stratum</u> (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>    </u>
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
= Total Cover				
% Bare Ground in Herb Stratum	<u>85</u>	% Cover of Biotic Crust <u>    </u>		

Remarks:  
 Sample plot meets dominance test but does not meet prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP FW V1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14	10YR 3/3	100					Sandy Loam	

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No _____ <b>X</b>
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Remarks:  
Sample plot lacks indicators of hydric soil.

**HYDROLOGY**

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

<b>Field Observations:</b> Surface Water Present?    Yes _____ No <b>X</b> Depth (inches): _____ Water Table Present?    Yes _____ No <b>X</b> Depth (inches): _____ Saturation Present?    Yes _____ No <b>X</b> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <b>X</b>
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Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
No primary or secondary wetland hydrology indicators observed.

**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/10/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP FW V2  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope(%): 0  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.299988 Long: -122.304810 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

Hydrophytic Vegetation Present?	Yes <u>    </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>X</u>		
Wetland Hydrology Present?	Yes <u>    </u> No <u>X</u>		

Remarks:  
 Verification plot located in ditch south of S. 336th Street. Sample plot has 0 of 3 wetland indicators, is not located in a wetland. The preceding three months were wetter than normal; however, site visit occurred at end of the dry season so dry season conditions were still considered when evaluating hydrology.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Rubus armeniacus</u>	<u>4</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
<u>Herb Stratum</u> (Plot size: 1m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>    </u> X <u>    </u>
1. <u>Hypochaeris radicata</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Agrostis capillaris</u>	<u>7</u>	<u>No</u>	<u>FAC</u>	
3. <u>Conium maculatum</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
4. <u>Phalaris arundinacea</u>	<u>5</u>	<u>No</u>	<u>FACW</u>	
5. <u>Carduus nutans</u>	<u>4</u>	<u>No</u>	<u>UPL</u>	
6. <u>Claytonia sibirica</u>	<u>3</u>	<u>No</u>	<u>FAC</u>	
7. <u>Galium aparine</u>	<u>3</u>	<u>No</u>	<u>FACU</u>	
8. <u>Ranunculus repens</u>	<u>2</u>	<u>No</u>	<u>FAC</u>	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum <u>56</u> % Cover of Biotic Crust _____				

Remarks:  
 Sample plot does not meet dominance test or prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP FW V2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 3/2	100					Silt Loam	
16-18								Drain rock

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

<b>Restrictive Layer (if present):</b>	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks:  
Sample plot lacks hydric soil indicators. Between horizon 1 and horizon 2 is a layer of geotextile fabric. Swale is clearly constructed and has drain rock liner to move water.

**HYDROLOGY**

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

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

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

Remarks:  
No primary or secondary wetland hydrology indicators observed.

**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/22/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP FW V3  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Flat Local Relief (concave, convex, none): None Slope(%): 0  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.292915 Long: -122.306824 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

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

Remarks:  
 Conditions wetter than normal for time of year. Sample plot has 0 of 3 indicators, is not located in a wetland.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. <u>Pseudotsuga menziesii</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>10</u>	<u>= Total Cover</u>		
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x1= _____ FACW species _____ x2= <u>0</u> FAC species <u>85</u> x3= <u>255</u> FACU species <u>15</u> x4= <u>60</u> UPL species _____ x5= <u>0</u> Column Totals: <u>100</u> (A) <u>315</u> (B)  <i>Prevalence Index = B/A= <u>3.15</u></i>
1. <u>Rubus armeniacus</u>	<u>85</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Prunus emarginata</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	<u>90</u>	<u>= Total Cover</u>		
<u>Herb Stratum</u> (Plot size: 1m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
	_____	<u>= Total Cover</u>		
<u>Woody Vine Stratum</u> (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input type="checkbox"/> X <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
	_____	<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>100</u>		% Cover of Biotic Crust _____		

Remarks:  
 Sample plot does not meet dominance test or prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP FW V3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/3	100					Sandy Loam	
8-18	10YR 4/6	100					Sandy Loam	

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

<b>Restrictive Layer (if present):</b>	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks:  
Sample plot lacks hydric soil indicators.

**HYDROLOGY**

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

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

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

Remarks:  
No primary or secondary hydrology indicators observed.



**SOIL**

Sampling Point: SP FW V4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 2/2	100					Silt Loam	Significant duff and leaf litter
6-18	10YR 4/6	100					Silt Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

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

<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes _____ No _____ X _____</p>
---	--

Remarks:  
Sample plot lacks hydric soil indicators.

**HYDROLOGY**

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

<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes _____ No _____ X _____    Depth (inches): _____</p> <p>Water Table Present?    Yes _____ No _____ X _____    Depth (inches): _____</p> <p>Saturation Present?    Yes _____ No _____ X _____    Depth (inches): _____</p> <p>(includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b>    Yes _____ No _____ X _____</p>
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Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
No primary or secondary hydrology indicators observed.



**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 12/19/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP FW V5  
 Investigators: STORY, DANIELSKI Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Channel Local Relief (concave, convex, none): None Slope(%): 0  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.293034 Long: -122.306145 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

Hydrophytic Vegetation Present?	Yes <u>    </u>	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u>	No <u>X</u>		
Wetland Hydrology Present?	Yes <u>X</u>	No <u>    </u>		

Remarks:  
 Sample plot located in small side channel. Sample plot has 1 of 3 wetland criteria, is not located in a wetland.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
		= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)				
1. <u>Rubus armeniacus</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Rubus laciniatus</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	<u>30</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 1m)				
1. <u>Agrostis capillaris</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Pteridium aquilinum</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
	<u>50</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
		= Total Cover		
% Bare Ground in Herb Stratum <u>50</u>		% Cover of Biotic Crust _____		

Remarks:  
 Sample plot does not meet dominance test or prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP FW V5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 3/2	100					Sandy Loam	
9-12	10YR 3/3	100					Sandy Loam	Gravelly, compacted

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

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No X

Remarks:

Sample plot lacks hydric soil indicators.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (2 or more required)

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

**Field Observations:**

Surface Water Present? Yes X No \_\_\_\_\_ Depth (inches): \_\_\_\_\_ 1.00  
 Water Table Present? Yes X No \_\_\_\_\_ Depth (inches): \_\_\_\_\_ 0.0  
 Saturation Present? Yes X No \_\_\_\_\_ Depth (inches): \_\_\_\_\_ 0.0  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes X No \_\_\_\_\_

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

Remarks:

Plot in small side channel, possibly old roadbed. Flooded from recent rains. Sample plot meets primary hydrology indicators for surface water, high water table, and saturation.

**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 12/19/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP FW V6  
 Investigators: STORY, DANIELSKI Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Channel Local Relief (concave, convex, none): None Slope(%): 0  
 Subregion (LRR): A Lat: 47.292854 Long: -122.307457 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u>	No <u>X</u>		
Wetland Hydrology Present?	Yes <u>X</u>	No <u>    </u>		

Remarks:  
 Sample plot lacks hydric soil and is not located within a wetland. Site visit occurred outside of growing season.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>    3    </u> (A) Total Number of Dominant Species Across All Strata: <u>    5    </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>    60    </u> (A/B)
1. <u>Salix scouleriana</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>25</u>	<u>= Total Cover</u>		
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> Total % Cover of: <u>    </u> Multiply by: OBL species <u>    </u> x1= <u>    </u> FACW species <u>    </u> x2= <u>    0    </u> FAC species <u>    95    </u> x3= <u>    285    </u> FACU species <u>    55    </u> x4= <u>    220    </u> UPL species <u>    </u> x5= <u>    0    </u> Column Totals: <u>    150    </u> (A) <u>    505    </u> (B)  <i>Prevalence Index = B/A=</i> <u>    3.37    </u>
1. <u>Rubus spectabilis</u>	<u>35</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Rubus ursinus</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Rubus armeniacus</u>	<u>15</u>	<u>No</u>	<u>FAC</u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>80</u>	<u>= Total Cover</u>		
<u>Herb Stratum</u> (Plot size: 1m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Ranunculus repens</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Pteridium aquilinum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Polystichum munitum</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
9. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
10. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
11. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>45</u>	<u>= Total Cover</u>		
<u>Woody Vine Stratum</u> (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>    </u>
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>    </u>	<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>25</u>		% Cover of Biotic Crust <u>    </u>		

Remarks:  
 Sample plot meets dominance test but not prevalence index for hydrophytic vegetation. Hydrophytic species found in plot are primarily deep-rooted tree and shrub species that have access to a deeper water table.

**SOIL**

Sampling Point: SP FW V6

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 3/2	100					Sandy Loam	
9-12	10YR 3/3	100					Sandy Loam	Gravelly

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

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

<b>Restrictive Layer (if present):</b>	
Type: _____	
Depth (inches): _____	
	<b>Hydric Soil Present?</b> Yes _____ No <input checked="" type="checkbox"/>

Remarks:  
Sample plot lacks hydric soil indicators.

**HYDROLOGY**

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

<b>Field Observations:</b>	
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____ 1.0	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____ 0.0	
(includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____

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

Remarks:  
Sample plot meets primary hydrology indicators for saturation and high water table.

**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 12/19/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP FW V7  
 Investigators: Danielski, Story Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Flat Local Relief (concave, convex, none): None Slope(%): 0  
 Subregion (LRR): A Lat: 47.291878 Long: -122.307533 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u>	No <u>X</u>		
Wetland Hydrology Present?	Yes <u>X</u>	No <u>    </u>		

Remarks:  
 Sample plot has 2 of 3 wetland indicators. Sample plot lacks hydric soil and is not located in a wetland. Site visit occurred outside of growing season.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>    3    </u> (A) Total Number of Dominant Species Across All Strata: <u>    5    </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>    60    </u> (A/B)
1. <u>Populus balsamifera</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Thuja plicata</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>25</u>	<u>= Total Cover</u>		
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> Total % Cover of: <u>    </u> Multiply by: <u>    </u> OBL species <u>    </u> x1= <u>    </u> FACW species <u>    50    </u> x2= <u>    100    </u> FAC species <u>    35    </u> x3= <u>    105    </u> FACU species <u>    10    </u> x4= <u>    40    </u> UPL species <u>    </u> x5= <u>    0    </u> Column Totals: <u>    95    </u> (A) <u>    245    </u> (B)  <i>Prevalence Index = B/A=</i> <u>    2.58    </u>
1. <u>Spiraea douglasii</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Rubus spectabilis</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>60</u>	<u>= Total Cover</u>		
<u>Herb Stratum</u> (Plot size: 1m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation <u>    </u> X 2 - Dominance Test is >50% <u>    </u> X 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet) <u>    </u> 5 - Wetland Non-Vascular Plants <sup>1</sup> <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <u>    </u> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Hedera helix</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Polystichum munitum</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
9. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
10. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
11. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>10</u>	<u>= Total Cover</u>		
<u>Woody Vine Stratum</u> (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>    </u>
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>    </u>	<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>    90    </u>		% Cover of Biotic Crust <u>    </u>		

Remarks:  
 Sample plot meets dominance test and prevalence index for hydrophytic vegetation. Hydrophytic species found in plot are primarily deep-rooted tree and shrub species that have access to a deeper water table.

**SOIL**

Sampling Point: SP FW V7

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 3/2	100					Sandy Loam	
9-14	10YR 3/3	100					Sandy Loam	
14-16	10YR 4/3	100					Sandy Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes _____ No <input checked="" type="checkbox"/></p>
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Remarks:  
Sample plot lacks hydric soil indicators.

**HYDROLOGY**

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

<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes _____ No <input checked="" type="checkbox"/>    Depth (inches): _____</p> <p>Water Table Present?    Yes _____ No <input checked="" type="checkbox"/>    Depth (inches): <u>5.0</u></p> <p>Saturation Present?    Yes _____ No <input checked="" type="checkbox"/>    Depth (inches): <u>1.0</u></p> <p>(includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b>    Yes <input checked="" type="checkbox"/> No _____</p>
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Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Saturation at 1 inch and water table present at 5 inches. Sample plot meets primary hydrology indicators for saturation and high water table.

**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 12/19/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP FW V8  
 Investigators: Danielski, Story Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Flat Local Relief (concave, convex, none): None Slope(%): 0  
 Subregion (LRR): A Lat: 47.292641 Long: -122.307724 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u>	No <u>X</u>		
Wetland Hydrology Present?	Yes <u>    </u>	No <u>X</u>		

Remarks:  
 Sample plot has 1 of 3 wetland indicators and is not located in a wetland.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Populus balsamifera</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Alnus rubra</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>60</u>	<u>= Total Cover</u>		
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>    </u> Multiply by: OBL species <u>    </u> x1= <u>    </u> FACW species <u>    </u> x2= <u>0</u> FAC species <u>130</u> x3= <u>390</u> FACU species <u>    </u> x4= <u>0</u> UPL species <u>    </u> x5= <u>0</u> Column Totals: <u>130</u> (A) <u>390</u> (B)  <i>Prevalence Index = B/A=</i> <u>3.00</u>
1. <u>Rubus armeniacus</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Prunus occidentalis</u>	<u>7</u>	<u>Yes</u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>17</u>	<u>= Total Cover</u>		
<u>Herb Stratum</u> (Plot size: 1m)				
1. <u>Ranunculus repens</u>	<u>60</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
9. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
10. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
11. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>60</u>	<u>= Total Cover</u>		
<u>Woody Vine Stratum</u> (Plot size: )				
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>    </u>	<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>40</u>		% Cover of Biotic Crust <u>    </u>		<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>    </u>

Remarks:  
 Sample plot meets dominance test and prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP FW V8

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		

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

<p><b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b></p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p>	<p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes    <input type="checkbox"/>    No    <input checked="" type="checkbox"/></p>
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Remarks:  
Sample plot located on highly compacted gravel/cobble. Possibly former road grade. Unable to dig into soil, therefore soils not sampled.

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p>Primary Indicators (minimum of one required; check all that apply)</p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Tables (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B)</p> <p><input type="checkbox"/> Sparsley Vegetated Concave Surface (B8)</p>	<p><input type="checkbox"/> Water-Stained Leaves (B9) (<b>except MRLA 1, 2, 4A, and 4B</b>)</p> <p><input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Stunted or Stressed Plants (D1) (<b>LRR A</b>)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>	<p><i>Secondary Indicators (2 or more required)</i></p> <p><input type="checkbox"/> Water Stained Leaves (B9) (<b>MRLA 1, 2, 4A, and 4B</b>)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p> <p><input type="checkbox"/> Raised Ant Mounds (D6) (<b>LRR A</b>)</p> <p><input type="checkbox"/> Frost-Heave Hummocks (D7)</p>
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<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes    <input type="checkbox"/>    No    <input checked="" type="checkbox"/>    Depth (inches): _____</p> <p>Water Table Present?    Yes    <input type="checkbox"/>    No    <input checked="" type="checkbox"/>    Depth (inches): _____</p> <p>Saturation Present?    Yes    <input type="checkbox"/>    No    <input checked="" type="checkbox"/>    Depth (inches): _____ (includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b>    Yes    <input type="checkbox"/>    No    <input checked="" type="checkbox"/></p>
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Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Sample plot lacks primary and secondary indicators of wetland hydrology.



# WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/9/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP FWF 1-1  
 Investigators: DANIELSKI, STORY Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Flat Local Relief (concave, convex, none): None Slope(%): 0  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.299740 Long: -122.304298 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: PFO

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u>	No <u>    </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>    </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>    </u>			

Remarks:  
 On low bank of Hylebos creek, looks like possible wet spot. The preceding three months were wetter than normal; however, site visit occurred at end of the dry season so dry season conditions were still considered when evaluating hydrology. Sample plot has 3 of 3 wetland criteria, is located in forested portion of WFW-1.

## VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 5)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>
1. <u>Fraxinus latifolia</u>	60	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. <u>    </u>				Total Number of Dominant
3. <u>    </u>				Species Across All Strata: <u>4</u> (B)
4. <u>    </u>				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
	60	= Total Cover		
<b><u>Sapling/Shrub Stratum</u></b> (Plot size: 3)				<b>Prevalence Index worksheet:</b>
1. <u>Oemleria cerasiformis</u>	20	Yes	FACU	<u>    </u> Total % Cover of: <u>    </u> Multiply by:
2. <u>Acer circinatum</u>	5	No	FAC	OBL species <u>    </u> x1= <u>    </u>
3. <u>Cornus alba</u>	3	No	FACW	FACW species <u>123</u> x2= <u>246</u>
4. <u>    </u>				FAC species <u>35</u> x3= <u>105</u>
5. <u>    </u>				FACU species <u>20</u> x4= <u>80</u>
	28	= Total Cover		UPL species <u>    </u> x5= <u>0</u>
				Column Totals: <u>178</u> (A) <u>431</u> (B)
				<i>Prevalence Index = B/A= 2.42</i>
<b><u>Herb Stratum</u></b> (Plot size: 1)				<b>Hydrophytic Vegetation Indicators:</b>
1. <u>Phalaris arundinacea</u>	60	Yes	FACW	<u>    </u> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Ranunculus repens</u>	30	Yes	FAC	<u>X</u> 2 - Dominance Test is >50%
3. <u>    </u>				<u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. <u>    </u>				<u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. <u>    </u>				<u>    </u> 5 - Wetland Non-Vascular Plants <sup>1</sup>
6. <u>    </u>				<u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
7. <u>    </u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. <u>    </u>				
9. <u>    </u>				
10. <u>    </u>				
11. <u>    </u>				
	90	= Total Cover		
<b><u>Woody Vine Stratum</u></b> (Plot size: )				<b>Hydrophytic Vegetation Present?</b>
1. <u>    </u>				Yes <u>X</u> No <u>    </u>
2. <u>    </u>				
		= Total Cover		
% Bare Ground in Herb Stratum <u>10</u>		% Cover of Biotic Crust <u>    </u>		

Remarks:  
 Sample plot meets dominance test and prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 1-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	7.5YR 2.5/1	100					Sandy Loam	
16-18	10YR 4/1	98	7.5 YR 4/6	2	C	M	Sandy Loam	Very gravelly from 10-18+

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes    <input checked="" type="checkbox"/>    No    <input type="checkbox"/></p>
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Remarks:  
Sample plot meets hydric soil indicator A12, thick dark surface.

**HYDROLOGY**

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

<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes    <input type="checkbox"/>    No    <input checked="" type="checkbox"/>    Depth (inches): _____</p> <p>Water Table Present?    Yes    <input type="checkbox"/>    No    <input checked="" type="checkbox"/>    Depth (inches): _____</p> <p>Saturation Present?    Yes    <input type="checkbox"/>    No    <input checked="" type="checkbox"/>    Depth (inches): _____</p> <p>(includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b>    Yes    <input checked="" type="checkbox"/>    No    <input type="checkbox"/></p>
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Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Sample plot located in forested area. No primary indicators observed, roughly 6 feet from OHWM of Hylebos Creek. Sample plot meets secondary hydrology indicators for FAC-Neutral Test (D5) and Geomorphic Position (D2).



**SOIL**

Sampling Point: SP WFW 1-2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-22	10YR 2/1	100					Silt Loam	
22-24	2.5Y 4/2	95	2.5Y 4/4	5	C	M	Silty Clay Loam	Lots of cobble/gravel

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

<b>Restrictive Layer (if present):</b>	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks:  
Sample plot meets hydric soil indicator A12, Thick Dark Surface.

**HYDROLOGY**

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

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

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

Remarks:  
No primary indicators observed. Sample plot meets secondary hydrology indicators for FAC-Neutral Test (D5) and Geomorphic Position (D2).

# WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/9/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 1-3  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope(%): 2  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.299992 Long: -122.303947 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

Hydrophytic Vegetation Present?	Yes <u>    </u>	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>		
Hydric Soil Present?	Yes <u>    </u>	No <u>X</u>		Yes <u>    </u>	No <u>X</u>
Wetland Hydrology Present?	Yes <u>    </u>	No <u>X</u>			

Remarks:  
 Sample plot has 0 of 3 wetland criteria, is not located in a wetland. Paired upland plot for WFW-1. The preceding three months were wetter than normal; however, site visit occurred at end of the dry season so dry season conditions were still considered when evaluating hydrology.

## VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: 5m)				<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A/B)  <b>Prevalence Index worksheet:</b> Total % Cover of: <u>    </u> Multiply by: OBL species <u>    </u> x1= <u>    </u> FACW species <u>    </u> x2= <u>0</u> FAC species <u>35</u> x3= <u>105</u> FACU species <u>145</u> x4= <u>580</u> UPL species <u>    </u> x5= <u>0</u> Column Totals: <u>180</u> (A) <u>685</u> (B)  $Prevalence Index = B/A = \underline{\quad 3.81 \quad}$
1. <u>Acer macrophyllum</u>	<u>35</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Pseudotsuga menziesii</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>    </u>				
4. <u>    </u>				
	<u>65</u>	<u>= Total Cover</u>		
<b>Sapling/Shrub Stratum</b> (Plot size: 3m)				
1. <u>Rubus ursinus</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Gaultheria shallon</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Acer circinatum</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>	
4. <u>Rubus spectabilis</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
5. <u>Acer macrophyllum</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
	<u>115</u>	<u>= Total Cover</u>		
<b>Herb Stratum</b> (Plot size: 1m)				
1. <u>    </u>				
2. <u>    </u>				
3. <u>    </u>				
4. <u>    </u>				
5. <u>    </u>				
6. <u>    </u>				
7. <u>    </u>				
8. <u>    </u>				
9. <u>    </u>				
10. <u>    </u>				
11. <u>    </u>				
		<u>= Total Cover</u>		
<b>Woody Vine Stratum</b> (Plot size: )				
1. <u>    </u>				
2. <u>    </u>				
		<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>60</u>		% Cover of Biotic Crust <u>    </u>		

Remarks:  
 Sample plot does not meet dominance test or prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 1-3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/3	100					Silt Loam	
8-18	10YR 4/4	100					Silt Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes _____ No _____ <b>X</b></p>
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Remarks:  
Sample plot lacks hydric soil indicators. Soil is very dry, very bright.

**HYDROLOGY**

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

<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes _____ No <b>X</b>    Depth (inches): _____</p> <p>Water Table Present?    Yes _____ No <b>X</b>    Depth (inches): _____</p> <p>Saturation Present?    Yes _____ No <b>X</b>    Depth (inches): _____ (includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b>    Yes _____ No <b>X</b></p>
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Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
No primary or secondary indicators observed, dry to 18+.

**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/9/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 1-4  
 Investigators: Danielski Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope(%): 0  
 Subregion (LRR): A Lat: 47.299290 Long: -122.304367 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: PEM1

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>    </u>		
Wetland Hydrology Present?	Yes <u>X</u>	No <u>    </u>		

Remarks:  
 Sample plot has 3 of 3 wetland criteria, is located in PEM community in WFW-1. The preceding three months were wetter than normal; however, site visit occurred at end of the dry season so dry season conditions were still considered when evaluating hydrology.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	= Total Cover
<b>Sapling/Shrub Stratum</b> (Plot size: 3m)				<b>Prevalence Index worksheet:</b> Total % Cover of:      Multiply by: OBL species      x1= _____ FACW species      92      x2= <u>184</u> FAC species      25      x3= <u>75</u> FACU species      x4= <u>0</u> UPL species      x5= <u>0</u> Column Totals: <u>117</u> (A) <u>259</u> (B)  <i>Prevalence Index = B/A=</i> <u>2.21</u>
1. <u>Salix lasiandra</u>	<u>2</u>	<u>Yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover <u>2</u>				
<b>Herb Stratum</b> (Plot size: 1m)				
1. <u>Phalaris arundinacea</u>	<u>90</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Athyrium cyclosorum</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
3. <u>Ranunculus repens</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
4. <u>Solanum dulcamara</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
5. <u>Urtica dioica</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
= Total Cover <u>115</u>				
<b>Woody Vine Stratum</b> (Plot size: )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover _____				
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust _____			

**Hydrophytic Vegetation Indicators:**  
 1 - Rapid Test for Hydrophytic Vegetation  
 X 2 - Dominance Test is >50%  
 X 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes X No     

Remarks:  
 Sample plot meets dominance test and prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 1-4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-11	7.5 YR 2/2	100					Sandy Loam	
11-20	7.5 YR 2/2	95	5YR 4/6	5	C	M	Sandy Loam	Gravelly

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input checked="" type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

<b>Restrictive Layer (if present):</b>	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks:  
 Sample plot nearly meets indicator for F6, Redox Dark Surface. Dark surface layers may have redox that is difficult to see. Given presence of hydrophytic vegetation and geomorphic position below OHWM of East Fork Hylebos Creek, soil is likely seasonally flooded for 14 or more consecutive days during the growing season, and therefore hydric soils presumed to exist.

**HYDROLOGY**

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

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

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

Remarks:  
 Damp at 20 but no saturation or water table. Secondary indicators Geomorphic Position (D2) and FAC-Neutral Test (D5) present. Below OHWM of Hylebos Creek. Sampling occurred at end of dry season/beginning of water year, before full groundwater recharge.  
 Subsequent visit on 10/18 showed sample plot under several inches of water. Is likely seasonally ponded.



**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/9/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 1-5  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope(%): 3  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.299271 Long: -122.304420 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

Hydrophytic Vegetation Present?	Yes <u>    </u>	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u>	No <u>X</u>		
Wetland Hydrology Present?	Yes <u>    </u>	No <u>X</u>		

Remarks:  
 Slightly upslope from wetland boundary and channel of Hylebos Creek. Sample plot has 0 of 3 wetland indicators, is not located in a wetland. Paired upland plot for WFW-1 The preceding three months were wetter than normal; however, site visit occurred at end of the dry season so dry season conditions were still considered when evaluating hydrology.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>    3    </u> (A) Total Number of Dominant Species Across All Strata: <u>    6    </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>    50    </u> (A/B)
1. <u>Thuja plicata</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Pseudotsuga menziesii</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Alnus rubra</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	
4. <u>Prunus emarginata</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
	<u>75</u>	<u>= Total Cover</u>		
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>    65    </u> Multiply by: OBL species <u>    </u> x1= <u>    0    </u> FACW species <u>    </u> x2= <u>    0    </u> FAC species <u>    65    </u> x3= <u>    195    </u> FACU species <u>    132    </u> x4= <u>    528    </u> UPL species <u>    </u> x5= <u>    0    </u> Column Totals: <u>    197    </u> (A) <u>    723    </u> (B)  <i>Prevalence Index = B/A=</i> <u>    3.67    </u>
1. <u>Rubus ursinus</u>	<u>60</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Acer circinatum</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Sambucus racemosa</u>	<u>7</u>	<u>No</u>	<u>FACU</u>	
4. <u>Oemleria cerasiformis</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>92</u>	<u>= Total Cover</u>		
<u>Herb Stratum</u> (Plot size: 1m)				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Polystichum munitum</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
9. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
10. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
11. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>30</u>	<u>= Total Cover</u>		
<u>Woody Vine Stratum</u> (Plot size: )				<b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>    </u> X <u>    </u>
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>    </u>	<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>10</u>	<u>    </u>	% Cover of Biotic Crust <u>    </u>		

Remarks:  
 Sample plot does not meet dominance test or prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 1-5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	7.5YR 3/3	100					Silt Loam	

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

<b>Restrictive Layer (if present):</b>	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input type="checkbox"/> X <input type="checkbox"/>
Type: _____ Depth (inches): _____	

Remarks:  
Sample plot lacks indicators of hydric soil.

**HYDROLOGY**

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

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

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

Remarks:  
No primary or secondary wetland hydrology indicators observed.

**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/9/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 1-6  
 Investigators: DANIELSKI, STORY Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Flat Local Relief (concave, convex, none): None Slope(%): 0  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.296963 Long: -122.304909 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: PFO

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>    </u>		
Wetland Hydrology Present?	Yes <u>X</u>	No <u>    </u>		

Remarks:  
 The preceding three months were wetter than normal; however, site visit occurred at end of the dry season so dry season conditions were still considered when evaluating hydrology. Sample plot meets 3 of 3 wetland criteria, is located in WFW-1.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Populus balsamifera</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Salix scouleriana</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>25</u>	<u>= Total Cover</u>		
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>    </u> Multiply by: OBL species <u>    </u> x1= <u>    </u> FACW species <u>    </u> x2= <u>0</u> FAC species <u>97</u> x3= <u>291</u> FACU species <u>    </u> x4= <u>0</u> UPL species <u>    </u> x5= <u>0</u> Column Totals: <u>97</u> (A) <u>291</u> (B)  <i>Prevalence Index = B/A=</i> <u>3.00</u>
1. <u>Rubus armeniacus</u>	<u>12</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Acer circinatum</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Crataegus monogyna</u>	<u>3</u>	<u>No</u>	<u>FAC</u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>20</u>	<u>= Total Cover</u>		
<u>Herb Stratum</u> (Plot size: 1m)				
1. <u>Agrostis stolonifera</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Ranunculus repens</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
3. <u>Solanum dulcamara</u>	<u>2</u>	<u>No</u>	<u>FAC</u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
9. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
10. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
11. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>52</u>	<u>= Total Cover</u>		
<u>Woody Vine Stratum</u> (Plot size: )				
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>    </u>	<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>48</u>		% Cover of Biotic Crust <u>    </u>		<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>    </u>

Remarks:  
 Sample plot meets dominance test and prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 1-6

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 2/1	93	10YR 3/4	7	C	M	Silt Loam	Lot of gravel in profile starting at 14

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)				

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No    _____
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Remarks:  
Sample plot meets hydric soil indicator F6, Redox Dark Surface.

**HYDROLOGY**

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

<b>Field Observations:</b> Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No    _____
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Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Sample plot has primary hydrology indicators for water marks on nearby trees, and secondary indicators for water stained leaves and geomorphic position. A site visit on 10/18 had 6 inches of surface water in the area near the sample plot.

# WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/9/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP FFW 1-7  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): Convex Slope(%): 40  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.296970 Long: -122.304825 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

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

Remarks:  
 Sample plot meets 0 of 3 wetland criteria, is not located in a wetland. Paired upland plot for FFW 1-7. CThe preceding three months were wetter than normal; however, site visit occurred at end of the dry season so dry season conditions were still considered when evaluating hydrology. Sample plot located on fill slope.

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____	_____	_____	_____	
= Total Cover				
<b>Prevalence Index worksheet:</b>				
<b>Sapling/Shrub Stratum (Plot size: 3m)</b>		Total % Cover of: _____ Multiply by: _____		
1. <u>Rubus armeniacus</u>	<u>70</u>	<u>Yes</u>	<u>FAC</u>	OBL species _____ x1= _____
2. _____	_____	_____	_____	FACW species _____ x2= <u>0</u>
3. _____	_____	_____	_____	FAC species <u>70</u> x3= <u>210</u>
4. _____	_____	_____	_____	FACU species <u>20</u> x4= <u>80</u>
5. _____	_____	_____	_____	UPL species _____ x5= <u>0</u>
= Total Cover				Column Totals: <u>90</u> (A) <u>290</u> (B)
= Total Cover				<i>Prevalence Index = B/A= 3.22</i>
<b>Hydrophytic Vegetation Indicators:</b>				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is >50%				
3 - Prevalence Index is ≤3.0 <sup>1</sup>				
4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet)				
5 - Wetland Non-Vascular Plants <sup>1</sup>				
Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
<b>Woody Vine Stratum (Plot size: )</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum <u>80</u>	% Cover of Biotic Crust _____			

Remarks:  
 Sample plot does not meet dominance test or prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 1-7

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		

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

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

**Hydric Soil Present?**    Yes \_\_\_\_\_ No \_\_\_\_\_ **X**

Remarks:  
Cobble fill pad, no soil.

**HYDROLOGY**

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

**Field Observations:**  
 Surface Water Present?    Yes \_\_\_\_\_ No **X**    Depth (inches): \_\_\_\_\_  
 Water Table Present?    Yes \_\_\_\_\_ No **X**    Depth (inches): \_\_\_\_\_  
 Saturation Present?    Yes \_\_\_\_\_ No **X**    Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?**    Yes \_\_\_\_\_ No \_\_\_\_\_ **X**

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

Remarks:  
No primary or secondary hydrology indicators observed.



**SOIL**

Sampling Point: SP WFW 1-8

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14	10YR 2/1	100					Silt Loam	
14-20	10YR 3/2	95	10YR 3/4	5	C	M	Silty Clay Loam	

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

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input checked="" type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hyric Soil Present?** Yes  No

Remarks:  
Sample plot nearly meets redox dark surface. Given presence of water marks in the area and presence of hydrophytic vegetation, it is assumed that the area is inundated for 14 or more consecutive days during growing season and therefore hyric soil is present.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (2 or more required)

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

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_ 16.0  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

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

Remarks:  
Saturated at 16. Sample plot meets primary hydrology indicator for water marks and secondary hydrology indicator for FAC-neutral test. Although October is technically during the wet season, in a forested depressional wetland, groundwater has not yet recharged. Water marks indicate area around sample plot is inundated at least occasionally.



**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/16/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 2-1  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): None Slope(%): 0  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.299564 Long: -122.312294 Datum: WGS84  
 Soil Map Unit Name: Tukwila muck NWI Classification: PFO

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>		
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>		

Remarks:  
 Sample plot meets 3 of 3 wetland criteria, is located in WFW 2. The preceding three months were wetter than normal; however, site visit occurred at end of the dry season so dry season conditions were still considered when evaluating hydrology.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Salix lasiandra</u>	<u>80</u>	<u>Yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>80</u>	<u>= Total Cover</u>		
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species x1= _____ FACW species <u>105</u> x2= <u>210</u> FAC species _____ x3= <u>0</u> FACU species _____ x4= <u>0</u> UPL species _____ x5= <u>0</u> Column Totals: <u>105</u> (A) <u>210</u> (B)  <i>Prevalence Index = B/A=</i> <u>2.00</u>
1. <u>Spiraea douglasii</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Salix lasiandra</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	<u>25</u>	<u>= Total Cover</u>		
<u>Herb Stratum</u> (Plot size: 1m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
	_____	<u>= Total Cover</u>		
<u>Woody Vine Stratum</u> (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
	_____	<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>100</u>		% Cover of Biotic Crust _____		

Remarks:  
 Sample plot meets rapid test, dominance test, and prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 2-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/1	100					Organic	Muck

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

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

<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes    <input checked="" type="checkbox"/>    No    _____</p>
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Remarks:  
Sample plot meets hydric soil indicator A1, Histosol.

**HYDROLOGY**

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

<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes    <input checked="" type="checkbox"/>    No    _____    Depth (inches): _____    0.50</p> <p>Water Table Present?    Yes    <input checked="" type="checkbox"/>    No    _____    Depth (inches): _____    0.0</p> <p>Saturation Present?    Yes    <input checked="" type="checkbox"/>    No    _____    Depth (inches): _____    0.0</p> <p>(includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b>    Yes    <input checked="" type="checkbox"/>    No    _____</p>
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Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Sample plot meets primary hydrology indicators for Surface Water (A1), High Water Table (A2), Saturation (A3), and Water Marks (B1) and secondary hydrology indicator for FAC-Neutral Test (D5)..

# WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/16/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 2-2  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Flat Local Relief (concave, convex, none): Convex Slope(%): 15  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.299557 Long: -122.312218 Datum: WGS84  
 Soil Map Unit Name: Tukwila muck NWI Classification: UPL

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>		
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>		Yes <u>      </u>	No <u>X</u>
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>			

Remarks:  
 On constructed fill berm upslope from boundary. Sample plot has 1 of 3 wetland criteria, is not located in a wetland. Paired upland plot for WFW 2-1. Conditions wetter than normal for time of year.

## VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: 5m)				<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)  <b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: OBL species <u>      </u> x1= <u>      </u> FACW species <u>      </u> x2= <u>0</u> FAC species <u>72</u> x3= <u>216</u> FACU species <u>35</u> x4= <u>140</u> UPL species <u>      </u> x5= <u>0</u> Column Totals: <u>107</u> (A) <u>356</u> (B)  $Prevalence Index = B/A = 3.33$
1. <u>Alnus rubra</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>      </u>				
3. <u>      </u>				
4. <u>      </u>				
	<u>15</u>	<u>= Total Cover</u>		
<b>Sapling/Shrub Stratum</b> (Plot size: 3m)				
1. <u>Rubus ursinus</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Rubus armeniacus</u>	<u>4</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Rubus spectabilis</u>	<u>3</u>	<u>Yes</u>	<u>FAC</u>	
4. <u>      </u>				
5. <u>      </u>				
	<u>12</u>	<u>= Total Cover</u>		
<b>Herb Stratum</b> (Plot size: 1m)				
1. <u>Agrostis capillaris</u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Dactylis glomerata</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>      </u>				
4. <u>      </u>				
5. <u>      </u>				
6. <u>      </u>				
7. <u>      </u>				
8. <u>      </u>				
9. <u>      </u>				
10. <u>      </u>				
11. <u>      </u>				
	<u>80</u>	<u>= Total Cover</u>		
<b>Woody Vine Stratum</b> (Plot size: )				
1. <u>      </u>				
2. <u>      </u>				
		<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>20</u>		% Cover of Biotic Crust <u>      </u>		

Remarks:  
 Sample plot meets dominance test but not prevalence index for hydrophytic vegetation.

**Hydrophytic Vegetation Present?** Yes X No

**SOIL**

Sampling Point: SP WFW 2-2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14	10 YR 3/3	100					Sandy Loam	

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<b>Restrictive Layer (if present):</b> Type: <u>Quarry Spall</u> Depth (inches): <u>14</u>	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:  
Sample plot lacks hydric soil indicators. Refusal at 14 inches due to quarry spall.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one required; check all that apply)</b>	<b>Secondary Indicators (2 or more required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9) ( <b>except MRLA 1, 2, 4A, and 4B</b> )
<input type="checkbox"/> High Water Tables (A2)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) ( <b>LRR A</b> )
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B)	
<input type="checkbox"/> Sparsley Vegetated Concave Surface (B8)	

<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
No primary or secondary hydrology indicators observed.

**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/16/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 2-3  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): None Slope(%): 1  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.300098 Long: -122.310761 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: PFO

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u> No <u>    </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>    </u>		
Wetland Hydrology Present?	Yes <u>X</u>	No <u>    </u>		

Remarks:  
 Plot in WFW 2. Sample plot has 3 of 3 criteria, is located in a wetland. Conditions wetter than normal for time of year.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>    3    </u> (A) Total Number of Dominant Species Across All Strata: <u>    3    </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>   100   </u> (A/B)
1. <u>Fraxinus latifolia</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>60</u>	<u>= Total Cover</u>		
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> Total % Cover of: <b>Multiply by:</b> OBL species              x1= _____ FACW species <u>80</u> x2= <u>160</u> FAC species <u>40</u> x3= <u>120</u> FACU species            _____ x4= <u>0</u> UPL species              _____ x5= <u>0</u> Column Totals: <u>120</u> (A) <u>280</u> (B)  <i>Prevalence Index = B/A=</i> <u>2.33</u>
1. <u>Rubus spectabilis</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Spiraea douglasii</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	<u>60</u>	<u>= Total Cover</u>		
<u>Herb Stratum</u> (Plot size: 1m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
	_____	<u>= Total Cover</u>		
<u>Woody Vine Stratum</u> (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>    </u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
	_____	<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>100</u>		% Cover of Biotic Crust _____		

Remarks:  
 Sample plot meets dominance test and prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 2-3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14	10YR 2/1	100					Silt Loam	
14-18	10 YR 4/2	97	10YR 3/4	3	C	M	Silty Clay Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes    <input checked="" type="checkbox"/>    No    _____</p>
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Remarks:  
Hydrogen sulfide odor at 10 inches. Sample plot meets hydric soil indicator A4, Hydrogen Sulfide, and A12, thick dark surface.

**HYDROLOGY**

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

<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes    <input type="checkbox"/>    No    <input checked="" type="checkbox"/>    Depth (inches): _____</p> <p>Water Table Present?    Yes    <input checked="" type="checkbox"/>    No    <input type="checkbox"/>    Depth (inches): _____ 8.0</p> <p>Saturation Present?    Yes    <input checked="" type="checkbox"/>    No    <input type="checkbox"/>    Depth (inches): _____ 0.0</p> <p>(includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b>    Yes    <input checked="" type="checkbox"/>    No    _____</p>
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Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Sample plot meets wetland hydrology indicators for High Water Table (A2), Saturation (A3), and Hydrogen Sulfide Odor (C1). Surface water present in vicinity of plot.

**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/16/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 2-4  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): Convex Slope(%): 15  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.300045 Long: -122.310776 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

Hydrophytic Vegetation Present?	Yes <u>    </u>	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u>	No <u>X</u>		
Wetland Hydrology Present?	Yes <u>    </u>	No <u>X</u>		

Remarks:  
 Upland plot for wetland WFW 2. Sample plot has 0 of 3 wetland criteria, is not located in a wetland. Conditions wetter than normal for time of year.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>29</u> (A/B)
1. <u>Fraxinus latifolia</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Pseudotsuga menziesii</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>40</u>	<u>= Total Cover</u>		
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>    </u> Multiply by: OBL species <u>    </u> x1= <u>    </u> FACW species <u>30</u> x2= <u>60</u> FAC species <u>20</u> x3= <u>60</u> FACU species <u>130</u> x4= <u>520</u> UPL species <u>    </u> x5= <u>0</u> Column Totals: <u>180</u> (A) <u>640</u> (B)  <i>Prevalence Index = B/A= 3.56</i>
1. <u>Rubus ursinus</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Rubus spectabilis</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Oemleria cerasiformis</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Symphoricarpos albus</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>110</u>	<u>= Total Cover</u>		
<u>Herb Stratum</u> (Plot size: 1m)				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Polystichum munitum</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
9. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
10. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
11. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>30</u>	<u>= Total Cover</u>		
<u>Woody Vine Stratum</u> (Plot size: )				<b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>    </u> X <u>    </u>
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>    </u>	<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>20</u>		% Cover of Biotic Crust <u>    </u>		

Remarks:  
 Sample plot does not meet dominance test or prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 2-4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/2	100					Silt Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

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

<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes _____ No _____ <b>X</b></p>
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Remarks:  
Sample plot lacks hydric soil indicators.

**HYDROLOGY**

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

<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes _____ No <b>X</b>    Depth (inches): _____</p> <p>Water Table Present?    Yes _____ No <b>X</b>    Depth (inches): _____</p> <p>Saturation Present?    Yes _____ No <b>X</b>    Depth (inches): _____ (includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b>    Yes _____ No <b>X</b></p>
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Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Sample plot lacks primary and second hydrology indicators.



**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/18/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 3-1  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): None Slope(%): 2  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.296341 Long: -122.305145 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: PFO

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u>	No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>			

Remarks:  
 On bench above E. Hylebos Creek. Conditions wetter than normal for time of year. Sample plot has 3 of 3 criteria, is located within WFW-3.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>	
1. <u>Fraxinus latifolia</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>4</u> (A)
2. <u>Alnus rubra</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata:	<u>6</u> (B)
3. <u>      </u>				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>67</u> (A/B)
4. <u>      </u>					
	<u>70</u>	<u>= Total Cover</u>			
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)				<b>Prevalence Index worksheet:</b>	
1. <u>Rubus armeniacus</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	<b>Total % Cover of:</b>	<b>Multiply by:</b>
2. <u>Rubus spectabilis</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	OBL species	x1= <u>      </u>
3. <u>Oemleria cerasiformis</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	FACW species	<u>60</u> x2= <u>120</u>
4. <u>Rubus ursinus</u>	<u>3</u>	<u>No</u>	<u>FACU</u>	FAC species	<u>48</u> x3= <u>144</u>
5. <u>      </u>				FACU species	<u>18</u> x4= <u>72</u>
	<u>48</u>	<u>= Total Cover</u>		UPL species	x5= <u>0</u>
				Column Totals:	<u>126</u> (A) <u>336</u> (B)
				<i>Prevalence Index = B/A=</i> <u>2.67</u>	
<u>Herb Stratum</u> (Plot size: 1m)				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Hedera helix</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	<u>      </u> 1 - Rapid Test for Hydrophytic Vegetation	
2. <u>Ranunculus repens</u>	<u>3</u>	<u>Yes</u>	<u>FAC</u>	<u>X</u> 2 - Dominance Test is >50%	
3. <u>      </u>				<u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
4. <u>      </u>				<u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet)	
5. <u>      </u>				<u>      </u> 5 - Wetland Non-Vascular Plants <sup>1</sup>	
6. <u>      </u>				<u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
7. <u>      </u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
8. <u>      </u>					
9. <u>      </u>					
10. <u>      </u>					
11. <u>      </u>					
	<u>8</u>	<u>= Total Cover</u>			
<u>Woody Vine Stratum</u> (Plot size: )				<b>Hydrophytic Vegetation Present?</b>	
1. <u>      </u>				Yes	<u>X</u> No <u>      </u>
2. <u>      </u>					
% Bare Ground in Herb Stratum	<u>89</u>	<u>% Cover of Biotic Crust</u>			

Remarks:  
 Sample plot meets dominance test and prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 3-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14	10 YR 3/2	95	10YR 4/6	5	C	M	Silt Loam	
14-18	10YR 4/2	98	10YR 5/4	2	C	M	Sandy Loam	

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

<b>Restrictive Layer (if present):</b>	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks:  
Lots of gravel. Sample plot meets hydric soil indicator F6, Redox Dark Surface.

**HYDROLOGY**

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

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ 12.0	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ 9.0	
(includes capillary fringe)	

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

Remarks:  
Sample plot meets primary hydrology indicators for saturation and high water table.

# WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/18/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 3-2  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Toeslope Local Relief (concave, convex, none): None Slope(%): 3  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.296326 Long: -122.305130 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>			

Remarks:  
 Soil disturbed from adjacent fill. Conditions wetter than normal for time of year. Sample plot has 1 of 3 wetland criteria, is not located in a wetland.

## VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: 5m)				<b>Dominance Test Worksheet:</b>
1. _____	_____	_____	_____	Number of Dominant Species
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>2</u> (A)
3. _____	_____	_____	_____	Total Number of Dominant
4. _____	_____	_____	_____	Species Across All Strata: <u>3</u> (B)
		= Total Cover		Percent of Dominant Species
				That Are OBL, FACW, or FAC: <u>67</u> (A/B)
<b>Sapling/Shrub Stratum</b> (Plot size: 3m)				<b>Prevalence Index worksheet:</b>
1. <u>Rubus armeniacus</u>	<u>45</u>	<u>Yes</u>	<u>FAC</u>	<b>Total % Cover of:</b>
2. <u>Acer circinatum</u>	<u>35</u>	<u>Yes</u>	<u>FAC</u>	<b>Multiply by:</b>
3. <u>Oemleria cerasiformis</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	OBL species <u>      </u> x1= <u>      </u>
4. <u>Rubus ursinus</u>	<u>4</u>	<u>No</u>	<u>FACU</u>	FACW species <u>      </u> x2= <u>0</u>
5. _____	_____	_____	_____	FAC species <u>80</u> x3= <u>240</u>
	<u>94</u>	= Total Cover		FACU species <u>21</u> x4= <u>84</u>
				UPL species <u>      </u> x5= <u>0</u>
<b>Herb Stratum</b> (Plot size: 1m)				Column Totals: <u>101</u> (A) <u>324</u> (B)
1. <u>Polystichum munitum</u>	<u>7</u>	<u>Yes</u>	<u>FACU</u>	$Prevalence\ Index = B/A = \frac{324}{101} = 3.21$
2. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>
3. _____	_____	_____	_____	<u>      </u> 1 - Rapid Test for Hydrophytic Vegetation
4. _____	_____	_____	_____	<u>X</u> 2 - Dominance Test is >50%
5. _____	_____	_____	_____	<u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
6. _____	_____	_____	_____	<u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide
7. _____	_____	_____	_____	data in Remarks or on a separate sheet)
8. _____	_____	_____	_____	<u>      </u> 5 - Wetland Non-Vascular Plants <sup>1</sup>
9. _____	_____	_____	_____	<u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology
11. _____	_____	_____	_____	must be present, unless disturbed or problematic.
	<u>7</u>	= Total Cover		
<b>Woody Vine Stratum</b> (Plot size: )				<b>Hydrophytic Vegetation Present?</b>
1. _____	_____	_____	_____	Yes <u>X</u> No <u>      </u>
2. _____	_____	_____	_____	
		= Total Cover		
% Bare Ground in Herb Stratum <u>89</u>		% Cover of Biotic Crust <u>      </u>		

Remarks:  
 Sample plot meets dominance test but not prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 3-2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 3/2	100					Loamy Sand	
7-18	2.5Y 4/3	100					Loamy Sand	Significant gravel and cobble

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No _____ <b>X</b>
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Remarks:  
Sample plot lacks hydric soil indicators.

**HYDROLOGY**

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

<b>Field Observations:</b> Surface Water Present?    Yes _____ No <b>X</b> Depth (inches): _____ Water Table Present?    Yes _____ No <b>X</b> Depth (inches): _____ Saturation Present?    Yes _____ No <b>X</b> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <b>X</b>
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Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
No primary or secondary wetland hydrology indicators observed.

# WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/18/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 4-1  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope(%): 0  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.295021 Long: -122.305908 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: PFO

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u>	No <u>    </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>    </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>    </u>			

Remarks:  
 Conditions wetter than normal for time of year. Sample plot meets 3 of 3 wetland criteria, is located in WFW-4.

## VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: 5m)				<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> Total % Cover of:                      Multiply by: OBL species                      25    x1=                      25 FACW species                      90    x2=                      180 FAC species                      30    x3=                      90 FACU species                                           x4=                      0 UPL species                                           x5=                      0 Column Totals: <u>145</u> (A) <u>295</u> (B)  $Prevalence Index = B/A =$ <u>2.03</u>
1. Fraxinus latifolia	40	Yes	FACW	
2. Populus balsamifera	30	Yes	FAC	
3. Salix lasiandra	10	No	FACW	
4. _____				
	80	= Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: 3m)				
1. Spiraea douglasii	40	Yes	FACW	
2. _____				
3. _____				
4. _____				
5. _____				
	40	= Total Cover		
<b>Herb Stratum</b> (Plot size: 1m)				
1. Carex obnupta	25	Yes	OBL	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	25	= Total Cover		
<b>Woody Vine Stratum</b> (Plot size: )				
1. _____				
2. _____				
		= Total Cover		
% Bare Ground in Herb Stratum	75	% Cover of Biotic Crust		

**Hydrophytic Vegetation Indicators:**  
 1 - Rapid Test for Hydrophytic Vegetation  
 X 2 - Dominance Test is >50%  
 X 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes X No     

Remarks:  
 Sample plot meets dominance test and prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 4-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 2/1	97	10YR 3/3	3	C	M	Silt Loam	High organic content

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

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

**Remarks:**

Sample plot meets hydric soil indicator F6, Redox Dark Surface.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (2 or more required)

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

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_ 0.0  
 Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_ 0.0  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

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

**Remarks:**

Surface water elsewhere in wetland. Sample plot meets primary hydrology indicators for High Water Table (A2) and Saturation (A3). Sample plot also passes FAC-Neutral Test (D5).

# WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/18/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 4-2  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Flat Local Relief (concave, convex, none): None Slope(%): 0  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.295021 Long: -122.305908 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>		
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>		Yes <u>      </u>	No <u>X</u>
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>			

Remarks:  
 The preceding three months were wetter than normal; however, site visit occurred at end of the dry season so dry season conditions were still considered when evaluating hydrology.. Sample plot is paired upland plot for WFW-4, located on fill pad adjacent to WFW-4. Sample plot has 1 of 3 indicators, is not located in a wetland.

## VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: 5m)				<b>Dominance Test Worksheet:</b>
1. _____	_____	_____	_____	Number of Dominant Species
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>2</u> (A)
3. _____	_____	_____	_____	Total Number of Dominant
4. _____	_____	_____	_____	Species Across All Strata: <u>2</u> (B)
		= Total Cover		Percent of Dominant Species
				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
<b>Sapling/Shrub Stratum</b> (Plot size: 3m)				<b>Prevalence Index worksheet:</b>
1. <u>Rubus armeniacus</u>	<u>35</u>	<u>Yes</u>	<u>FAC</u>	<b>Total % Cover of:</b>
2. _____	_____	_____	_____	<b>Multiply by:</b>
3. _____	_____	_____	_____	OBL species <u>      </u> x1= <u>      </u>
4. _____	_____	_____	_____	FACW species <u>      </u> x2= <u>0</u>
5. _____	_____	_____	_____	FAC species <u>65</u> x3= <u>195</u>
	<u>35</u>	= Total Cover		FACU species <u>5</u> x4= <u>20</u>
				UPL species <u>      </u> x5= <u>0</u>
<b>Herb Stratum</b> (Plot size: 1m)				Column Totals: <u>70</u> (A) <u>215</u> (B)
1. <u>Ranunculus repens</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	$Prevalence\ Index = B/A = \underline{\quad 3.07}$
2. <u>Polystichum munitum</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>
4. _____	_____	_____	_____	<u>      </u> 1 - Rapid Test for Hydrophytic Vegetation
5. _____	_____	_____	_____	<u>X</u> 2 - Dominance Test is >50%
6. _____	_____	_____	_____	<u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
7. _____	_____	_____	_____	<u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide
8. _____	_____	_____	_____	data in Remarks or on a separate sheet)
9. _____	_____	_____	_____	<u>      </u> 5 - Wetland Non-Vascular Plants <sup>1</sup>
10. _____	_____	_____	_____	<u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
11. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology
	<u>35</u>	= Total Cover		must be present, unless disturbed or problematic.
<b>Woody Vine Stratum</b> (Plot size: )				<b>Hydrophytic</b>
1. _____	_____	_____	_____	<b>Vegetation</b>
2. _____	_____	_____	_____	Yes <u>X</u> No <u>      </u>
		= Total Cover		<b>Present?</b>
% Bare Ground in Herb Stratum <u>65</u>		% Cover of Biotic Crust <u>      </u>		

Remarks:  
 Sample plot meets dominance test for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 4-2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	2.5Y 4/2	99	2.5Y 3/4	1	C	M	Sandy Loam	Refusal at 4; lots of cobble

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

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

**Restrictive Layer (if present):**

Type: Cobble  
 Depth (inches): 4

**Hydric Soil Present?** Yes  No

Remarks:  
 Sample plot lacks hydric soil indicators. Refusal at 4 inches due to cobble. Located on fill pad with minimal soil development. Soil color likely comes from color of parent material (fill pad) and is not caused by weathering or depletion.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (2 or more required)

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

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

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

Remarks:  
 No primary or secondary hydrology indicators observed.





**SOIL**

Sampling Point: SP WFW 5-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14	10YR 2/1	100					Silt Loam	
14-18	10YR 4/2	95	10YR 4/4	5	C	M	Sandy Loam	

<sup>1</sup>Type: C= Concentration, D= Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No \_\_\_\_\_

Remarks:

Sample plot meets hydric soil indicator A12, Thick Dark Surface.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (2 or more required)

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

**Field Observations:**

Surface Water Present? Yes  No \_\_\_\_\_ Depth (inches): \_\_\_\_\_ 2.00  
 Water Table Present? Yes  No \_\_\_\_\_ Depth (inches): \_\_\_\_\_ 0.0  
 Saturation Present? Yes  No \_\_\_\_\_ Depth (inches): \_\_\_\_\_ 0.0  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No \_\_\_\_\_

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

Remarks:

Sample plot meets primary hydrology indicators for Surface Water (A1), High Water Table (A2), and Saturation (A3).

**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/23/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 5-2  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Toeslope Local Relief (concave, convex, none): Convex Slope(%): 2  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.291729 Long: -122.307503 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

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

Remarks:  
 At toe of slope, just upslope from edge of wetland WFW-5. Located in relatively mature upland forest. The preceding three months were wetter than normal; however, site visit occurred at end of the dry season so dry season conditions were still considered when evaluating hydrology. Sample plot has 0 of 3 criteria, is not located in a wetland.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A/B)
1. <u>Thuja plicata</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Pseudotsuga menziesii</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Populus balsamifera</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
	<u>70</u>	<u>= Total Cover</u>		
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x1= _____ FACW species _____ x2= <u>0</u> FAC species <u>40</u> x3= <u>120</u> FACU species <u>137</u> x4= <u>548</u> UPL species _____ x5= <u>0</u> Column Totals: <u>177</u> (A) <u>668</u> (B)  <i>Prevalence Index = B/A= <u>3.77</u></i>
1. <u>Gaultheria shallon</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Rubus ursinus</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Holodiscus discolor</u>	<u>7</u>	<u>No</u>	<u>FACU</u>	
4. <u>Oemleria cerasiformis</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
	<u>92</u>	<u>= Total Cover</u>		
<u>Herb Stratum</u> (Plot size: 1m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Polystichum munitum</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
	<u>15</u>	<u>= Total Cover</u>		
<u>Woody Vine Stratum</u> (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input type="checkbox"/> X <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
	_____	<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>45</u>		% Cover of Biotic Crust _____		

Remarks:  
 Sample plot does not meet dominance test or prevalence index for hydrophytic vegetation.

**SOIL**

Sampling Point: SP WFW 5-2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	7.5YR 3/4	100					Sandy Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

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

<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>    Yes _____ No _____ <b>X</b></p>
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Remarks:  
Sample plot lacks hydric soil indicators.

**HYDROLOGY**

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

<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes _____ No <b>X</b>    Depth (inches): _____</p> <p>Water Table Present?    Yes _____ No <b>X</b>    Depth (inches): _____</p> <p>Saturation Present?    Yes _____ No <b>X</b>    Depth (inches): _____ (includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b>    Yes _____ No <b>X</b></p>
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Describe Recorded Date (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
No primary or secondary indicators observed.

**WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region**

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/23/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 6-1  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Channel Local Relief (concave, convex, none): Concave Slope(%): 1  
 Subregion (LRR): A - Northwestern Forest, Lat: 47.297321 Long: -122.304733 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: PSS

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

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u>	No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>			

Remarks:  
 Swale feature likely associated with construction of I-5. Conveys stormwater runoff from multiple culverts. Conditions wetter than normal for time of year. Sample plot has 3 of 3 criteria, is located in a WFW-6.

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: 5m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: 3m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species x1= _____ FACW species x2= <u>0</u> FAC species <u>90</u> x3= <u>270</u> FACU species <u>33</u> x4= <u>132</u> UPL species x5= <u>0</u> Column Totals: <u>123</u> (A) <u>402</u> (B)  <i>Prevalence Index = B/A= 3.27</i>
1. <u>Rubus spectabilis</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Rubus ursinus</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Oemleria cerasiformis</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
<u>Herb Stratum</u> (Plot size: 1m)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Tolmiea menziesii</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Athyrium cyclosum</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Polystichum munitum</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
4. <u>Geranium robertianum</u>	<u>3</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
= Total Cover				
73 = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum <u>12</u>	% Cover of Biotic Crust _____			

Remarks:  
 Sample plot meets dominance test but not prevalence index for hydrophytic vegetation.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 3/2	95	10YR 4/6	5	C	M	Sandy Loam	

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

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

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

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

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

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

**Restrictive Layer (if present):**

Type: Quarry spall

Depth (inches): 16

**Hydric Soil Present?** Yes  No

Remarks:  
Impenetrable restrictive layer at 16 inches. Sample plot meets hydric soil indicator F6, Redox Dark Surface.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

**Field Observations:**

Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0.50</u>	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0.0</u>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0.0</u>	

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

Remarks:  
Sample plot meets primary hydrology indicators for surface water, high water table, and saturation.

# WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Sound Transit OMFS City/County: Federal Way, King Sampling Date: 10/23/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: SP WFW 6-2  
 Investigators: STORY, PACE Section, Township, Range: T21N R4E S21  
 Landform (hillslope, terrace, etc.): Toeslope Local Relief (concave, convex, none): Convex Slope(%): 0  
 Subregion (LRR): A Lat: 47.297447 Long: -122.304787 Datum: WGS84  
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI Classification: UPL

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

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

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

Remarks:  
 The preceding three months were wetter than normal; however, site visit occurred at end of the dry season so dry season conditions were still considered when evaluating hydrology. Sample plot has 0 of 3 wetland criteria, is not located in a wetland. Paired upland plot for WFW-5.

## VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: 5m)				<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. <u>Pseudotsuga menziesii</u>	<u>35</u>	<u>Yes</u>	<u>FACU</u>	
2. _____				
3. _____				
4. _____				
	<u>35</u>	= Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: 3m)				
1. <u>Rubus ursinus</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Acer circinatum</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
3. <u>Rubus armeniacus</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
4. <u>Thuja plicata</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
5. <u>Acer macrophyllum</u>	<u>7</u>	<u>No</u>	<u>FACU</u>	
	<u>79</u>	= Total Cover		
<b>Herb Stratum</b> (Plot size: 1m)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
		= Total Cover		
<b>Woody Vine Stratum</b> (Plot size: )				
1. _____				
2. _____				
		= Total Cover		
% Bare Ground in Herb Stratum <u>100</u>	% Cover of Biotic Crust _____			
<b>Prevalence Index worksheet:</b> Total % Cover of: <u>114</u> (A) <span style="margin-left: 20px;">Multiply by:</span> OBL species <u>0</u> x1= _____ FACW species <u>30</u> x2= <u>0</u> FAC species <u>84</u> x3= <u>90</u> FACU species <u>84</u> x4= <u>336</u> UPL species <u>0</u> x5= <u>0</u> Column Totals: <u>114</u> (A) <u>426</u> (B)  Prevalence Index = B/A= <u>3.74</u>				
<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input type="checkbox"/> X <input checked="" type="checkbox"/>				

Remarks:  
 Sample plot does not meet dominance test or prevalence index for hydrophytic vegetation.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/3	100					Silt Loam	

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

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRLA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No  X

Remarks:

Sample plot lacks hydric soil indicators.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (2 or more required)

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

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No  X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No  X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No  X

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

Remarks:

No primary or secondary indicators of wetland hydrology observed.



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

Project/Site: OMFS and TDLE City/County: Federal Way, King County Sampling Date: 11/6/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: WFW-07-SP1  
 Investigator(s): Steve Krueger, Aaron Thom Section, Township, Range: T21N R04E S16  
 Landform (hillslope, terrace, etc.): stream bench Local relief (concave, convex, none): convex Slope (%): <3%  
 Subregion (LRR): Northwest Forests and Coast (LRR A) Lat: 47.309896 Long: -122.302392 Datum: NAD 1983  
 Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material, 0 to 6 percent slopes - AmB - Not Hydric NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

**Precipitation:**  
 According to the Seattle Tacoma International NOAA weather station. Precipitation was above the normal range for the three months prior to the site visit.

**Remarks:**  
 PEM wetland SP for WFW-07 located 2 meters east of E. Fork Hylebos Creek along stream bench @ OHWM LB-11. The stream has been heavily modified and is adjacent to a golf course.

**VEGETATION**

<u>Tree Stratum</u>	(Plot size: <u>1m radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>none</u>					
2. _____					
3. _____					
4. _____					
		0% = Total Cover			
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>1m radius</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
1. <u>Rubus armeniacus</u>		1%	No	FAC	
2. _____					
3. _____					
4. _____					
5. _____					
		1% = Total Cover			
<u>Herb Stratum</u>	(Plot size: <u>1m radius</u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
1. <u>Phalaris arundinacea</u>		95%	Yes	FACW	
2. <u>Ranunculus repens</u>		3%	No	FAC	
3. <u>Equisetum telmateia</u>		2%	No	FACW	
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
		100% = Total Cover			
<u>Woody Vine Stratum</u>	(Plot size: <u>1m radius</u> )				
1. <u>none</u>		0%			
2. _____					
		0% = Total Cover			
<b>% Bare Ground in Herb Stratum</b>		<u>0%</u>			

**Remarks:**

SOIL							Sampling Point:	WFW-07-SP1
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
0-4	10YR 2/2	100					L	
4-7	2.5Y 3/1	100					L	
7-9	5Y 4/1	100					SaL	decaying grass
9-20	10YR 4/1	100					CL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.  
<sup>3</sup>Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input checked="" type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)				

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

<b>Restrictive Layer (if present):</b> Type: <u>None</u> Depth (inches): <u>N/A</u>	<b>Hydric Soil Present?</b> Yes <u>X</u> No _____
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**Remarks:**  
 Assumed to be hydric based on aquic moisture regime and fluvial entisol. Decaying grass throughout layers, proximity to floodplain may explain lack of hydric soil indicators

**HYDROLOGY**

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

<b>Field Observations:</b> Surface Water Present?      Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present?      Yes <u>X</u> No _____      Depth (inches): <u>12</u> Saturation Present?      Yes <u>X</u> No _____      Depth (inches): <u>11</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No _____
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**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**

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

Project/Site: OMFS and TDLE City/County: Federal Way, King County Sampling Date: 11/6/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: WFW-07-SP2  
 Investigator(s): Steve Kruger, Aaron Thom Section, Township, Range: T21N R04E S16  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): >10%  
 Subregion (LRR): Northwest Forests and Coast (LRR A) Lat: 47.309893 Long: -122.302418 Datum: NAD 1983  
 Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material, 0 to 6 percent slopes - AmB - Not Hydric NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

**Precipitation:**  
 According to the Seattle Tacoma International NOAA weather station. Precipitation was above the normal range for the three months prior to the site visit.

**Remarks:**  
 Upland SP for WFW-07 paired with WFW-07-SP1. SP is ~4m east and upslope of East Fork Hylebos Creek and 2m east of WFW-07-SP1.

**VEGETATION**

<u>Tree Stratum</u>	(Plot size: <u>1m radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
1. <u>none</u>					
2. _____					
3. _____					
4. _____					
		0% = Total Cover			
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>1m radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
1. <u>Ilex aquifolium</u>		12%	Yes	FACU	
2. <u>Rubus armeniacus</u>		5%	Yes	FAC	
3. _____					
4. _____					
5. _____					
		17% = Total Cover			
<u>Herb Stratum</u>	(Plot size: <u>1m radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
1. <u>Equisetum telmateia</u>		80%	Yes	FACW	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
		80% = Total Cover			
<u>Woody Vine Stratum</u>	(Plot size: <u>1m radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>none</u>		0%			
2. _____					
		0% = Total Cover			
<b>% Bare Ground in Herb Stratum</b> <u>20%</u>					

**Remarks:**

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-7	10YR 3/2	100					L	
7-20	10YR 5/3	100					GSaL	

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

<sup>3</sup>Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

<p><b>Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):</b></p> <p><input type="checkbox"/> Histosol (A1) <span style="margin-left: 150px;"><input type="checkbox"/> Sandy Redox (S5)</span></p> <p><input type="checkbox"/> Histic Epipedon (A2) <span style="margin-left: 150px;"><input type="checkbox"/> Stripped Matrix (S6)</span></p> <p><input type="checkbox"/> Black Histic (A3) <span style="margin-left: 150px;"><input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)</span></p> <p><input type="checkbox"/> Hydrogen Sulfide (A4) <span style="margin-left: 150px;"><input type="checkbox"/> Loamy Gleyed Matrix (F2)</span></p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11) <span style="margin-left: 150px;"><input type="checkbox"/> Depleted Matrix (F3)</span></p> <p><input type="checkbox"/> Thick Dark Surface (A12) <span style="margin-left: 150px;"><input type="checkbox"/> Redox Dark Surface (F6)</span></p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) <span style="margin-left: 150px;"><input type="checkbox"/> Depleted Dark Surface (F7)</span></p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4) <span style="margin-left: 150px;"><input type="checkbox"/> Redox Depressions (F8)</span></p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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**Restrictive Layer (if present):**

Type: None

Depth (inches): N/A

**Hydric Soil Present?**

Yes  No

**Remarks:**

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<p><u>Primary Indicators (minimum of one required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1) <span style="margin-left: 150px;"><input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)</span></p> <p><input type="checkbox"/> High Water Table (A2) <span style="margin-left: 150px;"><input type="checkbox"/> Salt Crust (B11)</span></p> <p><input type="checkbox"/> Saturation (A3) <span style="margin-left: 150px;"><input type="checkbox"/> Aquatic Invertebrates (B13)</span></p> <p><input type="checkbox"/> Water Marks (B1) <span style="margin-left: 150px;"><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</span></p> <p><input type="checkbox"/> Sediment Deposits (B2) <span style="margin-left: 150px;"><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</span></p> <p><input type="checkbox"/> Drift Deposits (B3) <span style="margin-left: 150px;"><input type="checkbox"/> Presence of Reduced Iron (C4)</span></p> <p><input type="checkbox"/> Algal Mat or Crust (B4) <span style="margin-left: 150px;"><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</span></p> <p><input type="checkbox"/> Iron Deposits (B5) <span style="margin-left: 150px;"><input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)</span></p> <p><input type="checkbox"/> Surface Soil Cracks (B6) <span style="margin-left: 150px;"><input type="checkbox"/> Other (Explain in Remarks)</span></p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p>	<p><u>Secondary Indicators (2 or more required)</u></p> <p><input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p> <p><input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)</p> <p><input type="checkbox"/> Frost-Heave Hummocks (D7)</p>

**Field Observations:**

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

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

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

**Wetland Hydrology Present?**

Yes  No

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

**Remarks:**

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

Project/Site: OMFS and TDLE City/County: Federal Way, King County Sampling Date: 11/16/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: WFW-07-SP3  
 Investigator(s): Steve Krueger, Aaron Thom Section, Township, Range: T21N R04E S16  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): <3%  
 Subregion (LRR): Northwest Forests and Coast (LRR A) Lat: 47.310171 Long: -122.302239 Datum: NAD 1983  
 Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material, 0 to 6 percent slopes - AmB - Not Hydric NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes        No X (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation X, Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u>	No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>			

**Precipitation:**  
 According to the Seattle Tacoma International NOAA weather station. Precipitation was above the normal range for the three months prior to the site visit.

**Remarks:**  
 PSS SP for WFW-07. Located near pedestrian bridge ~2m east and upslope of E. Fork Hylebos Creek Tributary 0016A. The stream has been heavily modified and is adjacent to a golf course.  
 Vegetation within the wetland and also adjacent upland is dominated by the aggressive species, English ivy (*Hedera helix*), which would be considered problematic vegetation. Hydric soil indicators and hydrology indicators are both strong, supporting the assumption that vegetation is also hydric.

**VEGETATION**

<u>Tree Stratum</u>	(Plot size: <u>r=2m</u> )	Absolute <u>% Cover</u>	Dominant <u>Species?</u>	Indicator <u>Status</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>      2      </u> (A)  Total Number of Dominant Species Across All Strata: <u>      3      </u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>      67%      </u> (A/B)
1.	<u>none</u>				
2.					
3.					
4.					
		0% = Total Cover			
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>r=2m</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>      </u> x 1 = <u>      </u> FACW species <u>      </u> x 2 = <u>      </u> FAC species <u>      </u> x 3 = <u>      </u> FACU species <u>      </u> x 4 = <u>      </u> UPL species <u>      </u> x 5 = <u>      </u> Column Totals: <u>      </u> (A) <u>      </u> (B) Prevalence Index = B/A = <u>      </u>
1.	<u>Salix sitchensis</u>	80%	Yes	FACW	
2.	<u>Rubus armeniacus</u>	5%	No	FAC	
3.					
4.					
5.					
		85% = Total Cover			
<u>Herb Stratum</u>	(Plot size: <u>r=1m</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> 5 - Wetland Non-Vascular Plants <sup>1</sup> <u>      </u> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
1.	<u>Equisetum telmateia</u>	5%	Yes	FACW	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		5% = Total Cover			
<u>Woody Vine Stratum</u>	(Plot size: <u>r=2m</u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
1.	<u>Hedera helix</u>	95%	Yes	FACU	
2.					
		95% = Total Cover			
<b>% Bare Ground in Herb Stratum</b>		<u>0%</u>			

**Remarks:**  
 Vegetation within the wetland and also adjacent upland is dominated by the aggressive species, English ivy (*Hedera helix*), which would be considered problematic vegetation. Hydric soil indicators and hydrology indicators are both strong, supporting the assumption that vegetation is also hydric.



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

Project/Site: OMFS and TDLE City/County: Federal Way, King County Sampling Date: 11/6/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: WFW-07-SP4  
 Investigator(s): S. Krueger, A. Thom Section, Township, Range: T21N R04E S16  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): >10%  
 Subregion (LRR): Northwest Forests and Coast (LRR A) Lat: 47.310178 Long: -122.302193 Datum: NAD 1983  
 Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material, 0 to 6 percent slopes - AmB - Not Hydric NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No x (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes x No \_\_\_\_\_  
 Are Vegetation X, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>_____</u>	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>_____</u>	No <u>X</u>
Hydric Soil Present?	Yes <u>_____</u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>_____</u>	No <u>X</u>			

**Precipitation:**  
 According to the Seattle Tacoma International NOAA weather station, precipitation was above the normal range for the three months prior to the site visit.

**Remarks:**  
 upland SP for WFW-07. Near OHWM flag EH-RB11. East of WFW-07-SP3. Vegetation is naturally problematic due to presence of aggressive species, English ivy and Himalayan blackberry, dominate this area.

**VEGETATION**

<u>Tree Stratum</u>	(Plot size: <u>r=2m</u> )	Absolute <u>% Cover</u>	Dominant <u>Species?</u>	Indicator <u>Status</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)
1.	<u>Pseudotsuga menziesii</u>	<u>40%</u>	<u>Yes</u>	<u>FACU</u>	
2.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
3.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
		<u>40%</u> = Total Cover			
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>r=2m</u> )				
1.	<u>Rubus armeniacus</u>	<u>55%</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Rubus ursinus</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>	
3.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
5.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
		<u>56%</u> = Total Cover			
<u>Herb Stratum</u>	(Plot size: <u>r=1m</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup>  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>_____</u> No <u>X</u>
1.	<u>Equisetum telmateia</u>	<u>2%</u>	<u>No</u>	<u>FACW</u>	
2.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
3.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
5.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
6.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
7.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
8.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
9.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
10.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
11.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
		<u>2%</u> = Total Cover			
<u>Woody Vine Stratum</u>	(Plot size: <u>r=2m</u> )				
1.	<u>Hedera helix</u>	<u>98%</u>	<u>Yes</u>	<u>FACU</u>	
2.	<u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
		<u>98%</u> = Total Cover			
<b>% Bare Ground in Herb Stratum</b>		<u>0%</u>			

**Remarks:**  
 Aggressive vegetation (English ivy and Himalayan blackberry) dominate this area.

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-7	10YR 2/1	100					L	
7-11	10YR 3/2	80	10YR 4/2	20	D	M	GrSaL	
11-17	2.5YR 5/2	99	10YR 5/6	<1	C	M	GrSaL	

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

<sup>3</sup>Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

<p><b>Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):</b></p> <p><input type="checkbox"/> Histosol (A1) <span style="margin-left: 150px;"><input type="checkbox"/> Sandy Redox (S5)</span></p> <p><input type="checkbox"/> Histic Epipedon (A2) <span style="margin-left: 150px;"><input type="checkbox"/> Stripped Matrix (S6)</span></p> <p><input type="checkbox"/> Black Histic (A3) <span style="margin-left: 150px;"><input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)</span></p> <p><input type="checkbox"/> Hydrogen Sulfide (A4) <span style="margin-left: 150px;"><input type="checkbox"/> Loamy Gleyed Matrix (F2)</span></p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11) <span style="margin-left: 150px;"><input type="checkbox"/> Depleted Matrix (F3)</span></p> <p><input type="checkbox"/> Thick Dark Surface (A12) <span style="margin-left: 150px;"><input type="checkbox"/> Redox Dark Surface (F6)</span></p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) <span style="margin-left: 150px;"><input type="checkbox"/> Depleted Dark Surface (F7)</span></p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4) <span style="margin-left: 150px;"><input type="checkbox"/> Redox Depressions (F8)</span></p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p><b>Restrictive Layer (if present):</b></p> <p>Type: <u>None</u></p> <p>Depth (inches): <u>N/A</u></p>	<p><b>Hydric Soil Present?</b></p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
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**Remarks:**  
Soils may be the result of prior disturbances

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<p><u>Primary Indicators (minimum of one required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1) <span style="margin-left: 150px;"><input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)</span></p> <p><input type="checkbox"/> High Water Table (A2) <span style="margin-left: 150px;"><input type="checkbox"/> Salt Crust (B11)</span></p> <p><input type="checkbox"/> Saturation (A3) <span style="margin-left: 150px;"><input type="checkbox"/> Aquatic Invertebrates (B13)</span></p> <p><input type="checkbox"/> Water Marks (B1) <span style="margin-left: 150px;"><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</span></p> <p><input type="checkbox"/> Sediment Deposits (B2) <span style="margin-left: 150px;"><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</span></p> <p><input type="checkbox"/> Drift Deposits (B3) <span style="margin-left: 150px;"><input type="checkbox"/> Presence of Reduced Iron (C4)</span></p> <p><input type="checkbox"/> Algal Mat or Crust (B4) <span style="margin-left: 150px;"><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</span></p> <p><input type="checkbox"/> Iron Deposits (B5) <span style="margin-left: 150px;"><input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)</span></p> <p><input type="checkbox"/> Surface Soil Cracks (B6) <span style="margin-left: 150px;"><input type="checkbox"/> Other (Explain in Remarks)</span></p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p>	<p><u>Secondary Indicators (2 or more required)</u></p> <p><input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p> <p><input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)</p> <p><input type="checkbox"/> Frost-Heave Hummocks (D7)</p>

<p><b>Field Observations:</b></p> <p>Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p>	<p><b>Wetland Hydrology Present?</b></p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
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**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**



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

Project/Site: OMFS and TDLE City/County: Federal Way/King Sampling Date: 11/6/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: **WFW-08-SP1**  
 Investigator(s): S. Krueger, A. Thom Section, Township, Range: T21N R04E S16  
 Landform (hillslope, terrace, etc.): stream bench Local relief (concave, convex, none): concave Slope (%): <3%  
 Subregion (LRR): Northwest Forests and Coast (LRR A) Lat: 47.308060 Long: -122.302762 Datum: NAD 1983  
 Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material, 0 to 6 percent slopes - AmB - Not Hydric NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil X, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

**Precipitation:**  
 According to the Seattle Tacoma International NOAA weather station, precipitation was above the normal range for the three months prior to the site visit.

**Remarks:**  
 PSS wetland SP for WFW-08. In SW section of wetland. Wetland is adjacent to E. Fork Hylebos Creek Trib 0016A. The stream is heavily modified and appears to be used as a constructed stormwater facility.  
 Problematic Soil: Soil appears to be a fluvial entisol with aquic moisture regime. Strong hydrophytic vegetation, geomorphic position on stream bench, significant organics in soils, and strong wetland hydrology indicators support determination as hydric soil.

**VEGETATION**

<u>Tree Stratum</u>	(Plot size: <u>1m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>none</u>					
2. _____					
3. _____					
4. _____					
0% = Total Cover					
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>1m</u> )				
1. <u>Salix lasiandra</u>		<u>70%</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Rubus armeniacus</u>		<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
3. _____					
4. _____					
5. _____					
90% = Total Cover					
<u>Herb Stratum</u>	(Plot size: <u>1m</u> )				
1. <u>Phalaris arundinacea</u>		<u>80%</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Typha latifolia</u>		<u>15%</u>	<u>No</u>	<u>OBL</u>	
3. <u>Ranunculus repens</u>		<u>5%</u>	<u>No</u>	<u>FAC</u>	
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
100% = Total Cover					
<u>Woody Vine Stratum</u>	(Plot size: <u>1m</u> )				
1. <u>none</u>					
2. _____					
0% = Total Cover					
<b>% Bare Ground in Herb Stratum</b> <u>0%</u>					

**Remarks:**

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

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

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

<sup>3</sup>Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

<p><b>Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):</b></p> <p><input type="checkbox"/> Histosol (A1)                      <input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Histic Epipedon (A2)              <input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Black Histic (A3)                    <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)              <input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)           <input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)           <input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)           <input type="checkbox"/> Redox Depressions (F8)</p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input checked="" type="checkbox"/> Other (Explain in Remarks)</p> <p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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**Restrictive Layer (if present):**  
 Type: quarry spalls  
 Depth (inches): 4.5

**Hydric Soil Present?**                      Yes                       No

**Remarks:**  
 unable to dig past quarry spalls at 4.5" below ground surface. Stream has been heavily modified and appears to be used as a constructed stormwater facility. Wetlands have developed at the edges. Soil appears to be a fluvial entisol with aquic moisture regime. Strong hydrophytic vegetation, geomorphic position on stream bench, significant organics in soils, and strong wetland hydrology indicators support determination as hydric soil.

**HYDROLOGY**

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

**Field Observations:**

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

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

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

**Wetland Hydrology Present?**                      Yes                       No

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

**Remarks:**

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

Project/Site: OMFS and TDLE City/County: Federal Way, King County Sampling Date: 11/9/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: WFW-08-SP2  
 Investigator(s): S. Krueger, A. Thom Section, Township, Range: T21N R04E S16  
 Landform (hillslope, terrace, etc.): Flat area Local relief (concave, convex, none): convex Slope (%): <3%  
 Subregion (LRR): Northwest Forests and Coast (LRR A) Lat: 47.308239 Long: -122.302792 Datum: NAD 1983  
 Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material, 0 to 6 percent slopes - AmB - Not Hydric NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

**Precipitation:**  
 According to the Seattle Tacoma International NOAA weather station, precipitation was above the normal range for the three months prior to the site visit.

**Remarks:**  
 upland SP to WFW-08-SP1 and SP3, located on fairway of golf course. SP is west of wetland and just outside the fence surrounding the wetland.

**VEGETATION**

<u>Tree Stratum</u>	(Plot size: <u>1=3m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u>none</u>					
2. _____					
3. _____					
4. _____					
		0% = Total Cover			
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>1=2m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>none</u>					
2. _____					
3. _____					
4. _____					
5. _____					
		0% = Total Cover			
<u>Herb Stratum</u>	(Plot size: <u>1=1m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Poa pratensis</u>		<u>30%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Stellaria media</u>		<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Draba verna</u>		<u>10%</u>	<u>No</u>	<u>NOL</u>	
4. <u>Trifolium repens</u>		<u>2%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Hypochaeris radicata</u>		<u>1%</u>	<u>No</u>	<u>FACU</u>	
6. <u>Phalaris arundinacea</u>		<u>1%</u>	<u>No</u>	<u>FACW</u>	
7. <u>Cirsium arvense</u>		<u>1%</u>	<u>No</u>	<u>FAC</u>	
8. _____					
9. _____					
10. _____					
11. _____					
		60% = Total Cover			
<u>Woody Vine Stratum</u>	(Plot size: <u>1=2m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>none</u>					
2. _____					
		0% = Total Cover			
<b>% Bare Ground in Herb Stratum</b>		<u>40%</u>			

**Remarks:**  
 moss cover is 40%



<b>SOIL</b>							<b>Sampling Point: WFW-08-SP2</b>
<b>Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):</b>							
Depth	Matrix		Redox Features				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture <sup>3</sup>
0-2	10YR 2/2	100					SaL
2-19	2.5Y 4/2	100					GrSa

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

<sup>3</sup>Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

<b>Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):</b>			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)				

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

<b>Restrictive Layer (if present):</b> Type: none _____ Depth (inches): n/a _____	<table border="0" style="width:100%;"> <tr> <td style="text-align: right;"><b>Hydric Soil Present?</b></td> <td style="text-align: center;">Yes _____</td> <td style="text-align: center;">No <b>X</b> _____</td> </tr> </table>	<b>Hydric Soil Present?</b>	Yes _____	No <b>X</b> _____
<b>Hydric Soil Present?</b>	Yes _____	No <b>X</b> _____		

**Remarks:**  
sample plot in golf fairway.

**HYDROLOGY**

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

<b>Field Observations:</b>				<table border="0" style="width:100%;"> <tr> <td style="text-align: right;"><b>Wetland Hydrology Present?</b></td> <td style="text-align: center;">Yes _____</td> <td style="text-align: center;">No <b>X</b> _____</td> </tr> </table>		<b>Wetland Hydrology Present?</b>	Yes _____	No <b>X</b> _____
<b>Wetland Hydrology Present?</b>	Yes _____	No <b>X</b> _____						
Surface Water Present?	Yes _____ No <b>X</b> _____	Depth (inches): _____						
Water Table Present?	Yes _____ No <b>X</b> _____	Depth (inches): _____						
Saturation Present? (includes capillary fringe)	Yes _____ No <b>X</b> _____	Depth (inches): _____						

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

**Remarks:**

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

Project/Site: OMFS and TDLE City/County: Federal Way, King County Sampling Date: 11/6/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: **WFW-08-SP3**  
 Investigator(s): S. Krueger, A. Thom Section, Township, Range: T21N R04E S16  
 Landform (hillslope, terrace, etc.): Stream bench Local relief (concave, convex, none): none Slope (%): <3%  
 Subregion (LRR): Northwest Forests and Coast (LRR A) Lat: 47.308250 Long: -122.302752 Datum: NAD 1983  
 Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material, 0 to 6 percent slopes - AmB - Not Hydric NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes        No X (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil X, or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>      </u>	No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>			

**Precipitation:**  
 According to the Seattle Tacoma International NOAA weather station, precipitation was above the normal range for the three months prior to the site visit.

**Remarks:**  
 PEM wetland SP for WFW-08; located in NW section of wetland. Wetland associated with E. Fork Hylebos Creek Tributary 0016A and is adjacent to a golf course. The stream has been heavily modified, resulting in disturbed soils in riverine wetlands.  
 Problematic Soil: Soil appears to be a fluvial entisol with aquic moisture regime. Strong hydrophytic vegetation, geomorphic position on stream bench, significant organics in soils, and strong wetland hydrology indicators support determination as hydric soil.

**VEGETATION**

<u>Tree Stratum</u>	(Plot size: <u>1m<sup>2</sup></u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>none</u>					
2. <u>      </u>					
3. <u>      </u>					
4. <u>      </u>					
		0% = Total Cover			
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>1m<sup>2</sup></u> )				
1. <u>none</u>					
2. <u>      </u>					
3. <u>      </u>					
4. <u>      </u>					
5. <u>      </u>					
		0% = Total Cover			
<u>Herb Stratum</u>	(Plot size: <u>1m<sup>2</sup></u> )				
1. <u>Phalaris arundinacea</u>		<u>95%</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Typha latifolia</u>		<u>5%</u>	<u>No</u>	<u>OBL</u>	
3. <u>      </u>					
4. <u>      </u>					
5. <u>      </u>					
6. <u>      </u>					
7. <u>      </u>					
8. <u>      </u>					
9. <u>      </u>					
10. <u>      </u>					
11. <u>      </u>					
		100% = Total Cover			
<u>Woody Vine Stratum</u>	(Plot size: <u>1m<sup>2</sup></u> )				
1. <u>none</u>					
2. <u>      </u>					
		0% = Total Cover			
<b>% Bare Ground in Herb Stratum</b>		<u>0%</u>			

**Remarks:**



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

Project/Site: OMFS and TDLE City/County: Federal Way, King County Sampling Date: 11/6/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: **WFW-09-SP1**  
 Investigator(s): S. Krueger, A. Thom Section, Township, Range: T21N R04E S16  
 Landform (hillslope, terrace, etc.): stream bench Local relief (concave, convex, none): none Slope (%): None  
 Subregion (LRR): Northwest Forests and Coast (LRR A) Lat: 47.307276 Long: -122.302679 Datum: NAD 1983  
 Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material, 0 to 6 percent slopes - AmB - Not Hydric NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

**Precipitation:**  
 According to the Seattle Tacoma International NOAA weather station, precipitation was above the normal range for the three months prior to the site visit.

**Remarks:**  
 PSS wetland SP for WFW-09. Approx. 3m east of E. Fork Hylebos Creek Tributary 0016A near OHWM flag WH-LB34

**VEGETATION**

<u>Tree Stratum</u>	(Plot size: <u>r=3m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>none</u>					
2. _____					
3. _____					
4. _____					
		0% = Total Cover			
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>r=2m</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> _____ Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
1. <u>Rubus spectabilis</u>		<u>50%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Spiraea douglasii</u>		<u>30%</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Fraxinus latifolia</u>		<u>10%</u>	<u>No</u>	<u>FACW</u>	
4. <u>Rubus armeniacus</u>		<u>5%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Rubus ursinus</u>		<u>5%</u>	<u>No</u>	<u>FACU</u>	
		100% = Total Cover			
<u>Herb Stratum</u>	(Plot size: <u>r=1m</u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
1. <u>Carex obnupta</u>		<u>60%</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Phalaris arundinacea</u>		<u>10%</u>	<u>No</u>	<u>FACW</u>	
3. <u>Ranunculus repens</u>		<u>2%</u>	<u>No</u>	<u>FAC</u>	
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
		72% = Total Cover			
<u>Woody Vine Stratum</u>	(Plot size: <u>r=2m</u> )				
1. <u>none</u>					
2. _____					
		0% = Total Cover			
<b>% Bare Ground in Herb Stratum</b>		<u>28%</u>			

**Remarks:**

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-5	10YR 2/2	100					CL	
5-10	10YR 4/1	95	10YR 5/8	5	C	M	CL	
10-16	5Y 5/2	70	7.5YR 4/4	30	C	PL	CL	

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

<sup>3</sup>Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Other (Explain in Remarks)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

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

<p><b>Restrictive Layer (if present):</b></p> <p>Type: none _____</p> <p>Depth (inches): n/a _____</p>	<p><b>Hydric Soil Present?</b></p> <p>Yes <input checked="" type="checkbox"/> No _____</p>
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**Remarks:**  
redox features along living roots between 10-16" BGS.

**HYDROLOGY**

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

<p><b>Field Observations:</b></p> <p>Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 11 _____</p> <p>Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 8 _____ (includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b></p> <p>Yes <input checked="" type="checkbox"/> No _____</p>
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**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**  
Oxidized rhizospheres observed at depths between 10 and 16 inches.



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

Project/Site: OMFS and TDLE City/County: Federal Way, King County Sampling Date: 11/6/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: **WFW-09-SP2**  
 Investigator(s): S. Krueger, A. Thom Section, Township, Range: T21N R04E S16  
 Landform (hillslope, terrace, etc.): stream bench Local relief (concave, convex, none): none Slope (%): <3%  
 Subregion (LRR): Northwest Forests and Coast (LRR A) Lat: 47.307265 Long: -122.302611 Datum: NAD 1983  
 Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material, 0 to 6 percent slopes - AmB - Not Hydric NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes        No X (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>      </u>	No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>			

**Precipitation:**  
 According to the Seattle Tacoma International NOAA weather station, precipitation was above the normal range for the three months prior to the site visit.

**Remarks:**  
 Upland SP for WFW-09. located approx. 5m east of E. Fork Hylebos Creek Tributary 0016A and approx. 3m east of WFW-09-SP1

**VEGETATION**

<u>Tree Stratum</u>	(Plot size: <u>1=3m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1.	<u>Populus balsamifera</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2.	<u>Fraxinus latifolia</u>	<u>10%</u>	<u>Yes</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>4</u> (B)	
3.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<b>Prevalence Index worksheet:</b>	
30% = Total Cover						Total % Cover of: <u>      </u> Multiply by: <u>      </u>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>1=2m</u> )						
1.	<u>Rubus spectabilis</u>	<u>70%</u>	<u>Yes</u>	<u>FAC</u>	OBL species <u>      </u> x 1 = <u>      </u>	
2.	<u>Rubus ursinus</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	FACW species <u>      </u> x 2 = <u>      </u>	
3.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FAC species <u>      </u> x 3 = <u>      </u>	
4.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	FACU species <u>      </u> x 4 = <u>      </u>	
5.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	UPL species <u>      </u> x 5 = <u>      </u>	
72% = Total Cover					Column Totals: <u>      </u> (A) <u>      </u> (B)	
<b>Herb Stratum</b> (Plot size: <u>1=1m</u> )						
1.	<u>Carex obnupta</u>	<u>80%</u>	<u>Yes</u>	<u>OBL</u>	Prevalence Index = B/A = <u>      </u>	
2.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<b>Hydrophytic Vegetation Indicators:</b>	
3.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		<u>1</u> - Rapid Test for Hydrophytic Vegetation
4.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		<u>X</u> <u>2</u> - Dominance Test is >50%
5.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		<u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup>
6.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		<u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
7.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		<u>5</u> - Wetland Non-Vascular Plants <sup>1</sup>
8.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		<u>      </u> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup>
9.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
10.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
11.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
80% = Total Cover						
<b>Woody Vine Stratum</b> (Plot size: <u>1=2m</u> )						
1.	<u>none</u>	<u>      </u>	<u>      </u>	<u>      </u>	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>	
2.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		
0% = Total Cover						
<b>% Bare Ground in Herb Stratum</b> <u>20%</u>						

**Remarks:**

**SOIL**

Sampling Point: **WFW-09-SP2**

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-9	10YR 3/2	100					CL	
9-18	10YR 3/2	90	10YR 5/6	5	C	M	CL	
			10YR 4/6	C	C	M	CL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.  
<sup>3</sup>Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

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

- Histic Sol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (except MLRA 1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

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

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

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

**Restrictive Layer (if present):**

Type: none  
 Depth (inches): n/a

**Hydric Soil**

Present? Yes  No

**Remarks:**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Stunted or Stressed Plants (D1) (LRR A)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)
- Raised Ant Mounds (D6) (LRR A)
- Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland**

**Hydrology** Present? Yes  No   
**Present?**

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

**Remarks:**

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

Project/Site: OMFS and TDLE City/County: Federal Way, King County Sampling Date: 11/20/2019  
 Applicant/Owner: Sound Transit State: WA Sampling Point: WFW-10-SP03  
 Investigator(s): Steve Krueger, Aaron Thom Section, Township, Range: T21N R04E S16  
 Landform (hillslope, terrace, etc.): stream bench Local relief (concave, convex, none): none Slope (%): <3%  
 Subregion (LRR): Northwest Forests and Coast (LRR A) Lat: 47.304418 Long: -122.303953 Datum: NAD 1983  
 Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam, 0 to 8 % slopes - AgB - Not Hydric NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes        No   x   (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes   x   No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>  X  </u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>  X  </u>	No <u>      </u>
Hydric Soil Present?	Yes <u>  X  </u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>  X  </u>	No <u>      </u>			

**Precipitation:**  
 According to the Seattle Tacoma International NOAA weather station, precipitation was above the normal range for the three months prior to the site visits in November and within the normal range for visits within December. The month of November was drier than normal, and December was wetter than normal.

**Remarks:**  
 PFO wetland SP for WFW10, Unit A. Located approx. 2m west of E. Fork Hylebos near OHWM flag RB5.

**VEGETATION**

<u>Tree Stratum</u>	(Plot size: <u>r=3m</u> )	Absolute <u>% Cover</u>	Dominant <u>Species?</u>	Indicator <u>Status</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>  1  </u> (A)  Total Number of Dominant Species Across All Strata: <u>  1  </u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>none</u>					
2. _____					
3. _____					
4. _____					
		0% = Total Cover			
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>r=2m</u> )				<b>Prevalence Index worksheet:</b> <u>  </u> Total % Cover of: <u>  </u> Multiply by: <u>  </u> OBL species <u>  </u> x 1 = <u>  </u> FACW species <u>  </u> x 2 = <u>  </u> FAC species <u>  </u> x 3 = <u>  </u> FACU species <u>  </u> x 4 = <u>  </u> UPL species <u>  </u> x 5 = <u>  </u> Column Totals: <u>  </u> (A) <u>  </u> (B) Prevalence Index = B/A = <u>  </u>
1. <u>Rubus armeniacus</u>		80%	Yes	FAC	
2. <u>Acer circinatum</u>		5%	No	FAC	
3. <u>Rubus laciniatus</u>		5%	No	FACU	
4. <u>Ilex aquifolium</u>		2%	No	FACU	
5. _____					
		92% = Total Cover			
<u>Herb Stratum</u>	(Plot size: <u>r=1m</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>  </u> 1 - Rapid Test for Hydrophytic Vegetation <u>  X  </u> 2 - Dominance Test is >50% <u>  </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>  </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>  </u> 5 - Wetland Non-Vascular Plants <sup>1</sup> <u>  </u> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
1. <u>Ranunculus repens</u>		1%	No	FAC	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
		1% = Total Cover			
<u>Woody Vine Stratum</u>	(Plot size: <u>r=2m</u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>  X  </u> No <u>      </u>
1. <u>none</u>					
2. _____					
		0% = Total Cover			
<b>% Bare Ground in Herb Stratum</b>	<u>  99%  </u>				

**Remarks:**

<b>SOIL</b>							<b>Sampling Point:</b> WFW-10-SP03
<b>Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):</b>							
Depth	Matrix		Redox Features			Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	
0-2	10YR 2/2	100					L
2-9	10YR 3/2	100					L
9-12	10YR 4/2	100					SaL
12-16	2.5Y 4/2	90	7.5Y 5/8	10	C	M	SaL

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.  
<sup>3</sup>Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

<b>Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<b>Restrictive Layer (if present):</b> Type: <u>none</u> Depth (inches): <u>n/a</u>	<b>Hydric Soil Present?</b> Yes <u>X</u> No <u>      </u>
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**Remarks:**  
 Assumed to be hydric, with a problematic layer 9-12 (lots of organic masking)

**HYDROLOGY**

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

<b>Field Observations:</b> Surface Water Present?    Yes <u>      </u> No <u>  x  </u> Depth (inches): <u>      </u> Water Table Present?      Yes <u>  x  </u> No <u>      </u> Depth (inches): <u>  5.5  </u> Saturation Present?        Yes <u>  x  </u> No <u>      </u> Depth (inches): <u>  surface  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No <u>      </u>
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**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**