Appendix A

Background Information

Rainfall Documentation

Date: July 2020

Weather station: Seattle Tacoma Airport

Period of Record.: 1991-2020

County: King County

State: WA

Growing season: 2/8 to 12/14, 309 days

		Long-term rainfall records							
	Month	3 yrs. in 10 less than	Normal	3 yrs. in 10 more than	Rain fall	Condition dry, wet, normal	Condition value	Month weight value	Product of previous two columns
1st prior month*	June	0.93	1.44	1.73	2.28	Wet	3	3	9
2nd prior month*	May	1.09	1.88	2.28	3.12	Wet	3	2	6
3rd prior month*	April	2.10	3.18	3.82	1.70	Normal	1	1	1
								Sum	**16**

Note: If sum is

6 - 9	then prior period has been drier than normal
10 - 14	then prior period has been normal
15 - 18	then prior period has been wetter than normal

Condition value:

Dry	=1
Normal	=2
Wet	=3

Conclusions: The period prior to July 2020 has been wetter than normal.

Rainfall Documentation

Date: August 2020

Weather station: Seattle Tacoma Airport

Period of Record.: 1991-2020

County: King County

State: WA

Growing season: 2/8 to 12/14, 309 days

		Long-term rainfall records							
	Month	3 yrs. in 10 less than	Normal	3 yrs. in 10 more than	Rain fall	Condition dry, wet, normal	Condition value	Month weight value	Product of previous two columns
1st prior month*	July	0.26	0.59	0.69	0.17	Dry	1	3	3
2nd prior month*	June	0.93	1.44	1.73	2.28	Wet	3	2	6
3rd prior month*	May	1.09	1.88	2.28	3.12	Wet	3	1	3
								Sum	**12**

Note: If sum is

6 - 9	then prior period has been drier than normal
10 - 14	then prior period has been normal
15 - 18	then prior period has been wetter than normal

Condition value:

Dry	=1
Normal	=2
Wet	=3

Conclusions: The period prior to August 2020 has been normal.

Rainfall Documentation

Date: September 2020

Weather station: Seattle Tacoma Airport

Period of Record.: 1991-2020

County: King County

State: WA

Growing season: 2/8 to 12/14, 309 days

		Long-term rainfall records							
	Month	3 yrs. in 10 less than	Normal	3 yrs. in 10 more than	Rain fall	Condition dry, wet, normal	Condition value	Month weight value	Product of previous two columns
1st prior month*	Aug	0.30	0.97	1.12	0.31	Normal	2	3	6
2nd prior month*	July	0.26	0.59	0.69	0.17	Dry	1	2	2
3rd prior month*	June	0.93	1.44	1.73	2.28	Wet	3	1	3
								Sum	**11**

Note: If sum is

6 - 9	then prior period has been drier than normal
10 - 14	then prior period has been normal
15 - 18	then prior period has been wetter than normal

Condition value:

Dry	=1
Normal	=2
Wet	=3

Conclusions: The period prior to September 2020 has been normal.

Rainfall Documentation

Date: October 2020

Weather station: Seattle Tacoma Airport

Period of Record.: 1991-2020

County: King County

State: WA

Growing season: 2/8 to 12/14, 309 days

		Long-term rainfall records							
	Month	3 yrs. in 10 less than	Normal	3 yrs. in 10 more than	Rain fall	Condition dry, wet, normal	Condition value	Month weight value	Product of previous two columns
1st prior month*	Sep	0.65	1.59	1.89	2.48	Wet	3	3	9
2nd prior month*	Aug	0.30	0.97	1.12	0.31	Normal	2	2	4
3rd prior month*	July	0.26	0.59	0.69	0.17	Dry	1	1	1
								Sum	**14**

Note: If sum is

6 - 9	then prior period has been drier than normal
10 - 14	then prior period has been normal
15 - 18	then prior period has been wetter than normal

Condition value:

Dry	=1
Normal	=2
Wet	=3

Conclusions: The period prior to October 2020 has been normal.

Rainfall Documentation

Date: November 2020

Weather station: Seattle Tacoma Airport

Period of Record.: 1991-2020

County: King County

State: WA

Growing season: 2/8 to 12/14, 309 days

		Long-term rainfall records							
	Month	3 yrs. in 10 less than	Normal	3 yrs. in 10 more than	Rain fall	Condition dry, wet, normal	Condition value	Month weight value	Product of previous two columns
1st prior month*	Oct	2.58	3.91	4.70	2.58	Normal	2	3	6
2nd prior month*	Sep	0.65	1.59	1.89	2.48	Wet	3	2	6
3rd prior month*	Aug	0.30	0.97	1.12	0.31	Normal	2	1	2
								Sum	**14**

Note: If sum is

6 - 9	then prior period has been drier than normal
10 - 14	then prior period has been normal
15 - 18	then prior period has been wetter than normal

Condition value:

Dry	=1
Normal	=2
Wet	=3

Conclusions: The period prior to October 2020 has been normal.

Rainfall Documentation

Date: December 2020

Weather station: Seattle Tacoma Airport

Period of Record.: 1991-2020

County: King County

State: WA

Growing season: 2/8 to 12/14, 309 days

		Long-term rainfall records							
	Month	3 yrs. in 10 less than	Normal	3 yrs. in 10 more than	Rain fall	Condition dry, wet, normal	Condition value	Month weight value	Product of previous two columns
1st prior month*	Nov	4.68	6.39	7.51	5.58	Normal	2	3	6
2nd prior month*	Oct	2.58	3.91	4.70	2.58	Normal	2	2	4
3rd prior month*	Sep	0.65	1.59	1.89	2.48	Wet	3	1	3
								Sum	13

Note: If sum is

6 - 9	then prior period has been drier than normal
10 - 14	then prior period has been normal
15 - 18	then prior period has been wetter than normal

Condition value:

Dry	=1
Normal	=2
Wet	=3

Conclusions: The period prior to December 2020 has been normal.

Rainfall Documentation

Date: January 2021

Weather station: Seattle Tacoma Airport

Period of Record.: 1991-2020

County: King County

State: WA

Growing season: 2/8 to 12/14, 309 days

		Long-term rainfall records							
	Month	3 yrs. in 10 less than	Normal	3 yrs. in 10 more than	Rain fall	Condition dry, wet, normal	Condition value	Month weight value	Product of previous two columns
1st prior month*	Dec	4.01	5.43	6.37	6.65	Wet	3	3	9
2nd prior month*	Nov	4.68	6.39	7.51	5.58	Normal	2	2	4
3rd prior month*	Oct	2.58	3.91	4.70	2.58	Normal	2	1	2
								Sum	**15**

Note: If sum is

6 - 9	then prior period has been drier than normal
10 - 14	then prior period has been normal
15 - 18	then prior period has been wetter than normal

Condition value:

Dry	=1
Normal	=2
Wet	=3

Conclusions: The period prior to January 2021 has been wetter than normal.

Rainfall Documentation

Date: May 2021

Weather station: Seattle Tacoma Airport

Period of Record.: 1991-2020

County: King County

State: WA

Growing season: 2/8 to 12/14, 309 days

		Long-term rainfall records							
	Month	3 yrs. in 10 less than	Normal	3 yrs. in 10 more than	Rain fall	Condition dry, wet, normal	Condition value	Month weight value	Product of previous two columns
1st prior month*	April	2.10	3.18	3.82	0.92	Dry	1	3	3
2nd prior month*	Mar	3.01	4.16	4.91	2.61	Dry	1	2	2
3rd prior month*	Feb	2.38	3.76	4.53	4.68	Wet	3	1	3
								Sum	8

Note: If sum is

6 - 9	then prior period has been drier than normal
10 - 14	then prior period has been normal
15 - 18	then prior period has been wetter than normal

Condition value:

Dry	=1
Normal	=2
Wet	=3

Conclusions: The period prior to May 2021 has been drier than normal.

Precipitation two weeks prior to fieldwork was 0.65 inches.

APPENDIX A-2

Daily Precipitation for 10 Days Preceding Fieldwork, SeaTac International Airport, Washington

To determine whether light, moderate, or heavy precipitation occurred in the 10 days prior to field work, the 10-day total is compared to one-third of the monthly average precipitation for the month evaluated (NRCS 2020a).

Daily precipitation data preceding field work for SeaTac International Airport, Washington

Date (2019)	Daily Precipitation (inches)[a]
April 29	0.00
April 28	0.00
April 27	0.14
April 26	0.00
April 25	0.00
April 24	0.00
April 23	0.00
April 22	0.13
April 21	0.00
April 20	T
Sum	0.27

[a] NRCS 2020a

"T" values indicate a trace value was recorded.

Conclusions: One-third of the monthly average precipitation for the month of April is 1.06 inches. Therefore, light precipitation was recorded in the 10 days preceding field work for April 30, 2019.

Daily precipitation data preceding field work for SeaTac International Airport, Washington

Date (2020)	Daily Precipitation (inches)[a]	Date (2020)	Daily Precipitation (inches)[a]
July 23	0.00	September 1	0.00
July 22	0.02	August 31	0.02
July 21	0.00	August 30	T
July 20	0.00	August 29	0.00
July 19	0.00	August 28	0.00
July 18	0.00	August 27	0.00
July 17	0.13	August 26	0.00
July 16	0.00	August 25	0.00
July 15	0.00	August 24	0.00
July 14	0.00	August 23	0.00
Sum	0.15	Sum	0.02

[a] NRCS 2020a

"T" values indicate a trace value was recorded.

Conclusions: One-third of the monthly average precipitation for the month of July is 0.20 inch and for the month of August is 0.32 inch. Therefore, light precipitation was recorded in the 10 days preceding field work for July 24, 2020, and September 2, 2020.

Daily precipitation data preceding field work for SeaTac International Airport, Washington

Date (2020)	Daily Precipitation (inches)[a]
August 18	0.00
August 17	0.00
August 16	0.00
August 15	0.00
August 14	0.00
August 13	0.00
August 12	0.00
August 11	0.00
August 10	0.00
August 9	0.00
August 8	0.01
August 7	T
August 6	0.08
August 5	0.00
August 4	0.00
August 3	0.00
August 2	0.00
Sum	0.09

[a] NRCS 2020a

"T" values indicate a trace value was recorded.

Conclusions: One-third of the monthly average precipitation for the month of August is 0.32 inch. Therefore, light precipitation was recorded in the 10 days preceding field work for August 13, 18, and 19, 2020.

Daily precipitation data preceding field work for SeaTac International Airport, Washington

Date (2020)	Daily Precipitation (inches)[a]
November 10	0.04
November 9	0.06
November 8	0.00
November 7	0.01
November 6	T
November 5	0.32
November 4	0.18
November 3	0.90
November 2	0.00
November 1	0.00
Sum	1.51

Conclusions: One-third of the monthly average precipitation for the month of November is 2.10 inches. Therefore, light precipitation was recorded in the ten days preceding field work for November 11, 2020.

Daily precipitation data preceding field work for SeaTac International Airport, Washington

Date (2021)	Daily Precipitation (inches)[a]
January 10	0.12
January 9	0.00
January 8	0.22
January 7	T
January 6	0.19
January 5	0.66
January 4	0.39
January 3	0.44
January 2	1.71
January 1	0.42
December 31 (2020)	0.35
December 30	0.97
December 29	0.16
December 28	0.00
Sum	5.63

[a] NRCS 2020a

"T" values indicate a trace value was recorded.

Conclusions: One-third of the monthly average precipitation for the month of January is 2.92 inches. One-third of the monthly average precipitation for the month of December is 2.22 inches. Therefore, heavy precipitation was recorded in the 10 days preceding field work for January 7 and 11 2021.

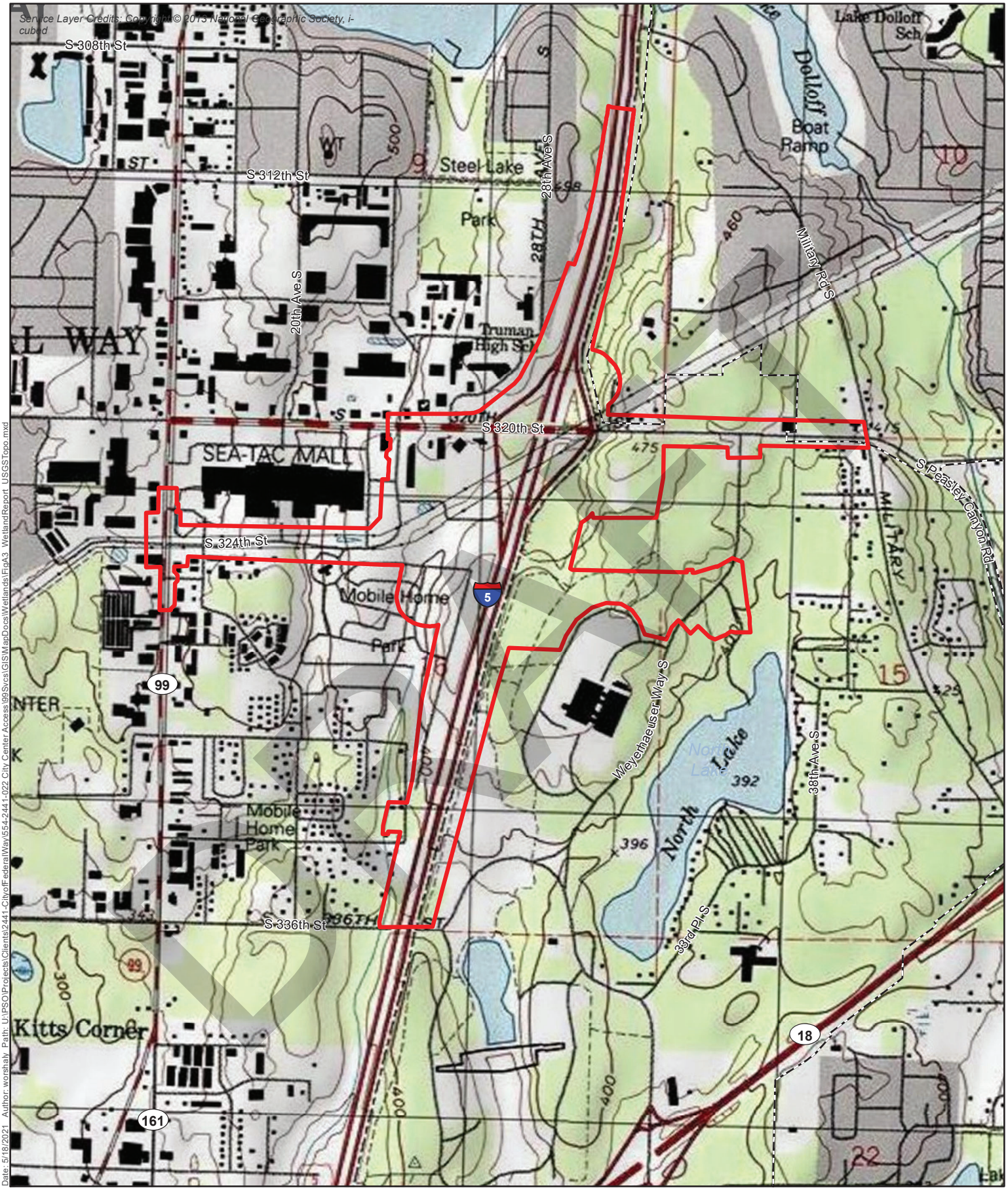
Daily precipitation data preceding field work for SeaTac International Airport, Washington

Date (2021)	Daily Precipitation (inches)[a]
May 4	0.03
May 3	0.25
May 2	0.00
May 1	0.03
April 30	0.11
April 29	0.00
April 28	0.00
April 27	0.00
April 26	0.00
April 25	0.10
April 24	0.51
April 23	0.04
Sum	1.07

[a] NRCS 2020a

Conclusions: One-third of the monthly average precipitation for the month of May is 0.63 inches. One-third of the monthly average precipitation for the month of April is 1.06 inches. Therefore, normal precipitation was recorded in the 10 days preceding field work for May 3 and 5 2021.

This Page Intentionally Left Blank



Date: 5/18/2021 Author: worshalv Path: U:\PSO\Projects\Clients\2441-CityofFederalWay\554-2441-022 City Center Access\99Svcs\GIS\MapDocs\Wetlands\FigA3_WetlandReport_USGSTopo.mxd

Parametrix

Source: USGS, ESRI

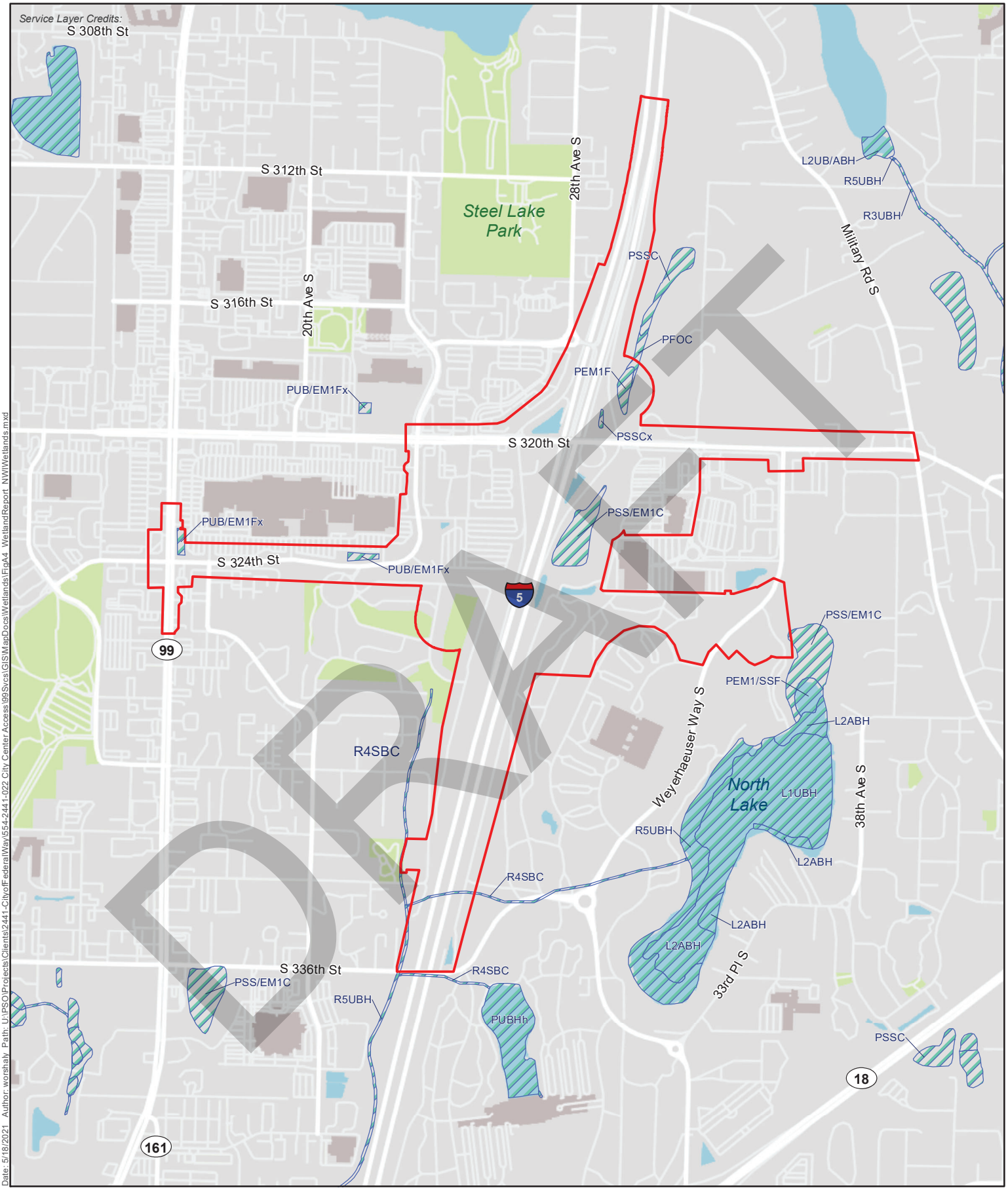
Study Area

City Boundary

0 250 500 1,000 Feet

Figure A-3
USGS Topographic Map
Federal Way City Center Access
Project: Wetland Report

Federal Way, WA



Date: 5/18/2021 Author: worshaly Path: U:\PSO\Projects\Clients\2441-CityofFederalWay\554-2441-022 City Center Access\99Svcs\GIS\MapDocs\Wetlands\Fig4 WetlandReport NWIWetlands.mxd

Parametrix

Source: USFWS,
© Mapbox, © OpenStreetMap

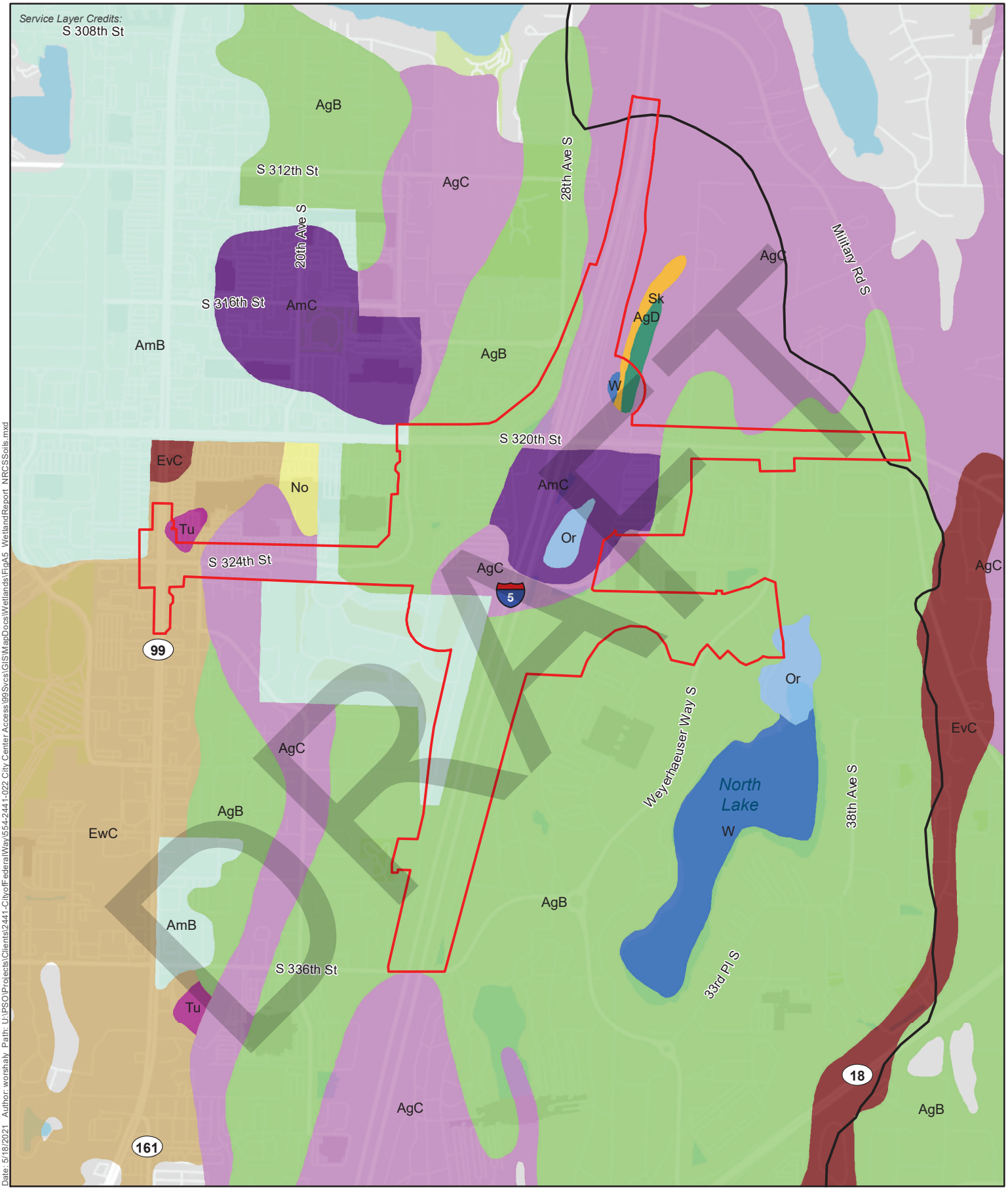
0 250 500 1,000 Feet

Study Area

NWI Wetland

Figure A-4
NWI Wetland Map
Federal Way City Center Access
Project: Wetland Report

Federal Way, WA



Date: 5/18/2021 Author: worshalv Path: U:\PSO\Projects\Clients\2441-CityofFederalWay\554-2441-022 City Center Access\99Svcs\GIS\MapDocs\Wetlands\Fig A5 WetlandReport NRCSSoils.mxd

Parametrix

Source: NRCS,
© Mapbox, © OpenStreetMap

0 250 500 1,000 Feet

Study Area

Subbasin Boundary

Map Unit

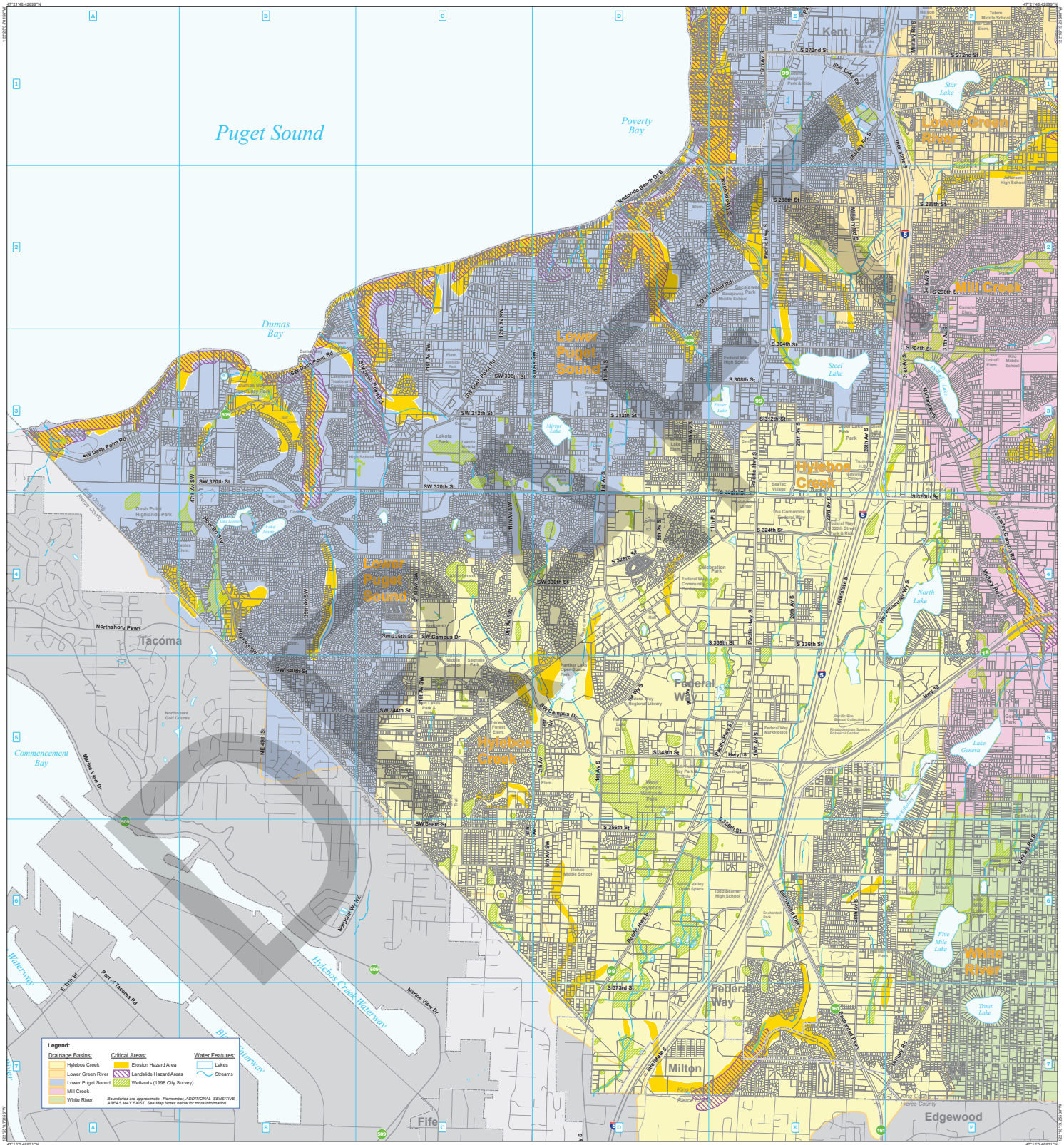
AgB	AmC	Or
AgC	EvC	Sk
AgD	EwC	Tu
AmB	No	W

Figure A-5
NRCS Soil Survey Map
Federal Way City Center Access
Project: Wetland Report

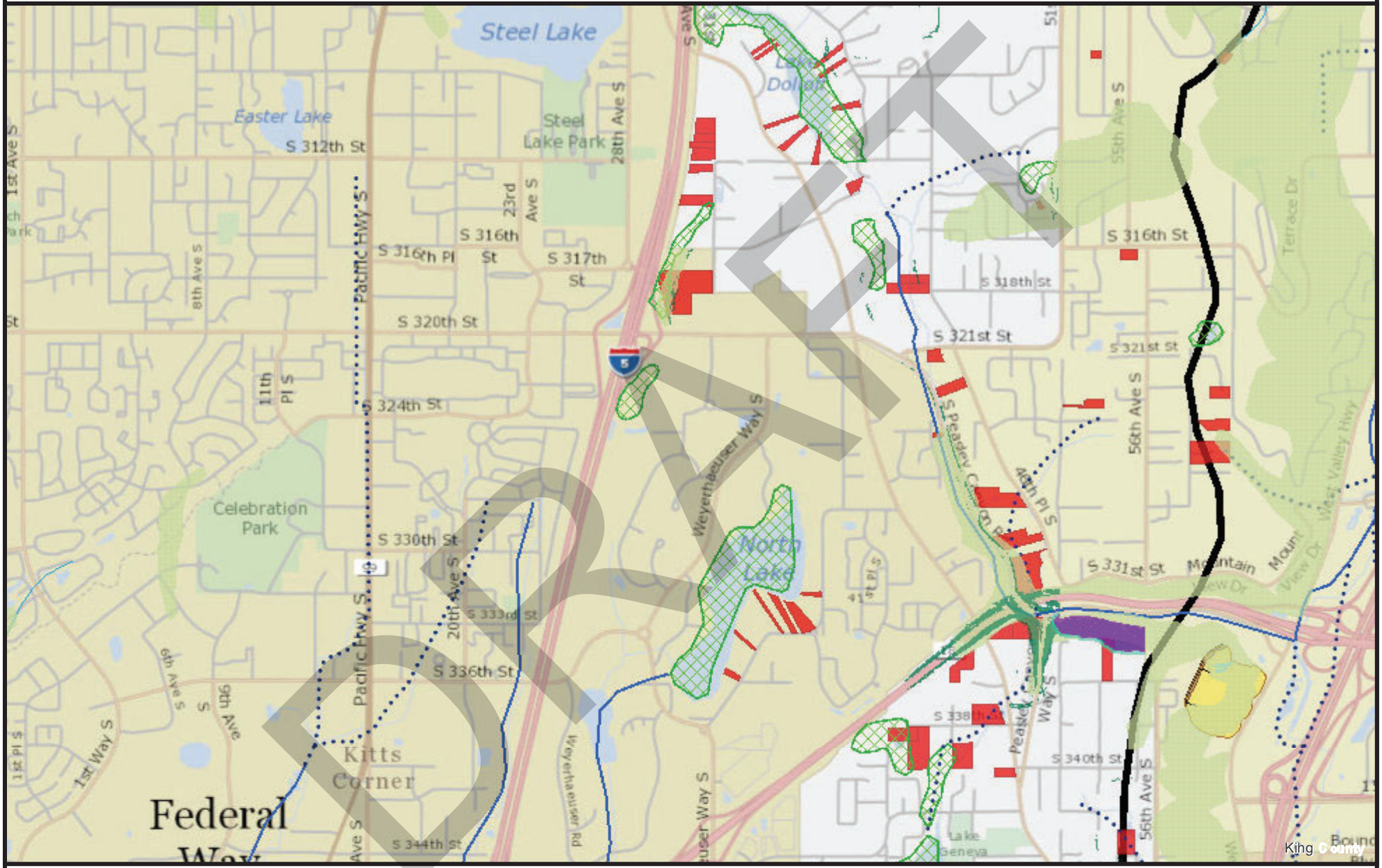
Federal Way, WA

City of Federal Way | Critical Areas Map

Map Date: May 2016
City of Federal Way,
GIS Division
33325 8th Ave S
Federal Way, WA 98003
(253) 835-7000
www.cityoffederalway.com



Federal Way City Center Access Project - King County iMap



Date: 10/13/2020 Notes:

N

King County

This Page Intentionally Left Blank

Appendix B

Wetland Descriptions

Table 1. Wetland W1 Summary

WETLAND W1– INFORMATION SUMMARY	
Location:	West of Federal Way Fire Station 4, north of S 320th St, northeast of Weyerhaeuser Way South

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	III
Local Rating	III
City of Federal Way Buffer Width	80 feet
Wetland Size	0.16 acres*
Cowardin Class	PEM, PSS
HGM Class	Slope, Depressional
Wetland Data Sheet(s)	W1-SP1
Upland Data Sheet(s)	W1-SP2, W1-SP3

Wetland Delineation	
Dominant Vegetation	Shrubs – Himalayan blackberry (*Rubus armeniacus*) Herbaceous – reed canarygrass (*Phalaris arundinacea*), small-fruited bulrush (*Scirpus microcarpus*), St. John's-wort (*Hypericum perforatum*), bedstraw (*Galium aparine*), common foxglove (*Digitalis purpurea*).
Soils	A soil matrix color of 10YR 3/2 was observed from 0-12 inches below soil surface. From 12-14 inches, a soil matrix color of 2.5Y 4/2 with redoximorphic concentrations was observed. A compact gravel layer at 14 inches hindered further exploration, but it is presumed that the depleted matrix extends beyond 14 inches, thus meeting indicator Depleted Below Dark Surface (A11).
Hydrology	No primary indicators were met for hydrology. Secondary indicators Geomorphic position (D2) and FAC-Neutral Test (D5) were recorded.
Rationale for Delineation	Depressional wetland with hydric soils, supports hydrophytic vegetation, and meets secondary hydrology indicators in July. Hydric soils were helpful in determining the wetland boundary.
Wetland Rating and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W1 rates as a Category III with a habitat score of 4.
Functions	Water quality functions scored moderate with a score of 6, hydrologic functions scored moderate with a score of 6, and habitat functions scored moderate with a score of 5. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer ranges from forested areas dominated by native conifers to open grass. Forested buffer provides screening and habitat functions.

*Wetland boundary approximated; area calculation is approximate.

Table 2. Wetland W2 summary

WETLAND W2 – INFORMATION SUMMARY	
Location:	West of South King Fire & Rescue Station 64, north of S 320th St, northwest of Weyerhaeuser Way South

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	IV
Local Rating	IV
City of Federal Way Buffer Width	50 feet
Wetland Size	0.03 acres
Cowardin Class	PSS
HGM Class	Depressional
Wetland Data Sheet(s)	W2-SP4
Upland Data Sheet(s)	W2-SP5

Wetland Delineation	
Dominant Vegetation	Trees – black cottonwood (*Populus balsamifera*) Shrubs – red osier dogwood (*Cornus alba*), hardhack (*Spiraea douglasii*), twinberry (*Lonicera involucrata*), nootka rose (*Rosa nutkana*) Herbaceous – bent grass (*Agrostis capillaris*) and Kentucky bluegrass (*Poa pratensis*)
Soils	Soil matrices of 10YR 3/2 (0-2) and 2.5Y 3/2 (2-16) with redoximorphic concentrations and depletions were observed throughout the upper 16 inches of the soil surface. Indicator Depleted Dark Surface (F7) met.
Hydrology	Surface soil cracks (B6) and Algal Mat or Crust (B4) were identified as primary indicators of hydrology for Wetland W2.
Rationale for Delineation	Depressional wetland with hydric soils, supports hydrophytic vegetation, and has 2 primary indicators of hydrology during a drier part of the growing season. Hydric soils were helpful in determining the wetland boundary. Wetland soils had matrices of chroma 2. Upland areas directly adjacent had soil matrices of chroma 3.
Wetland Rating and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W2 rates as a Category IV with a habitat score of 4.
Functions	Water quality functions scored moderate with a score of 6, hydrologic functions scored moderate with a score of 6, and habitat functions scored moderate with a score of 5. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer conditions range from forested areas dominated by a mixture of native conifers and shrubs to the north. Forested buffer provides screening and habitat functions. S 320th Street is located to the south with an unpaved utility access road crossing through the wetland unit from the east and west, parallel to S 320th Street.

Table 3. Wetland W3 summary

WETLAND W3 – INFORMATION SUMMARY	
Location:	North of S 320th St, west of 32nd avenue south.

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	III
Local Rating	III
City of Federal Way Buffer Width	80 feet
Wetland Size	0.02 acres
Cowardin Class	PEM
HGM Class	Depressional
Wetland Data Sheet(s)	W3-SP6
Upland Data Sheet(s)	W3-SP7

Wetland Delineation	
Dominant Vegetation	Herbaceous – reed canarygrass (*Phalaris arundinacea*), common rush (*Juncus effusus*), bent grass (*Agrostis capillaris*), and twinberry (*Lotus corniculatus*).
Soils	Soils were not observed. Assumed hydric.
Hydrology	Wetland W3 was checked with "other" primary indicator and is assumed to be saturated for a minimum of 5% of the growing season given no stormwater controls on S 320th Street allowing overland flow from uplands into the wetland with no observed outlet present. Wetland W3 also met secondary indicators geomorphic position (D2) and FAC-neutral test (D5).
Rationale for Delineation	Depressional wetland with hydric soils, supports hydrophytic vegetation, and is assumed to be saturated for at least 5% of the growing season.
Wetland Rating and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W3 rates as a Category III with a habitat score of 3.
Functions	Water quality functions scored high with a score of 7, hydrologic functions scored moderate with a score of 6, and habitat functions scored low with a score of 4. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer is a large hillslope of fill material, located on the north side of 320th. The buffer consists mainly of invasive Himalayan blackberry (*Rubus armeniacus*) and native trailing blackberry (*Rubus ursinus*). This buffer is poor in condition and provides little screening or protection.

Table 4. Wetland W5 summary

WETLAND W5 – INFORMATION SUMMARY	
Location:	East of I-5 exit 142 towards Federal Way S. 320th St and west of Rockwell Collins, Seattle Service Center Parking lot.

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	I/II
Local Rating	I/II
City of Federal Way Buffer Width	250 feet / 150 feet
Wetland Size	1.76 (bog, Cat I)/ 5.48 (Cat II)
Cowardin Class	PEM, PSS, PFO
HGM Class	Depressional
Wetland Data Sheet(s)	W5-SP8
Upland Data Sheet(s)	W5-SP9

Wetland Delineation	
Dominant Vegetation	Species within the mineral wetland component: Trees – Red alder (*Alnus rubra*), Oregon Ash (*Fraxinus latifolia*), European Mountain Ash (*Sorbus aucuparia*) Shrubs – Salmonberry (*Rubus spectabilis*) Species with the bog component: Trees – Red alder Shrubs – bog laurel (*Kalmia microphylla*) and Labrador tea (*Rhododendron groenlandicum*) Herbaceous –fowl manna grass (*Glyceria striata*),
Soils	A soil matrix of 10Y 5/1 with redoximorphic concentrations was observed throughout the upper 16 inches of the soil surface. These characteristics meet indicators Loamy Gleyed Matrix (F2) and Depleted Matrix (F3).
Hydrology	A locally shallow water table and stream flow hydrologically support the wetlands. Inundation at two inches was observed. Indicators, High Water Table (A2), Saturation (A3), and Hydrogen Sulfide Odor (C1) were met. Secondary indicators, Dry-Season Water Table (C2), Geomorphic Position (D2), and FAC-Neutral Test (D5) were also met.
Rationale for Delineation	Depressional wetland with hydric soils, supports hydrophytic vegetation, and has soils saturation in late July during a drier part of the growing season.
Wetland Rating and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W5 rates as a dual rating as Category I/II with a habitat score of 6.
Functions	Water quality functions scored high with a score of 7, hydrologic functions scored high with a score of 7, and habitat functions scored high with a score of 7. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer consists of a forested area. Forested buffer provides screening and habitat functions protecting the Category II wetland and associated Category I bog.

*Wetland boundary approximated; area calculation is approximate.

Table 5. Wetland W6 summary

WETLAND W6 – INFORMATION SUMMARY	
Location:	West of Oakland Hills Boulevard, east of Burning Tree Blvd

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	III
Local Rating	III
City of Federal Way Buffer Width	80 feet
Wetland Size	0.11 acres*
Cowardin Class	PEM, PSS
HGM Class	Riverine
Wetland Data Sheet(s)	W6-SP10
Upland Data Sheet(s)	W6-SP11

Wetland Delineation	
Dominant Vegetation	Trees – Western red cedar (*Thuja plicata*) Shrubs – Himalayan blackberry and salmonberry (*Rubus spectabilis*) Herbaceous – reed canarygrass (*Phalaris arundinacea*), giant horsetail (*Equisetum telmateia*), bittersweet nightshade (*Solanum dulcamara*)
Soils	Soil matrices of 10YR 2/1 (0-5) and 10YR 2/2 (5-16) with 10GY 4/1 gleyed depletions in the 5 to 16 inch layer were observed. These characteristics met indicator Redox Dark Surface (F6).
Hydrology	Supposed by Steam 1 flows and locally high water table. Indicators High Water Table (A2) and Saturation (A3) were identified as primary indicators for Wetland W6. Secondary indicators Dry-Season Water Table (C2) and Geomorphic Position (D2), and FAC-Neutral Test (D5) were met.
Rationale for Delineation	Riverine wetland with hydric soils, supports hydrophytic vegetation, and has soils saturation in July during a drier part of the growing season. Hydric soils were helpful in determining the wetland boundary. Upland areas directly adjacent had soil matrices of chroma 3.
Wetland Rating and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W6 rates as a Category III with a habitat score of 4.
Functions	Water quality functions scored moderate with a score of 6, hydrologic functions scored moderate with a score of 6, and habitat functions scored moderate with a score of 5. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer is limited in size with a few large conifers. It is located directly next to Belmor Park Golf Course. Overall the buffer is very small.

*Wetland boundary approximated; area calculation is approximate.

Table 6. Wetland W7 summary

WETLAND W7 – INFORMATION SUMMARY	
Location:	Along east shoulder of southbound I-5, adjacent to Exit 143 signage.

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	IV
Local Rating	IV
City of Federal Way Buffer Width	50 feet
Wetland Size	0.03 acres*
Cowardin Class	PEM
HGM Class	Depressional
Wetland Data Sheet(s)	None (no entry permission)
Upland Data Sheet(s)	None (no entry permission)

Wetland Delineation	
Dominant Vegetation	Herbaceous – cattail (*Typha latifolia*)
Soils	Soils were not observed due to buried power line and occurrence of wetland within I-5 fill prism. Soils presumed hydric.
Hydrology	Hydrology provided by stormwater runoff from I-5 and overland flow from adjacent uplands. Outlet is a stormwater catch basin perched approximately 6-inches above wetland surface. Hydrology indicator, Saturation (A3), was present.
Rationale for Delineation	Presence of obligate vegetation and saturated soils in geomorphic position with presumed hydric soils.
Wetland Rating and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W7 rates as a Category IV with a habitat score of 3.
Functions	Water quality functions scored moderate with a score of 5, hydrologic functions scored moderate with a score of 5, and habitat functions scored low with a score of 4. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer is highly disturbed with I-5 southbound lanes immediately adjacent and forested slope between I-5 and a multi-family development.

*Wetland boundary approximated; area calculation is approximate.

Table 7. Wetland W9 summary

WETLAND W9 – INFORMATION SUMMARY	
Location:	South of 320th street, located in the inner portion of the I-5 North on-ramp.

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	IV
Local Rating	IV
City of XX/XX County Buffer Width	50 feet
Wetland Size	0.01 acres
Cowardin Class	PEM
HGM Class	Slope
Wetland Data Sheet(s)	W9-SP13
Upland Data Sheet(s)	W9-SP14

Wetland Delineation	
Dominant Vegetation	Herbaceous – reed canarygrass (*Phalaris arundinacea*)
Soils	Soil matrices of 10YR 4/1 (0-4.5 inches) and 10Y 5/1 (4.5-16 inches) with 10YR 4/6 redoximorphic concentrations observed throughout the soil profile. These characteristics meet soil indicators Depleted Below Dark Surface (A11), Loamy Gleyed Matrix (F2), and Depleted Matrix (F3).
Hydrology	Surface Water (A1) and High Water Table (A2) were identified as primary indicators of hydrology for Wetland W9. Secondary indicators Drainage Patterns (B10) and Geomorphic Position (D2) met.
Rationale for Delineation	Slope wetland with hydric soils, supports hydrophytic vegetation, and has soils saturation in August during a drier part of the growing season. Hydric soils were helpful in determining the wetland boundary.
Wetland Rating and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W9 rates as a Category IV with a habitat score of 3.
Functions	Water quality functions scored moderate with a score of 6, hydrologic functions scored moderate with a score of 6, and habitat functions scored low with a score of 4. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer is open grass that is confined within an on-ramp to I-5 north. Overall, the buffer provides some screening but is frequently mowed for roadside maintenance and safety.

Table 8. Wetland W10 summary

WETLAND W10 – INFORMATION SUMMARY		
Location:	Located north of 320th street east of the I-5 north on-ramp.	
	**Local Jurisdiction**	City of Federal Way
	Ecology Rating (2014)	III
	Local Rating	III
	City of Federal Way Buffer Width	80 feet
	Wetland Size	0.15 acres
	Cowardin Class	PAB, PEM, PSS, PFO
	HGM Class	Depressional
	Wetland Data Sheet(s)	W10-SP15
	Upland Data Sheet(s)	W10-SP16
Wetland Delineation		
Dominant Vegetation	Trees – red alder (*Alnus rubra*) Shrubs – red osier dogwood (*Cornus sericea* = *C. alba*), pacific willow (*Salix lasiandra*), Himalayan blackberry (*Rubus armeniacus*) Herbaceous – slough sedge (*Carex obnupta*), reed canarygrass (*Phalaris arundinacea*), creeping buttercup (*Ranunculus repens*).	
Soils	A soil matrix of 10YR 3/2 with redoximorphic concentrations were observed throughout the upper 16 inches of the soil surface. Indicator Redox Dark Surface (F6) met.	
Hydrology	High Water Table (A2) and Saturation (A3) were identified as primary indicators of hydrology for Wetland W10.	
Rationale for Delineation	Depressional wetland with hydric soils, supports hydrophytic vegetation, and has soils saturation in July during a drier part of the growing season.	
Wetland Rating and Functions		
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W10 rates as a Category III with a habitat score of 5.	
Functions	Water quality functions scored moderate with a score of 5, hydrologic functions scored high with a score of 7, and habitat functions scored moderate with a score of 6. Function rating details are in Appendix D.	
Wetland Buffers		
Buffer Condition	Buffer consists of large forested area with conifers and mixed deciduous trees. Forested buffer provides screening and habitat functions protecting the wetland.	

Table 9. Wetland W11 summary

WETLAND W11 – INFORMATION SUMMARY	
Location:	North of 320th Street, east of I-5 north on-ramp, and west of 32nd Ave S
	

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	II
Local Rating	II
City of Federal Way Buffer Width	150 feet
Wetland Size	8.19 acres*
Cowardin Class	PAB, PEM, PSS, PFO
HGM Class	Depressional
Wetland Data Sheet(s)	W11-SP17
Upland Data Sheet(s)	W11-SP18

Wetland Delineation	
Dominant Vegetation	Trees – Oregon ash (*Fraxinus latifolia*), red alder (*Alnus rubra*), black cottonwood (*Populus balsamifera*) Shrubs – hardhack (*Spiraea douglasii*), Salmonberry (*Rubus spectabilis*), Oregon Ash (*Fraxinus latifolia*), black cottonwood (*Populus balsamifera*) Herbaceous – slough sedge (*Carex obnupta*), large leaved avens (*Geum macrophyllum*)
Soils	A soil matrix of 10YR 2/2 with redoximorphic concentrations starting at 4 inches below soil surface were observed throughout the upper 18 inches of the soil surface. Indicators Redox Dark Surface (F6) and Depleted Dark Surface (F7) met.
Hydrology	Secondary indicators Geomorphic position (D2) and FAC-Neutral Test (D5) were obseved. Seasonally high water table assumed
Rationale for Delineation	Depressional wetland with hydric soils and supports hydrophytic vegetation.
Wetland Rating and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W11 rates as a Category II with a habitat score of 6.
Functions	Water quality functions scored moderate with a score of 6, hydrologic functions scored high with a score of 8, and habitat functions scored moderate with a score of 6. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer ranges from large forested areas dominated by a mixture of native conifers and shrubs. Forested buffer provides screening and habitat functions.

*Wetland boundary approximated; area calculation is approximate.

Table 10. Wetland W12 summary

WETLAND W12 – INFORMATION SUMMARY	
Location:	Between southbound I-5 and 320th street onramp to southbound I-5

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	III
Local Rating	III
City of Federal Way Buffer Width	80 feet
Wetland Size	0.04 acres
Cowardin Class	PEM
HGM Class	Depressional
Wetland Data Sheet(s)	W12-SP19
Upland Data Sheet(s)	W12-SP20

Wetland Delineation	
Dominant Vegetation	Herbaceous – reed canarygrass (*Phalaris arundinacea*), colonial bentgrass (*Agrostis stolonifera*), common rush
Soils	Soil matrices of 10YR 4/1 with redoximorphic concentrations were observed throughout the upper 16 inches of the soil surface. Indicator Depleted Matrix (F3) met.
Hydrology	Oxidized rhizospheres (C3) along living roots was the only primary indicator noted. Secondary indicators include Geomorphic Position (D2) and FAC-Neutral Test (D5).
Rationale for Delineation	Depressional wetland with hydric soils, supports hydrophytic vegetation, and has oxidized rhizospheres along living roots. Oxidized rhizospheres were a strong indicator in determining the wetland boundary.
Wetland Rating and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W12 rates as a Category III with a habitat score of 3.
Functions	Water quality functions scored high with a score of 7, hydrologic functions scored moderate with a score of 6, and habitat functions scored low with a score of 4. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer is an open pasture that is confined by roadways. Overall, the buffer provides minimal function and is frequently mowed for roadside maintenance and safety.

Table 11. Wetland W13 summary

WETLAND W13 – INFORMATION SUMMARY		
Location:	South of S 320th Street and west of Weyerhaeuser Way S	
	**Local Jurisdiction**	City of Federal Way
	Ecology Rating (2014)	III
	Local Rating	III
	City of Federal Way Buffer Width	80 feet
	Wetland Size	0.45 acres*
	Cowardin Class	PEM, PSS, PFO
	HGM Class	Depressional
	Wetland Data Sheet(s)	W13-SP21
	Upland Data Sheet(s)	W13-SP22
Wetland Delineation		
Dominant Vegetation	Trees – Bitter cherry (*Prunus emarginata*) Shrubs – hardhack (*Spiraea douglasii*), pacific willow (*Salix scouleriana*), red osier dogwood (*Cornus sericea = C. alba*), black cottonwood (*Populus balsamifera*) Herbaceous – piggyback plant (*Tolmiea menziesii*), soft rush (*Juncus effusus*), slough sedge (*Carex obnupta*)	
Soils	A soil matrix of 10YR 3/2 with redoximorphic concentrations was observed in the first layer (0 to 7 inches). A soil matrix of 10YR 4/2 with redoximorphic depletions and concentrations were observed on the second layer (7 to 16 inches). Indicators Depleted Below Dark Surface (A11), Depleted Matrix (F3), and Redox Dark Surface (F6) were met.	
Hydrology	Primary indicators Sediment Deposits (B2) and Sparsely Vegetated Concave Surfaces (B8) met.	
Rationale for Delineation	Depressional wetland with hydric soils, supports hydrophytic vegetation, and has strong primary indicators for hydrology in July during a drier part of the growing season. Hydric soils were helpful in determining the wetland boundary. Wetland soils had matrices of chroma 2. Upland areas directly adjacent had soil matrices of chroma 3.	
Wetland Rating and Functions		
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W13 rates as a Category III with a habitat score of 4.	
Functions	Water quality functions scored moderate with a score of 6, hydrologic functions scored moderate with a score of 6, and habitat functions scored moderate with a score of 5. Function rating details are in Appendix D.	
Wetland Buffers		
Buffer Condition	Buffer ranges from large forested areas dominated by a mixture of native conifers and shrubs. Forested buffer provides screening and habitat functions.	

*Wetland boundary approximated; area calculation is approximate.

Table 12. Wetland W14 summary

WETLAND W14 – INFORMATION SUMMARY	
Location:	North of S 320th Street, east of South King Fire & Rescue Station 64 and west of the intersection of Military Road S and S 320th Street.

Local Jurisdiction	King County
Ecology Rating (2014)	III
Local Rating	III
King County Buffer Width	80 feet
Wetland Size	0.26 acres*
Cowardin Class	PSS, PFO
HGM Class	Depressional
Wetland Data Sheet(s)	None (no entry permission)
Upland Data Sheet(s)	None (no entry permission)

Wetland Delineation	
Dominant Vegetation	Trees – red alder (*Alnus rubra*) Shrubs – hardhack ((*Spiraea douglasii*)
Soils	Soils not investigated due to lack of entry permission
Hydrology	Hydrology not investigated due to lack of entry permission. Roadside observations suggest seasonal flooding.
Rationale for Delineation	Boundary estimated based on hydrophytic vegetation and topographic features.
Wetland Rating and Functions	
Rationale for Local Rating	KCC 21A.24.325 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) and determines buffer widths based on both the habitat score and land use intensity. Wetland W14 rates as a Category III with a habitat score of 4.
Functions	Water quality functions scored moderate with a score of 6, hydrologic functions scored moderate with a score of 6, and habitat functions scored moderate with a score of 5. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer ranges from large forested areas dominated by a mixture of native conifers and shrubs. Forested buffer provides screening and habitat functions.

*Wetland boundary approximated; area calculation is approximate.

Table 13. Wetland W15 summary

WETLAND W15 – INFORMATION SUMMARY	
Location:	South of S 320th Street, west of the I-5 southbound on-ramp and east of the I-5 southbound travel lanes.

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	IV
Local Rating	IV
City of Federal Way Buffer Width	50 feet
Wetland Size	0.14 acres*
Cowardin Class	PEM, PSS
HGM Class	Depressional
Wetland Data Sheet(s)	None (no entry permission)
Upland Data Sheet(s)	None (no entry permission)

Wetland Delineation	
Dominant Vegetation	Salmonberry (*Rubus spectabilis*), soft rush (*Juncus effusus*).
Soils	Soils not investigated due to lack of entry permission
Hydrology	Hydrology not investigated due to lack of entry permission. Roadside observations suggest seasonal flooding.
Rationale for Delineation	Boundary estimated based on hydrophytic vegetation and topographic features.
Wetland Rating and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W15 rates as a Category IV with a habitat score of 3.
Functions	Water quality functions scored moderate with a score of 6, hydrologic functions scored moderate with a score of 6, and habitat functions scored low with a score of 3. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer is limited in size with a few large trees and shrubs. It is located on the far east side of the Best Western Plus Seattle/Federal Way. Overall the buffer is very small.

*Wetland boundary approximated; area calculation is approximate.

Table 14. Wetland W17 summary

WETLAND W17 – INFORMATION SUMMARY	
Location:	South of Weyerhaeuser Way S and west of Fishing Access Road

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	III
Local Rating	III
City of Federal Way Buffer Width	80 feet
Wetland Size	0.13 acres
Cowardin Class	PFO
HGM Class	Depressional
Wetland Data Sheet(s)	W17-SP3
Upland Data Sheet(s)	W17-SP1, W17-SP2

Wetland Delineation	
Dominant Vegetation	Trees – western red cedar (*Thuja plicata*), red alder (*Alnus rubra*) Shrubs – salmonberry (*Rubus spectabilis*), vine maple (*Acer circinatum*)
Soils	Soil matrices are 10YR 3/2 (0-7 inches) and 2.5YR 4/2 (7-16 inches) with redoximorphic concentrations in the lower layer. These characteristics meet indicator Depleted Matrix (F3).
Hydrology	Indicators High Water Table (A2), Saturation (A3), Water Marks (B1), Sediment Deposits (B2) were met.
Rationale for Delineation	Depressional wetland with hydric soils, supports hydrophytic vegetation, and has strong primary indicators for hydrology. Wetland boundary was distinct by the steep slope to upland conditions.
Wetland Rating and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W17 rates as a Category III with a habitat score of 5.
Functions	Water quality functions scored moderate with a score of 6, hydrologic functions scored high with a score of 7, and habitat functions scored moderate with a score of 5. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer is a large forested area dominated by Douglas fir, western red cedar, big leaf maple, vine maple, salal, and swordfern. Southern buffer area includes Wetland 18. The buffer provides functions such as habitat and screening.

Table 15. Wetland 18 summary

WETLAND W18 – INFORMATION SUMMARY			
Location:	South and east of Weyerhaeuser Way S		
		**Local Jurisdiction**	City of Federal Way
		Ecology Rating (2014)	II
		Local Rating	II
		City of Federal Way Buffer Width	150 feet
		Wetland Size	0.62 within study area, overall, approximately 13 acres
		Cowardin Class	PAB, PSS, PFO
		HGM Class	Depressional
		Wetland Data Sheet(s)	W18-SP2, W18-SP3, W18-SP5
		Upland Data Sheet(s)	W18-SP1, W18-SP4, W18-SP6
Wetland Delineation			
Dominant Vegetation	Trees – western red cedar (*Thuja plicata*), red alder (*Alnus rubra*) Shrubs – vine maple (*Acer circinatum*), salmonberry (*Rubus spectabilis*), hardhack (*Spiraea douglasii*) Herbaceous – soft rush (*Juncus effusus*), creeping buttercup (*Ranunculus repens*),		
Soils	Soils were examined at several locations within the wetland. Indicators met include Redox Depressions (F8), Depleted Matrix (F3), and Depleted Below Dark Surface (A11).		
Hydrology	Indicators met include High Water Table (A2), Saturation (A3), and Water Marks (B1).		
Rationale for Delineation	Depressional wetland with hydric soils, supports hydrophytic vegetation, and has strong primary indicators for hydrology. Wetland boundaries are marked by a steep slope (north) and fishing access road (east). Wetland extends to water edge at North Lake.		
Wetland Rating and Functions			
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W18 rates as a Category II with a habitat score of 7.		
Functions	Water quality functions scored moderate with a score of 6, hydrologic functions scored high with a score of 7, and habitat functions scored high with a score of 9. Function rating details are in Appendix D.		
Wetland Buffers			
Buffer Condition	Buffer is a large forested area dominated by Douglas fir, western red cedar, big leaf maple, vine maple, salal, and swordfern. Southern buffer area includes North Lake. Western buffer boundary is marked by Weyerhaeuser Way S.		

Table 16. Wetland 19 summary

WETLAND W19 – INFORMATION SUMMARY	
Location:	South and west of Weyerhaeuser Way S.

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	II
Local Rating	II
City of Federal Way Buffer Width	150 feet
Wetland Size	0.22 acres within study area, but part of larger system: approximately 15 acres
Cowardin Class	PAB, PEM, PSS, PFO
HGM Class	Depressional
Wetland Data Sheet(s)	W19-SP1
Upland Data Sheet(s)	W19-SP2

Wetland Delineation	
Dominant Vegetation	Trees – western red cedar (*Thuja plicata*), red alder (*Alnus rubra*) Shrubs – vine maple (*Acer circinatum*), salmonberry (*Rubus spectabilis*), hardhack (*Spiraea douglasii*) Herbaceous – soft rush (*Juncus effusus*), creeping buttercup (*Ranunculus repens*)
Soils	Organic soils were observed from 0 to 8 inches below the soil surface. Below the organic layer a mineral layer with a matrix of 10YR 2/2 containing redoximorphic concentrations was observed. These characteristics meet soil indicator Histic Epipedon (A2).
Hydrology	Indicators met include High Water Table (A2), Saturation (A3), and Water Marks (B1).
Rationale for Delineation	Depressional wetland with hydric soils, supports hydrophytic vegetation, and has strong primary indicators for hydrology. Hydrology indicators and hydric soils helped to determine wetland boundary.
Wetland Rating and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W19 rates as a Category II with a habitat score of 7.
Functions	Water quality functions scored moderate with a score of 6, hydrologic functions scored high with a score of 7, and habitat functions scored high with a score of 9. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer is a large forested area dominated by Douglas fir, western red cedar, big leaf maple, vine maple, salal, and swordfern. Southern buffer area includes North Lake. Eastern buffer boundary is lined with single-family residential.

Table 17. Wetland 20 Summary

WETLAND W20 – INFORMATION SUMMARY	
Location:	East of I-5 northbound, within WSDOT right-of-way

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	IV
Local Rating	IV
City of Federal Way Buffer Width	50 feet
Wetland Size	0.2
Cowardin Class	PEM
HGM Class	Slope
Wetland Data Sheet(s)	W20-SP1
Upland Data Sheet(s)	W20-SP2, W20-SP3

Wetland Delineation	
Dominant Vegetation	Herbaceous – reed canarygrass (*Phalaris arundinacea*), Kentucky bluegrass (*Poa pratensis*), velvetgrass (*Holcus lanatus*)
Soils	Soils were examined to have three layers. All layers are depleted with matrices of 2.5Y 4/1 (0 to 6 inches), 2.5Y 5/2 (6 to 10 inches), and 5Y 5/1 (10-16 inches). Redoximorphic features are present at 6 inches and below. These soil characteristics meet hydric soil indicator F3, Depleted Matrix.
Hydrology	Indicators met include High Water Table (A2), Saturation (A3), Algal Mat or Crust (B4), and Oxidized Rhizospheres along Living Roots (C3).
Rationale for Delineation	Slope wetland with hydric soils, supports hydrophytic vegetation, and has indicators for hydrology. Hydrology indicators helped to determine wetland boundary.
Wetland Rating and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W20 rates as a Category IV with a habitat score of 3.
Functions	Water quality functions scored moderate with a score of 6, hydrologic functions scored low with a score of 4, and habitat functions scored low with a score of 3. Function rating details are in Appendix D.
Wetland Buffers	
Buffer Condition	Buffer is a maintained mown easement adjacent to I-5 northbound. Southern buffer area includes some shrubbery.

Table 18. Wetland 21 Summary

WETLAND W21 – INFORMATION SUMMARY			
Location:	West of I-5 southbound; east of 24th Avenue South		
		**Local Jurisdiction**	City of Federal Way
		Ecology Rating (2014)	III
		Local Rating	III
		City of Federal Way Buffer Width	80 feet
		Wetland Size[a]	~0.34 acre
		Cowardin Class	PEM, PFO
		HGM Class	Depressional
		Wetland Data Sheet(s)	None (no entry permission)
		Upland Data Sheet(s)	None (no entry permission)
Wetland Delineation			
Dominant Vegetation	Trees – back cottonwood (*Populus balsamifera*), red alder (*Alnus rubra*), and Oregon ash (*Fraxinus latifolia*) Shrubs – Sitka willow (*Salix sitchensis*), hardhack (*Spiraea douglasii*), and Himalayan blackberry (*Rubus armeniacus*) Herbaceous – reed canarygrass (*Phalaris arundinacea*)		
Soils	Soils not observed due to lack of entry permission.		
Hydrology	Hydrology not observed due to lack of entry permission. Roadside observations suggest seasonal flooding.		
Rationale for Delineation	Depressional wetland with observed hydrophytic vegetation and hydrology. Wetland boundary was estimated based on aerial photography and online resources.		
Wetland Rating and Functions			
Rationale for Local Rating[b]	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W21 rates as a Category III with a habitat score of 5.		
Functions	Water quality and hydrologic functions are presumed moderate with the preliminary review. Habitat functions scored moderate with a score of 5.		
Wetland Buffers			
Buffer Condition	Buffer is limited to the surrounding upland forest. Extending beyond the upland forest includes residential development and I-5 southbound.		

[a] approximate size based on aerial photography

[b] preliminary rating based on observations from city road rights-of-way and online data sources.

Table 19. Wetland 22 Summary

WETLAND W22 – INFORMATION SUMMARY	
Location:	North of S 333rd Street; west of Cedar Grove Park

Local Jurisdiction	City of Federal Way
Ecology Rating (2014)	III
Local Rating	III
City of Federal Way Buffer Width	80 feet
Wetland Size[a]	~0.81 acre
Cowardin Class	PFO
HGM Class	Depressional
Wetland Data Sheet(s)	None (no entry permission)
Upland Data Sheet(s)	None (no entry permission)

Wetland Delineation	
Dominant Vegetation	Trees – back cottonwood (*Populus balsamifera*), red alder (*Alnus rubra*) Shrubs – Sitka willow (*Salix sitchensis*), Himalayan blackberry (*Rubus armeniacus*)
Soils	Soils not observed due to lack of entry permission.
Hydrology	Hydrology not observed due to lack of entry permission. Roadside observations suggest saturation in proximity to stream.
Rationale for Delineation	Depressional wetland with observed hydrophytic vegetation and hydrology. Wetland boundary was estimated based on aerial photography and online resources.
Wetland Rating and Functions	
Rationale for Local Rating[b]	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W22 rates as a Category III with a habitat score of 5.
Functions	Water quality and hydrologic functions are presumed moderate with the preliminary review. Habitat functions scored moderate with a score of 5.
Wetland Buffers	
Buffer Condition	Buffer is limited to the surrounding upland forest and stream corridor. Extending beyond includes residential development and a park

[a] approximate size based on aerial photography

[b] preliminary rating based on observations from city road rights-of-way and online data sources.

Table 21. Wetland 23 Summary

WETLAND W23 – INFORMATION SUMMARY		
Location:	West of I-5 southbound; north of S 336th Street	
	**Local Jurisdiction**	City of Federal Way
	Ecology Rating (2014)	III
	Local Rating	III
	City of Federal Way Buffer Width	80 feet
	Wetland Size[a]	0.27 acres
	Cowardin Class	PFO
	HGM Class	Riverine
	Wetland Data Sheet(s)	None (no entry permission)
	Upland Data Sheet(s)	None (no entry permission)
Wetland Delineation		
Dominant Vegetation	Trees – quaking aspen (*Populus tremuloides*), red alder (*Alnus rubra*) Shrubs – Sitka willow (*Salix sitchensis*) and Himalayan blackberry (*Rubus armeniacus*) Herbaceous – reed canarygrass (*Phalaris arundinacea*)	
Soils	Soils not observed due to lack of entry permission.	
Hydrology	Hydrology not observed due to lack of entry permission. Roadside observations suggest saturation in proximity to stream.	
Rationale for Delineation	Riverine wetland with hydrophytic vegetation and signs of hydrology (perennial stream). Wetland boundary was estimated based on aerial photography and online resources.	
Wetland Rating and Functions		
Rationale for Local Rating[b]	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W23 rates as a Category III with a habitat score of 5.	
Functions	Water quality and hydrologic functions are presumed moderate with the preliminary review. Habitat functions scored moderate with a score of 5.	
Wetland Buffers		
Buffer Condition	Buffer is limited to the surrounding upland forested. Extending beyond the upland forest includes residential development and city roads.	

[a] approximate size based on aerial photography

[b] preliminary rating based on observations from city road rights-of-way and online data sources.

Table 22. Wetland 24 Summary

WETLAND W24 – INFORMATION SUMMARY			
Location:	North of S 336th Street		
Wetland estimated based on aerial photography. No photos were taken.		**Local Jurisdiction**	City of Federal Way
		Ecology Rating (2014)	IV
		Local Rating	IV
		City of Federal Way Buffer Width	50 feet
		Wetland Size[a]	0.02 acres
		Cowardin Class	PEM
		HGM Class	Depressional
		Wetland Data Sheet(s)	None (no entry permission)
		Upland Data Sheet(s)	None (no entry permission)
Wetland Delineation			
Dominant Vegetation	Herbaceous – Kentucky bluegrass (*Poa pratensis*), creeping buttercup (*Ranunculus repens*)		
Soils	Soils not observed due to lack of entry permission.		
Hydrology	Hydrology not observed due to lack of entry permission.		
Rationale for Delineation	Depressional wetland with hydrophytic vegetation and observations of hydrology. Wetland boundary was estimated based on aerial photography and online resources.		
Wetland Rating and Functions			
Rationale for Local Rating[b]	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W24 rates as a Category IV with a habitat score of 4.		
Functions	Water quality and hydrologic functions are presumed moderate to low with the preliminary review. Habitat functions scored moderate with a score of 4.		
Wetland Buffers			
Buffer Condition	Buffer contains a narrow swath of forested habitat with residential development and city roads.		

[a] approximate size based on aerial photography

[b] preliminary rating based on observations from city road rights-of-way and online data sources.

Table 23. Wetland 25 Summary

WETLAND W25 – INFORMATION SUMMARY			
Location:	South of S 336th Street		
		**Local Jurisdiction**	City of Federal Way
		Ecology Rating (2014)	II
		Local Rating	II
		City of Federal Way Buffer Width	150 feet
		Wetland Size[a]	~1.50 acres
		Cowardin Class	PFO
		HGM Class	Riverine
		Wetland Data Sheet(s)	None (no entry permission)
		Upland Data Sheet(s)	None (no entry permission)
Wetland Delineation			
Dominant Vegetation	Trees – quaking aspen (*Populus tremuloides*), red alder (*Alnus rubra*), black cottonwood (*Populus balsamifera*)		
Soils	Soils not observed due to lack of entry permission.		
Hydrology	Hydrology not observed due to lack of entry permission. Roadside observations suggest saturation in proximity to stream.		
Rationale for Delineation	Riverine wetland with hydrophytic vegetation and observed hydrology (perennial stream). Wetland boundary was estimated based on aerial photography and online resources.		
Wetland Rating and Functions			
Rationale for Local Rating[b]	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W25 rates as a Category II with a habitat score of 6.		
Functions	Water quality and hydrologic functions are presumed moderate to high with the preliminary review. Habitat functions scored moderate with a score of 6.		
Wetland Buffers			
Buffer Condition	Forested buffer extends for a limited distance east and west with county roads and highways fragmenting habitat.		

[a] approximate size based on aerial photography

[b] preliminary rating based on observations from city road rights-of-way and online data sources.

Table 24. Wetland 26 Summary

WETLAND W26 – INFORMATION SUMMARY			
Location:	North of S 330th Street; west of Oakland Hills Blvd.		
Wetland estimated based on aerial photography. No photos were taken.		**Local Jurisdiction**	City of Federal Way
		Ecology Rating (2014)	III
		Local Rating	III
		City of Federal Way Buffer Width	80 feet
		Wetland Size[a]	~0.68 acres
		Cowardin Class	PFO
		HGM Class	Riverine
		Wetland Data Sheet(s)	None (no entry permission)
		Upland Data Sheet(s)	None (no entry permission)
Wetland Delineation			
Dominant Vegetation	Trees – back cottonwood (*Populus balsamifera*), red alder (*Alnus rubra*) Shrubs – Sitka willow (*Salix sitchensis*), Himalayan blackberry (*Rubus armeniacus*)		
Soils	Soils not observed due to lack of entry permission.		
Hydrology	Hydrology not observed due to lack of entry permission.		
Rationale for Delineation	Riverine wetland with hydrophytic vegetation and observed hydrology. Wetland boundary was estimated based on aerial photography and online resources.		
Wetland Rating and Functions			
Rationale for Local Rating[b]	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby 2014) with buffer widths based in part on the habitat score. Wetland W26 rates as a Category III with a habitat score of 5.		
Functions	Water quality and hydrologic functions are presumed moderate with the preliminary review. Habitat functions scored moderate with a score of 5.		
Wetland Buffers			
Buffer Condition	Buffer is limited to the surrounding upland forest and stream corridor. Extending beyond includes residential development and a park		

[a] approximate size based on aerial photography

[b] preliminary rating based on observations from city road rights-of-way and online data sources.

This Page Intentionally Left Blank

Appendix C

Wetland Delineation Data Sheets

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 7/24/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W1-SP-1**

Investigator(s): Matt Murphy, Aaron Thom | Section, Township, Range: T21N R04E S10

Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): concave | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.315586 | Long: -122.287857 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	
Hydric Soil Present?	Yes	**X**	No	**Is the Sampled Area within a Wetland?** Yes **X** No
Wetland Hydrology Present?	Yes	**X**	No	

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

Remarks:
W1-SP-1 is located in the middle of a reed canarygrass (*Phalaris arundinacea*) patch within a shallow depression approximately 120 feet north of S 320th St and west of S King County Fire and Rescue Station 64. A french drain has been installed along the eastern boundary of the Wetland W1 unit, extending north and south.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status
1. *none*				
2.				
3.				
4.				
		0%	= Total Cover	
Sapling/Shrub Stratum	(Plot size: r=2m)			
1. *none*				
2.				
3.				
4.				
5.				
		0%	= Total Cover	
Herb Stratum	(Plot size: r=1m)			
1. *Phalaris arundinacea*		100%	Yes	FACW
2. *Juncus effusus*		10%	No	FACW
3. *Hypericum perforatum*		1%	No	FACU
4. *Galium aparine*		1%	No	FACU
5. *Digitalis purpurea*		1%	No	FACU
6.				
7.				
8.				
9.				
10.				
11.				
		113%	= Total Cover	
Woody Vine Stratum	(Plot size: r=2m)			
1. *none*				
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes **X** No ____

Remarks:

SOIL

Sampling Point: W1-SP-1

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[1]	Loc[2]	Texture[3]	Remarks
0-12	10YR 3/2	100					CbL	
12-14	2.5Y 4/2	85	10YR 5/5	15	C	M	GrSiL	

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

[3]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):

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- X 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[3]:

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

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

Restrictive Layer (if present):

Type: compacted cobbles

Depth (inches): 14

Hydric Soil Present? Yes X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (LRR A)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Hydrology assumed to be present for 5% minimum of growing season based on hydric vegetetaion and hydric soil.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 7/24/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W1-SP-2**

Investigator(s): Matt Murphy, Aaron Thom | Section, Township, Range: T21N R04E S10

Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): none | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.315468 | Long: -122.287727 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____
Hydric Soil Present?	Yes **X**	No ____
Wetland Hydrology Present?	Yes ____	No **X**

Is the Sampled Area within a Wetland? Yes ____ No **X**

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

Remarks:
Upland sample plot paired with W1-SP-2 and W1-SP-3. Sample plot is located SE and downslope of W1-SP-1.

VEGETATION

Tree Stratum (Plot size: r=3m)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Rubus armeniacus*	40%	Yes	FAC
2.			
3.			
4.			
5.			
	40% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *Agrostis stolonifera*	100%	Yes	FAC
2. *Jacobaea vulgaris*	20%	No	FACU
3. *Hypericum perforatum*	2%	No	FACU
4. *Juncus effusus*	1%	No	FACW
5. *Holcus lanatus*	1%	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	124% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: W1-SP-2

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[1]	Loc[2]	Texture[3]	Remarks
0-11	10YR 3/2	100					CbL	
11-13	2.5Y 4/2	85	10YR	15	C	M	GrSiL	

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

[3]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):

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- X 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[3]:

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

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

Restrictive Layer (if present):

Type: compacted cobbles

Depth (inches): 13

Hydric Soil Present? Yes X 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 X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Artificially drained by french drain extending north/south approximately 10 feet to the east of W1-SP-2. Microtopgraphy appears to be past excavator tracks were observed near W1-SP-2 withing Wetland W1.

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

Project/Site: City Center Access | City/County: Federal Way / King | Sampling Date: 5/03/2021

Applicant/Owner: KC Fire Protection Dist 39 | State: WA | Sampling Point: **W1-SP-2.1**

Investigator(s): Josh Wozniak, Amanda Weiss | Section, Township, Range: T21N R04E S10

Landform (hillslope, terrace, etc.): Terrace | Local relief (concave, convex, none): concave | Slope (%): None

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.315678 | Long: -122.288620 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - 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 **X**	No ____
Hydric Soil Present?	Yes ____	No **X**
Wetland Hydrology Present?	Yes ____	No **X**

Is the Sampled Area within a Wetland? **Yes** ____ **No** **X**

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

Remarks:
This sample point is located upslope of Wetland 1. It is in proximity to Scouler's willow and salmonberry.

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)	% Cover	Species?	Status
1. *Salix scouleriana*	20%	Yes	FAC
2.			
3.			
4.			
	20% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Rubus armeniacus*	20%	Yes	FAC
2. *Rubus spectabilis*	10%	Yes	FAC
3.			
4.			
5.			
	30% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *Dicentra formosa*	40%	Yes	FACU
2. *Polystichum munitum*	10%	No	FACU
3. *Carex bolanderi*	3%	No	FAC
4. *Hypericum perforatum*	1%	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	54% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: W1-SP-2.1

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[1]	Loc[2]	Texture[3]	Remarks
0-9	10YR 3/2	100					GrL	
9-10	10YR 6/1						GrSL	
10-16	10YR 4/4						CoL	

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

[3]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):

- ___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

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

Wetland Hydrology Present? **Yes** _____ **No** X

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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 7/24/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W2-SP-3**

Investigator(s): Per Johnson, Matt Murphy, Aaron Thom | Section, Township, Range: T21N R04E S10

Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): concave | Slope (%): 3-5%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.315296 | Long: -122.290276 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____	**Is the Sampled Area within a Wetland?**	**Yes** ____ **No** **X**
Hydric Soil Present?	Yes ____	No **X**		
Wetland Hydrology Present?	Yes **X**	No ____		

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

Remarks:
W1-SP-3 is located north of S. 320th St., north of upland berm with evidence of ponding up to 6-inches above surface.

VEGETATION

Tree Stratum (Plot size: 3m semi-circle)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Malus fusca*	100%	Yes	FACW
2.			
3.			
4.			
	100% = Total Cover		
Sapling/Shrub Stratum (Plot size: 2m semi-circle)			
1. *Rubus leucodermis*	20%	Yes	FACU
2. *Spiraea douglasii*	15%	Yes	FACW
3. *Rubus armeniacus*	5%	No	FAC
4. *Rubus laciniatus*	5%	No	FACU
5.			
	45% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *none*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0% = Total Cover		
Woody Vine Stratum (Plot size: 2m semi-circle)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** **X** **No** ____

Remarks:

SOIL

Sampling Point: **W2-SP-3**

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[1]	Loc[2]	Texture[3]	Remarks
0-10	10YR 3/3						L	
10-16	10YR 3/6	90	7.5YR 4/6	10	C	M	L	

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

[3]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):

- ___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

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)
- X 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 X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 7/24/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W2-SP-4**

Investigator(s): Per Johnson, Matt Murphy, Aaron Thom | Section, Township, Range: T21N R04E S10

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): concave | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.315216 | Long: -122.290916 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____
Hydric Soil Present?	Yes **X**	No ____
Wetland Hydrology Present?	Yes **X**	No ____

Is the Sampled Area within a Wetland? **Yes X** **No** ____

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

Remarks:
W2-SP-4 is located approximately 500 feet west of Weyerhaeuser Way S and S 320th St, west of a ditch.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status
1. *Populus balsamifera*		65%	Yes	FAC
2.				
3.				
4.				
		65% = Total Cover		
Sapling/Shrub Stratum	(Plot size: r=2m)			
1. *Cornus alba*		60%	Yes	FACW
2. *Spiraea douglasii*		20%	Yes	FACW
3. *Lonicera involucrata*		15%	No	FAC
4. *Rosa nutkana*		5%	No	FAC
5.				
		100% = Total Cover		
Herb Stratum	(Plot size: r=1m)			
1. *Agrostis capillaris*		35%	Yes	FAC
2. *Poa pratensis*		35%	Yes	FAC
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		70% = Total Cover		
Woody Vine Stratum	(Plot size: r=2m)			
1. *none*				
2.				
		0% = Total Cover		

% Bare Ground in Herb Stratum 30%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	0	x 1 =	0
FACW species	80	x 2 =	160
FAC species	155	x 3 =	465
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	235 (A)		625 (B)

Prevalence Index = B/A = 2.66

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No** ____

Remarks:
Area appears to be planted given that the trees have collars around them.

SOIL

Sampling Point: W2-SP-4

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[1]	Loc[2]	Texture[3]	Remarks
0-2	10YR 3/2	100					CbGrL	
2-16	2.5Y 3/2	60	2.5Y 5/2	35	D	M	CbGrL	
			10YR 5/8	5	C	M		

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

[3]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):

- ___ Histosol (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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **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)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X 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 X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? **Yes** X **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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 7/24/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W2-SP-5**

Investigator(s): Per Johnson, Matt Murphy, Aaron Thom | Section, Township, Range: T21N R04E S10

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.315205 | Long: -122.290703 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____
Hydric Soil Present?	Yes ____	No **X**
Wetland Hydrology Present?	Yes ____	No **X**

Is the Sampled Area within a Wetland? **Yes** ____ **No** **X**

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

Remarks:
W2-SP-5 is the paired upland pit to W2-SP-4. It is located east of W2-SP-4 on a hillslope.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status
1. *Populus balsamifera*		80%	Yes	FAC
2.				
3.				
4.				
		80%	= Total Cover	
Sapling/Shrub Stratum	(Plot size: r=2m)			
1. *Mahonia nervosa*		20%	Yes	FACU
2. *Oemleria cerasiformis*		15%	Yes	FACU
3. *Rubus armeniacus*		9%	Yes	FAC
4. *Populus balsamifera*		1%	No	FAC
5.				
		45%	= Total Cover	
Herb Stratum	(Plot size: r=1m)			
1. *Poa pratensis*		85%	Yes	FAC
2. *Agrostis capillaris*		15%	No	FAC
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		100%	= Total Cover	
Woody Vine Stratum	(Plot size: r=2m)			
1. *none*				
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: W2-SP-5

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[1]	Loc[2]	Texture[3]	Remarks
0-16	10YR 3/3	100					CbGrL	

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

[3]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):

- ___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: road - compacted cobble

Depth (inches): 8"

Hydric Soil Present? Yes ___ No X

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

Wetland Hydrology Present? Yes ___ No X

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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 7/24/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W3-SP-6**

Investigator(s): Matt Murphy, Aaron Thom | Section, Township, Range: T21N R04E S09

Landform (hillslope, terrace, etc.): depression | Local relief (concave, convex, none): none | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.315193 | Long: -122.293503 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgC - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____	**Is the Sampled Area within a Wetland?** **Yes X** **No ____**
Hydric Soil Present?	Yes **X**	No ____	
Wetland Hydrology Present?	Yes **X**	No ____	

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

Remarks:
Wetland W3 is effectively a vegetated roadside ditch with no apparent outlet, north of S 320th Street and east of NB I-5 onramp. W3-SP-6 located within wetland unit. Due to proximity of buried power and communications utilities, disturbed soil conditions from the S 320th fill embankement, and abnundant unsafe human debris (e.g., hyperdermic needles), a soils and hydrology conditions below grade were not explored.

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)	% Cover	Species?	Status
1. *none*			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *none*			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *Phalaris arundinacea*	100%	Yes	FACW
2. *Juncus effusus*	40%	Yes	FACW
3. *Agrostis capillaris*	30%	No	FAC
4. *Lotus corniculatus*	15%	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	185% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No ____**

Remarks:

SOIL

Sampling Point: **W3-SP-6**

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[1]	Loc[2]	Texture[3]	Remarks
Not observed								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.
[3]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)

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

- ___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** **X** **No** ___

Remarks:
Assumed hydric. No soil was pit dug for numerous reasons.

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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (LRR A)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Wetland Hydrology Present? **Yes** **X** **No** ___

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

Remarks:
Assumed saturated for a minimum of 5% of growing season given no stormwater controls on S 320th Street allowing sheetflow and overland flow from uplands into the wetland with no observed outlet present.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 7/24/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W3-SP-7**

Investigator(s): Matt Murphy, Aaron Thom | Section, Township, Range: T21N R04E S09

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.315208 | Long: -122.292679 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No _____
Hydric Soil Present?	Yes _____	No **X**
Wetland Hydrology Present?	Yes _____	No **X**

Is the Sampled Area within a Wetland? **Yes** _____ **No** **X**

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

Remarks:
Paired upland sample plot for Wetland W3 located upslope and east of Wetland W3, upon fill prism for gravel driveway and adjacent to power pole. Due to proximity of buried power and communications utilities, disturbed soil conditions from the S 320th fill embankement, and abnundant unsafe human debris (e.g., hyperdermic needles), a soils and hydrology conditions below grade were not explored.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status
1. *none*				
2.				
3.				
4.				
		0%	= Total Cover	
Sapling/Shrub Stratum	(Plot size: r=2m)			
1. *Rubus armeniacus*		90%	Yes	FAC
2.				
3.				
4.				
5.				
		90%	= Total Cover	
Herb Stratum	(Plot size: r=1m)			
1. *Agrostis capillaris*		65%	Yes	FAC
2. *Anthoxanthum odoratum*		20%	Yes	FACU
3. *Poa pratensis*		10%	No	FAC
4. *Hypericum perforatum*		5%	No	FACU
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		100%	= Total Cover	
Woody Vine Stratum	(Plot size: r=2m)			
1. *none*				
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** _____

Remarks:

SOIL

Sampling Point: **W3-SP-7**

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[1]	Loc[2]	Texture[3]	Remarks
Not observed								

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

[3]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):

- ___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Assumed lack of hydric soils. Soils were not excavated.

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

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

Assumed lack of saturation in disturbed soils. Soil pit was not dug.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 8/13/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W5-SP-8**

Investigator(s): Per Johnson | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): depression | Local relief (concave, convex, none): none | Slope (%): None

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.313820 | Long: -122.296265 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material - AmC - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____	**Is the Sampled Area within a Wetland?** **Yes X** **No ____**
Hydric Soil Present?	Yes **X**	No ____	
Wetland Hydrology Present?	Yes **X**	No ____	

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

Remarks:
Sample plot is within the mineral edge of a large previously identified wetland, the inner portion of which is a bog (see W5-SP-24). W5-SP-8 location is approximately 20 feet northeast of the outlet of a stormwater overflow pipe from Wetland W8 (a stormwater pond) which extends west below the I-5 NB off-ramp to the eastern toe of a fill slope, west of the Olympic Pipeline easement.

VEGETATION

Tree Stratum (Plot size: 3m semi-circle)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	90%	Yes	FAC
2. *Fraxinus latifolia*	10%	No	FACW
3. *Sorbus aucuparia*	2%	No	NOL
4.			
	102% = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m semi-circle)			
1. *none*			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 2m semi-circle)			
1. *none*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0% = Total Cover		
Woody Vine Stratum (Plot size: 1m semi-circle)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 100%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No ____**

Remarks:

SOIL

Sampling Point: **W5-SP-8**

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[1]	Loc[2]	Texture[3]	Remarks
0-16	10Y 5/1	80	10YR 4/6	20	C	M	SiL	

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

[3]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):

- ___ Histosol (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)
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X 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)
- X Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___	**Wetland Hydrology Present?**	**Yes** X **No** ___
Water Table Present?	Yes X	No ___	Depth (inches): 2		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): surface		

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

Remarks:

Abundant animal foot prints in soft moist surface soils suggesting frequency and duration of saturation.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 8/13/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W5-SP-9**

Investigator(s): Per Johnson, Aaron Thom | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): none | Slope (%): 3-5%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.313866 | Long: -122.296394 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material - AmC - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No **X**
Hydric Soil Present?	Yes _____	No **X**	
Wetland Hydrology Present?	Yes _____	No **X**	

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

Remarks:
Sample plot is within the uplands adjacent to W5-SP-8.

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)	% Cover	Species?	Status
1. *Alnus rubra*	70%	Yes	FAC
2. *Thuja plicata*	30%	Yes	FAC
3.			
4.			
	100% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Rubus ursinus*	50%	Yes	FACU
2. *Rubus spectabilis*	25%	Yes	FAC
3. *Oemleria cerasiformis*	15%	No	FACU
4.			
5.			
	90% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *Polystichum munitum*	30%	Yes	FACU
2. *Equisetum hyemale*	2%	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	32% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 20%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- _____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- _____ 3 - Prevalence Index is ≤3.0[1]
- _____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- _____ 5 - Wetland Non-Vascular Plants[1]
- _____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes **X** No _____

Remarks:
40% moss cover in herb strata

SOIL

Sampling Point: **W5-SP-9**

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[1]	Loc[2]	Texture[3]	Remarks
0-8	10YR 4/2	100					GrCbSiL	

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

[3]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):

___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: gravel/cobbles/roots

Depth (inches): 8

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Soil appears to be fill for I-5 embankment.

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

Wetland Hydrology Present? **Yes** ____ **No** X

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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 4/30/2019

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W5-SP-23**

Investigator(s): Per Johnson | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): concave | Slope (%): None

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.312046 | Long: -122.296600 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material - AmC - Not Hydric | NWI classification: PSS/EM1C

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____
Hydric Soil Present?	Yes **X**	No ____
Wetland Hydrology Present?	Yes **X**	No ____

Is the Sampled Area within a Wetland? **Yes X** **No** ____

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

Remarks:
Sample plot is located within Wetland 5, 15 feet east of delineated bog edge. Corresponds to DP-1 from 2019 bog delineation.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)		% Cover	Species?	Status
1.	*Alnus rubra*	90%	Yes	FAC
2.				
3.				
4.				
		90% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)				
1.	*Oemleria cerasiformis*	50%	Yes	FACU
2.				
3.				
4.				
5.				
		50% = Total Cover		
Herb Stratum (Plot size: r=1m)				
1.	*Glyceria striata*	40%	Yes	OBL
2.	*Urtica dioica*	5%	No	FAC
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		45% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)				
1.	*none*			
2.				
		0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No** ____

Remarks:
Vegetation plots chosen to capture wetland versus upland hummocks.

SOIL

Sampling Point: **W5-SP-23**

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[1]	Loc[2]	Texture[3]	Remarks
+2-0								Organic debris
0-8	10YR 3/2	98	10YR 4/6	2	C	M	SiL	
8-14	10YR 3/2	80	2.5Y 6/2	15	D	M	SiL	
			10YR 4/6	5	C	M		

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

[3]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):

- ___ Histosol (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)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: n/a

Depth (inches): n/a

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Clay layer at 24-inches

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X 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 X	No ___	Depth (inches):	3
Water Table Present?	Yes X	No ___	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	0

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

Apparent "moat" between bog and rest of wetland.

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

Project/Site: Federal Way City Center Access | City/County: | Sampling Date: 4/30/2019

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W5-SP-24**

Investigator(s): Jeff Meyer and Kaylee Moser | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): concave | Slope (%): 3-5%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.312042 | Long: -122.296822 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Orcas Peat - Or - Hydric | NWI classification: PSS/EM1C

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No
Hydric Soil Present?	Yes **X**	No
Wetland Hydrology Present?	Yes **X**	No

Is the Sampled Area within a Wetland? **Yes X** **No**

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

Remarks:
W5-SP-24 is located inside a delineated bog within Wetland W5, approximately 10 feet west of the eastern edge of the bog. Corresponds to DP-2 from 2019 bog delineation.

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)	% Cover	Species?	Status
1. *Tsuga heterophylla*	100%	Yes	FACU
2.			
3.			
4.			
	100% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Sambucus racemosa*	30%	Yes	FACU
2. *Rubus spectabilis*	15%	Yes	FAC
3.			
4.			
5.			
	45% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *none*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 10%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- X 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks:
Tsuga heterophylla meets special characteristics; is a bog adapted species.

SOIL

Sampling Point: **W5-SP-24**

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[1]	Loc[2]	Texture[3]	Remarks
0-6	7.5YR 3/3	100					Organic debris	
6-12	7.5YR 2.5/2	100					sapric peat	
12-28+	7.5YR 3/4	100					hemic peat	

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

[3]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):

- X Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: n/a

Depth (inches): n/a

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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 X	Depth (inches): ___	
Water Table Present?	Yes X	No ___	Depth (inches): 8	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 8	

Wetland Hydrology Present? **Yes** X **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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 8/18/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W6-SP-10**

Investigator(s): Matt Murphy, Aaron Thom | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): valley narrow | Local relief (concave, convex, none): none | Slope (%): 3-5%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.310406 | Long: -122.302139 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material - AmB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____	**Is the Sampled Area within a Wetland?** **Yes X** **No ____**
Hydric Soil Present?	Yes **X**	No ____	
Wetland Hydrology Present?	Yes **X**	No ____	

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

Remarks:
Sample plot located within Wetland W6, along right (west) bank of Stream 1 (East Fork Hylebos Creek) in Belmor Park. Located along narrow floodbench adjacent to channel with steep slopes.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum	(Plot size: 3m x 1m)	% Cover	Species?	Status
1. *Thuja plicata*		5%	Yes	FAC
2.				
3.				
4.				
		5% = Total Cover		
Sapling/Shrub Stratum	(Plot size: 2m x 1m)			
1. *Rubus armeniacus*		20%	Yes	FAC
2. *Rubus spectabilis*		10%	Yes	FAC
3.				
4.				
5.				
		30% = Total Cover		
Herb Stratum	(Plot size: 1m x 1m			
1. *Phalaris arundinacea*		50%	Yes	FACW
2. *Equisetum telmateia*		15%	No	FACW
3. *Solanum dulcamara*		15%	No	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		80% = Total Cover		
Woody Vine Stratum	(Plot size: r=2m)			
1. *none*				
2.				
		0% = Total Cover		

% Bare Ground in Herb Stratum open water

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No ____**

Remarks:

SOIL

Sampling Point: **W6-SP-10**

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[1]	Loc[2]	Texture[3]	Remarks
0-5	10YR 2/1	100					SiL	
5-16+	10YR 2/2	95	10GY 4/1	5	D	M	SiL	

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

[3]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):

- ___ Histosol (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)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (LRR A)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____	
Water Table Present?	Yes X	No _____	Depth (inches): 6	
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0, surface	

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks:

A 4-inch black plastic and 8-inch concrete pipe drain into Wetland W6 and Stream 1 from east (golf course). Stream 1 adjacent to SP-10 has standing water present.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 8/18/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W6-SP-11**

Investigator(s): Per Johnson, Aaron Thom | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): >10%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.310421 | Long: -122.302277 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material - AmB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No **X**
Hydric Soil Present?	Yes ____	No **X**	
Wetland Hydrology Present?	Yes ____	No **X**	

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

Remarks:
Paired upland pit for Wetland W6

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)	% Cover	Species?	Status
1. *Salix scouleriana*	80%	Yes	FAC
2. *Thuja plicata*	30%	Yes	FAC
3.			
4.			
	110% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Rubus armeniacus*	30%	Yes	FAC
2. *Rubus ursinus*	15%	Yes	FACU
3.			
4.			
5.			
	45% = Total Cover		
Herb Stratum (Plot size: r=1m			
1. *Equisetum telmateia*	5%	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	5% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *Ilex aquifolium*	2%	Yes	FACU
2.			
	2% = Total Cover		

% Bare Ground in Herb Stratum 55%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes **X** No ____

Remarks:

SOIL

Sampling Point: **W6-SP-11**

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[1]	Loc[2]	Texture[3]	Remarks
0-8	10YR 4/3	100					CbL	

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

[3]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):

___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

Soil pit dug to 8" only due to cobble presence and steep slope.

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

Wetland Hydrology Present? **Yes** _____ **No** X

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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 8/18/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **SP-12**

Investigator(s): Per Johnson, Aaron Thom | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): flat | Local relief (concave, convex, none): none | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.305656 | Long: -122.301895 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____
Hydric Soil Present?	Yes ____	No **X**
Wetland Hydrology Present?	Yes ____	No **X**

Is the Sampled Area within a Wetland? **Yes** ____ **No** **X**

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

Remarks:
Upland sample plot located 20 feet east from soundwall and 75 feet from exit 142A sign. Snags present nearby wihtin a facultative dominated vegetation community, suggesting potential changes to hydrology such as altered hydrology or establishment of wetland conditions. However, no indication of wetland conditions observed below grade. Sample plot not associated with a wetland.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)		% Cover	Species?	Status
1.	*Populus balsamifera*	70%	Yes	FAC
2.	*Salix scouleriana*	30%	Yes	FAC
3.				
4.				
		100% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)				
1.	*Rubus ursinus*	15%	Yes	FACU
2.	*Rubus armeniacus*	10%	Yes	FAC
3.	*Acer macrophyllum*	2%	No	FACU
4.				
5.				
		27% = Total Cover		
Herb Stratum (Plot size: r=1m)				
1.	*Agrostis stolonifera*	100%	Yes	FAC
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		100% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)				
1.	*none*			
2.				
		0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: **SP-12**

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[1]	Loc[2]	Texture[3]	Remarks
0-4	10YR 4/2	100					GrL	with angular rocks

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

[3]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):

___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

Soil is compacted gravel fill material with angular rock.

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

Wetland Hydrology Present? **Yes** _____ **No** X

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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 8/18/2020 & 11/11/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W9-SP-13**

Investigator(s): Per Johnson, Aaron Thom | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): sloped depression | Local relief (concave, convex, none): concave | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.314583 | Long: -122.296806 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material - AmC - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____
Hydric Soil Present?	Yes **X**	No ____
Wetland Hydrology Present?	Yes **X**	No ____

Is the Sampled Area within a Wetland? **Yes X** **No** ____

Precipitation:
According to the Seattle Tacoma Airport NOAA weather station, precipitation was within the normal range for the three months prior to the 8/18/2020 and 11/11/2020 site visits.

Remarks:
SP for Wetland 9 located within the looping northbound I-5 on-ramp, south of S 320th Street. This SP was observed on both 8/18/2020 and 11/11/2020.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)		% Cover	Species?	Status
1.	*none*			
2.				
3.				
4.				
		0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)				
1.	*none*			
2.				
3.				
4.				
5.				
		0% = Total Cover		
Herb Stratum (Plot size: r=1m)				
1.	*Phalaris arundinacea*	100%	Yes	FACW
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		100% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)				
1.				
2.				
		0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No** ____

Remarks:
Vegetion conditions did not change between the 8/18/2020 and 11/11/2020 field visit.

SOIL

Sampling Point: **W9-SP-13**

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[1]	Loc[2]	Texture[3]	Remarks
0-4.5	10YR 4/1	100						
4.5-16+	10Y 5/0	80	10YR 4/6	20	C	M		

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

[3]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):

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- X 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)
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Soils were only observed on 11/11/2020.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X 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 X	Depth (inches): N/A	**Wetland Hydrology Present?**	**Yes** X **No** ___
Water Table Present?	Yes X	No ___	Depth (inches): 8.5		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 0		

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

Remarks:

During the 8/18/2020 field visit, surface drainage inlets (e.g., rills) were observed upslope with drainage marks leading to Wetland W9 providing two secondary indicators of hydrology (drainage patterns [B10] and geomorphic position [D2]). During the 11/11/2020 field visit, surface drainage within these drainage marks was observed with shallow ponding occuring within the rills and ruts near the sample plot and within the wetland unit with observed surface water drainage extending the wetland unit downslope to a catchbasin. Observed soils within the wetland sample plot were saturated with a shallow water table observed at 8.5 inches bgs.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 8/18/2020 & 11/11/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W9-SP-14**

Investigator(s): Per Johnson, Aaron Thom | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): none | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.314621 | Long: -122.296700 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material - AmC - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____
Hydric Soil Present?	Yes **X**	No ____
Wetland Hydrology Present?	Yes **X**	No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** **X**

Precipitation:
According to the Seattle Tacoma Airport NOAA weather station, precipitation was within the normal range for the three months prior to the 8/18/2020 and 11/11/2020 site visits.

Remarks:
Paired upland pit for W9 located just north and upslope of W9 within I-5 footprint. This sample plot was observed on both 8/18/2020 and 11/11/2020.

VEGETATION

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: r=3m)				
1.	*none*			
2.				
3.				
4.				
		0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)				
1.	*none*			
2.				
3.				
4.				
5.				
		0% = Total Cover		
Herb Stratum (Plot size: r=1m)				
1.	*Holcus lanatus*	60%	Yes	FAC
2.	*Agrostis stolonifera*	40%	Yes	FAC
3.	*Hypochaeris radicata*	5%	No	FACU
4.	*Plantago lanceolata*	2%	No	FACU
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		107% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)				
1.	*none*			
2.				
		0% = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** **X** **No** ____

Remarks:
Vegetation conditions did not change between the 8/18/2020 and 11/11/2020 field visits.

SOIL

Sampling Point: **W9-SP-14**

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[1]	Loc[2]	Texture[3]	Remarks
0-4	10YR 3/2	100						
4-8	10YR 4/2	95	10YR 4/6	5	C	M	GrL	
8-16+	10YR 5/1	85	10YR 4/6	15	C	M	GrL	

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

[3]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):

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- X 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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

Soils were observed on 11/11/2020.

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 X	Depth (inches): ___	
Water Table Present?	Yes ___	No X	Depth (inches): ___	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 7	

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

On 11/11/2020, no surface water was observed present and the water table was deeper than 16-inches bgs. Soil was saturated at 7-inches. Given the time of year (mid-November) and the depth of saturation observed, it is believed that if soils become saturated to the surface during the year, it does not do so with sufficient duration. Given the slope and downstream catchbasin, soils outside of Wetland W9 unit are believed to drain too quickly to meet the duration requirement.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 8/19/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W10-SP-15**

Investigator(s): Per Johnson, Aaron Thom | Section, Township, Range: T21N R04E S09

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): none | Slope (%): >10%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.315601 | Long: -122.296219 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgC - Not Hydric | NWI classification: PSSCx

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____
Hydric Soil Present?	Yes **X**	No ____
Wetland Hydrology Present?	Yes **X**	No ____

Is the Sampled Area within a Wetland? **Yes X** **No** ____

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

Remarks:
Approximately 1 foot east of ponded area, along narrow band of seasonally to occasionally innundated Wetland 10.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)		% Cover	Species?	Status
1.	*Alnus rubra*	85%	Yes	FAC
2.				
3.				
4.				
		85% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)				
1.	*Cornus alba*	30%	Yes	FACW
2.	*Salix lasiandra*	25%	Yes	FACW
3.	*Rubus armeniacus*	5%	No	FAC
4.				
5.				
		60% = Total Cover		
Herb Stratum (Plot size: r=1m)				
1.	*Carex obnupta*	25%	Yes	OBL
2.	*Phalaris arundinacea*	20%	Yes	FACW
3.	*Ranunculus repens*	5%	No	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		50% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)				
1.	*none*			
2.				
		0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No** ____

Remarks:

SOIL

Sampling Point: **W10-SP-15**

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[1]	Loc[2]	Texture[3]	Remarks
0-8	10YR 3/2	100					GrSaL	
8-16	10YR 3/2	90	10YR 4/1	10	D	M	GrSaL	

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

[3]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):

- ___ Histosol (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)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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 X	Depth (inches): _____	
Water Table Present?	Yes X	No _____	Depth (inches): 8	
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0	

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks:

Ponded water located about 1-foot from sample plot.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 8/19/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W10-SP-16**

Investigator(s): Per Johnson, Aaron Thom | Section, Township, Range: T21N R04E S09

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): none | Slope (%): >10%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.315613 | Long: -122.296112 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgC - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____
Hydric Soil Present?	Yes ____	No **X**
Wetland Hydrology Present?	Yes ____	No **X**

Is the Sampled Area within a Wetland? **Yes** ____ **No** **X**

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

Remarks:
Located approximately 6 feet from W10-SP-15, upslope approximately 4 feet in elevation from ponded water.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum (Plot size: 3mx2m)		% Cover	Species?	Status
1.	*Alnus rubra*	90%	Yes	FAC
2.	*Salix scouleriana*	10%	No	FAC
3.				
4.				
		100% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)				
1.	*Oemleria cerasiformis*	50%	Yes	FACU
2.	*Rubus armeniacus*	15%	Yes	FAC
3.				
4.				
5.				
		65% = Total Cover		
Herb Stratum (Plot size: r=1m)				
1.	*Ranunculus repens*	90%	Yes	FAC
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		90% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)				
1.	*none*			
2.				
		0% = Total Cover		

% Bare Ground in Herb Stratum 10%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: **W10-SP-16**

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[1]	Loc[2]	Texture[3]	Remarks
0-6	10YR 4/2	100					GrSaL	

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

[3]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):

___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: compacted with cobbles

Depth (inches): 6

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Unable to dig beyond 6 inches because of cobbles and roots intermixed within compacted layer. Soil was dry and friable at time of site visit.

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

Wetland Hydrology Present? **Yes** ____ **No** X

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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 8/19/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W11-SP-17**

Investigator(s): Per Johnson, Aaron Thom | Section, Township, Range: T21N R04E S09

Landform (hillslope, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.317001 | Long: -122.295387 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Water - W - Not Hydric | NWI classification: PEM1F

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____
Hydric Soil Present?	Yes **X**	No ____
Wetland Hydrology Present?	Yes **X**	No ____

Is the Sampled Area within a Wetland? **Yes X** **No** ____

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

Remarks:
Near WSDOT northern project boundary east of I-5 northbound on ramp.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)		% Cover	Species?	Status
1.	*Fraxinus latifolia*	90%	Yes	FACW
2.	*Alnus rubra*	10%	No	FAC
3.	*Populus balsamifera*	10%	No	FAC
4.				
		110% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)				
1.	*Spiraea douglasii*	15%	Yes	FACW
2.	*Rubus spectabilis*	10%	Yes	FAC
3.	*Fraxinus latifolia*	5%	No	FACW
4.	*Populus balsamifera*	5%	No	FAC
5.				
		35% = Total Cover		
Herb Stratum (Plot size: r=1m)				
1.	*Carex obnupta*	2%	No	OBL
2.	*Geum macrophyllum*	1%	No	FAC
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		3% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)				
1.	*none*			
2.				
		0% = Total Cover		

% Bare Ground in Herb Stratum 97%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No** ____

Remarks:

SOIL

Sampling Point: **W11-SP-17**

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[1]	Loc[2]	Texture[3]	Remarks
0-4	10YR 2/2	100					L	
4-18	10YR 2/2	60	10YR 5/1	30	D	M	L	
			10YR 5/8	10	C	M	L	

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

[3]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):

- ___ Histosol (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)
- X Redox Dark Surface (F6)
- X Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: n/a

Depth (inches): n/a

Hydric Soil Present? **Yes** X **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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (LRR A)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

Seasonally high water table assumed.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 8/19/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W11-SP-18**

Investigator(s): Per Johnson, Aaron Thom | Section, Township, Range: T21N R04E S09

Landform (hillslope, terrace, etc.): hillslop | Local relief (concave, convex, none): none | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.316986 | Long: -122.295593 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgC - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No **X**
Hydric Soil Present?	Yes **X**	No ____
Wetland Hydrology Present?	Yes ____	No **X**

Is the Sampled Area within a Wetland? Yes ____ No **X**

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

Remarks:
W11 upland plot approximately 20ft west of W11-SP-17

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)	% Cover	Species?	Status
1. *Fraxinus latifolia*	80%	Yes	FACW
2. *Alnus rubra*	20%	No	FAC
3. *Acer macrophyllum*	15%	No	FACU
4.			
	115% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Lonicera involucrata*	15%	Yes	FAC
2. *Vaccinium ovalifolium*	10%	Yes	UPL
3. *Rubus spectabilis*	5%	No	FAC
4. *Spiraea douglasii*	2%	No	FACW
5.			
	32% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *Rubus ursinus*	60%	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 40%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ____ No **X**

Remarks:

SOIL

Sampling Point: **W11-SP-18**

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[1]	Loc[2]	Texture[3]	Remarks
0-5	10YR 3/2	100					L	
5-10	10YR 3/2	85	10YR 3/6	15	C	M	L	
10+	10YR 5/1	100					L	

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

[3]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):

___ Histosol (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)
X Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **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 X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 8/19/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W12-SP-19**

Investigator(s): Per Johnson, Aaron Thom | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): valley/depression | Local relief (concave, convex, none): concave | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.312946 | Long: -122.299057 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood material - AmC - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____	**Is the Sampled Area within a Wetland?** **Yes X** **No ____**
Hydric Soil Present?	Yes **X**	No ____	
Wetland Hydrology Present?	Yes **X**	No ____	

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

Remarks:
Between I-5 southbound on-ramp and I-5 main travel lanes, SW of 320th intersection

VEGETATION

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: r=3m)			
1. *none*			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *none*			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *Juncus effusus*	65%	Yes	FACW
2. *Phalaris arundinacea*	30%	Yes	FACW
3. *Agrostis stolonifera*	10%	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No ____**

Remarks:

SOIL

Sampling Point: **W12-SP-19**

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[1]	Loc[2]	Texture[3]	Remarks
0-16+	10YR 4/1	90	10YR 4/6	10	C	M	L	

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

[3]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):

- ___ Histosol (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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** **X** **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)
- X 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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (LRR A)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

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

Wetland Hydrology Present? **Yes** **X** **No** _____

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

Remarks:

Assumed inundated/saturated for at least 5% of growing season.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 8/19/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W12-SP-20**

Investigator(s): Per Johnson, Aaron Thom | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): none | Slope (%): 5-10%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.312950 | Long: -122.298889 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Arents, Alderwood materia - AmC - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No **X**
Hydric Soil Present?	Yes ____	No **X**	
Wetland Hydrology Present?	Yes ____	No **X**	

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

Remarks:
Wetland 12 upland sample plot.

VEGETATION

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: r=3m)				
1. *none*				
2.				
3.				
4.				
		0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: r=2m)				
1. *none*				
2.				
3.				
4.				
5.				
		0%	= Total Cover	
Herb Stratum (Plot size: r=1m)				
1. *Holcus lanatus*		45%	Yes	FAC
2. *Agrostis stolonifera*		45%	Yes	FAC
3. *Cirsium arvense*		5%	No	FAC
4. *Phalaris arundinacea*		5%	No	FACW
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		100%	= Total Cover	
Woody Vine Stratum (Plot size: r=2m)				
1. *none*				
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes **X** No ____

Remarks:

SOIL

Sampling Point: **W12-SP-20**

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[1]	Loc[2]	Texture[3]	Remarks

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

[3]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):

___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

Located along I-5 road fill prism

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

Wetland Hydrology Present? **Yes** _____ **No** X

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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 9/2/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W13-SP-21**

Investigator(s): Per Johnson | Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): depression | Local relief (concave, convex, none): none | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.314716 | Long: -122.290291 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____
Hydric Soil Present?	Yes **X**	No ____
Wetland Hydrology Present?	Yes **X**	No ____

Is the Sampled Area within a Wetland? **Yes X** **No X**

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

Remarks:
East edge of W13 south of 320th

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)	% Cover	Species?	Status
1. *Prunus emarginata*	10%	Yes	FACU
2.			
3.			
4.			
	10% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Spiraea douglasii*	25%	Yes	FACW
2. *Salix scouleriana*	25%	Yes	FAC
3. *Cornus alba*	15%	Yes	FACW
4. *Populus balsamifera*	10%	No	FAC
5.			
	75% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *Tolmiea menziesii*	10%	Yes	FAC
2. *Juncus effusus*	3%	No	FACW
3. *Carex species*	3%	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	16% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No** ____

Remarks:

SOIL

Sampling Point: **W13-SP-21**

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[1]	Loc[2]	Texture[3]	Remarks
0-7	10YR 3/2	90	10YR 4/6	10	C	Pl	SiL	
7+	10YR 4/2	80	2.5Y 5/3	10	D	M	SiL	redox appears stratified
			2.5Y 5/6	10	C	M		

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

[3]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):

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- X 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)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **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)
- X Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- X 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)
- X 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 X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks:

Ground surface lacks abundant herbaceaous layer with evidence of silt sediment deposit indicating seasonal and periodic flooding.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 9/2/2020

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W13-SP-22**

Investigator(s): Per Johnson | Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 5-10%

Subregion (LRR): Northwest Forests and Coast (LRR A) | Lat: 47.314694 | Long: -122.290169 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No _____
Hydric Soil Present?	Yes _____	No **X**
Wetland Hydrology Present?	Yes _____	No **X**

Is the Sampled Area within a Wetland? **Yes** _____ **No** **X**

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

Remarks:
Approximately 5 ft east of W13 boundary on gradual slope.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)		% Cover	Species?	Status
1.	*none*			
2.				
3.				
4.				
		0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)				
1.	*Acer circinatum*	25%	Yes	FAC
2.	*Oemleria cerasiformis*	20%	Yes	FACU
3.	*Rubus spectabilis*	20%	Yes	FAC
4.	*Rubus armeniacus*	20%	Yes	FAC
5.	*Ilex aquifolium*	15%	No	FACU
		100% = Total Cover		
Herb Stratum (Plot size: r=1m)				
1.	*Polystichum munitum*	5%	Yes	FACU
2.	*Epilobium ciliatum*	5%	Yes	FACW
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		10% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)				
1.	*none*			
2.				
		0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** _____

Remarks:

SOIL

Sampling Point: **W13-SP-22**

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[1]	Loc[2]	Texture[3]	Remarks
0-16	10YR 4/3						CbL	

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

[3]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):

- ___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: n/a

Depth (inches): n/a

Hydric Soil Present? **Yes** ___ **No** X

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

Wetland Hydrology Present? **Yes** ___ **No** X

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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 1/7/2021

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W16-SP-1**

Investigator(s): Trey Parry, Aaron Thom | Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): terrace | Local relief (concave, convex, none): convex | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.310883 | Long: -122.289017 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No **X**
Hydric Soil Present?	Yes _____	No **X**
Wetland Hydrology Present?	Yes _____	No **X**

Is the Sampled Area within a Wetland? **Yes** _____ **No** **X**

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

Remarks:
This is the upland paired soil plot o W16-SP1 located on a stream terrace above stream 2.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status
1. *Alnus rubra*		70%	Yes	FAC
2. *Pseudotsuga menziesii*		30%	Yes	FACU
3.				
4.				
		100%	= Total Cover	
Sapling/Shrub Stratum	(Plot size: r=2m)			
1. *Rubus spectabilis*		40%	Yes	FAC
2. *Rubus ursinus*		5%	No	FACU
3. *Acer circinatum*		5%	No	FAC
4.				
5.				
		50%	= Total Cover	
Herb Stratum	(Plot size: r=1m)			
1. *Polystichum munitum*		20%	Yes	FACU
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		20%	= Total Cover	
Woody Vine Stratum	(Plot size: r=2m)			
1. *none*				
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum 80%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** _____ **No** **X**

Remarks:

SOIL

Sampling Point: W16-SP-1

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[1]	Loc[2]	Texture[3]	Remarks
0-16	7.5YR 3/3	80					Cobbly Loam	mixed matrix
0-16	10YR 4/6	20					Cobbly Loam	mixed matrix

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

[3]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):

- ___ Histosol (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[3]:

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

[3]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** X

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? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 1/7/2021

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W16-SP-2**

Investigator(s): Trey Parry, Aaron Thom | Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): stream channel | Local relief (concave, convex, none): concave | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.310913 | Long: -122.289017 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No _____
Hydric Soil Present?	Yes **X**	No _____
Wetland Hydrology Present?	Yes **X**	No _____

Is the Sampled Area within a Wetland? **Yes X** **No** _____

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

Remarks:
Sample plot is adjecent to Stream 2 at the tow of a slope that creates a confined channel. This is the paired sample plot to W16-SP1.

VEGETATION

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: r=3m)			
1. *none*			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Rubus spectabilis*	70%	Yes	FAC
2. *Rubus ursinus*	5%	No	FACU
3.			
4.			
5.			
	75% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *Polystichum munitum*	3%	No	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	3% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 10%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	0
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- _____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- _____ 3 - Prevalence Index is ≤3.0[1]
- _____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- _____ 5 - Wetland Non-Vascular Plants[1]
- _____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No** _____

Remarks:

SOIL

Sampling Point: W16-SP-2

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[1]	Loc[2]	Texture[3]	Remarks
0-3	10YR 3/3	75	10YR 4/6	15	C	M	SaL	
3-8	10YR 3/2	75	10YR 4/6	15	C	M	Cobbly Loam	
8-16	10YR 3/1	80	10YR 3/4	20	C	M	Cobbly Loam	

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

[3]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):

- ___ Histosol (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)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

[3]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 X No ___

Remarks:

Alpha alpha dipyridyl test strips were applied to the top 12 inches of the soil profile, a positive reaction was observed indicating the presence of reduced iron.

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X 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)
- X 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)

- X Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X 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 X	No ___	Depth (inches): 0.5	
Water Table Present?	Yes X	No ___	Depth (inches): surface (0)	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): surface (0)	

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Alpha alpha dipyridyl test strips were applied to the top 12 inches of the soil profile, a positive reaction was observed indicating the presence of reduced iron.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 1/7/2021

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W17-SP-1**

Investigator(s): Trey Parry, Aaron Thom | Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): stream terrace | Local relief (concave, convex, none): none | Slope (%): 5-10%

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.309956 | Long: -122.290634 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No **X**
Hydric Soil Present?	Yes _____	No **X**
Wetland Hydrology Present?	Yes **X**	No _____

Is the Sampled Area within a Wetland? **Yes** _____ **No** **X**

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

Remarks:
This soil pit is located on a stream terrace of stream S3 a short distance upslope of wetland W17.

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)	% Cover	Species?	Status
1. *none*			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Rubus spectabilis*	35%	Yes	FAC
2. *Rubus ursinus*	10%	Yes	FACU
3.			
4.			
5.			
	45% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *Polystichum munitum*	20%	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	20% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- 5 - Wetland Non-Vascular Plants[1]
- Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** _____ **No** **X**

Remarks:

SOIL

Sampling Point: W17-SP-1

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[1]	Loc[2]	Texture[3]	Remarks
0-7	10YR 3/2	100					GrL	
7-16	10YR 4/4	100					GrSaL	

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

[3]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):

- ___ Histosol (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[3]:

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

[3]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** X

Remarks:

Alpha alpha dipyridyl test strips were applied to the top 12 inches of the soil profile, no reaction was observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- X 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)

- X Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X 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 X	Depth (inches): ___	
Water Table Present?	Yes X	No ___	Depth (inches): 7	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 5	

Wetland Hydrology Present? **Yes** X **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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 1/7/2021

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W17-SP-2**

Investigator(s): Trey Parry, Aaron Thom | Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): none | Slope (%): 5-10%

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.309910 | Long: -122.290619 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No **X**
Hydric Soil Present?	Yes _____	No **X**
Wetland Hydrology Present?	Yes **X**	No _____

Is the Sampled Area within a Wetland? **Yes** _____ **No** **X**

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

Remarks:
This sample plot is located on a steep slope above strea S3 and wetland W18. This is the paired sample plot to W17-SP3.

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)	% Cover	Species?	Status
1. *none*			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Rubus ursinus*	20%	Yes	FACU
2. *Rubus spectabilis*	15%	Yes	FAC
3.			
4.			
5.			
	35% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *Polystichum munitum*	20%	Yes	FACU
2. *Geranium robertianum*	5%	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	25% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	45	x 4 =	180
UPL species	0	x 5 =	0
Column Totals:	60 (A)		225 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:

- _____ 1 - Rapid Test for Hydrophytic Vegetation
- _____ 2 - Dominance Test is >50%
- _____ 3 - Prevalence Index is ≤3.0[1]
- _____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- _____ 5 - Wetland Non-Vascular Plants[1]
- _____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** _____ **No** **X**

Remarks:

SOIL

Sampling Point: W17-SP-2

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[1]	Loc[2]	Texture[3]	Remarks
0-11	10YR 3/2	100					L	
11-16	10YR 4/4	100					GrSaL	

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

[3]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):

- ___ Histosol (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[3]:

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

[3]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 X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X 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 X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): ___

Wetland Hydrology Present? Yes X 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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 1/7/2021

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W17-SP-3**

Investigator(s): Trey Parry, Aaron Thom | Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.309860 | Long: -122.290634 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No _____	**Is the Sampled Area within a Wetland?**	**Yes X** **No** _____
Hydric Soil Present?	Yes **X**	No _____		
Wetland Hydrology Present?	Yes **X**	No _____		

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

Remarks:
This SP is located within wetland W17 where stream S3 discharges to the closed wetland that has no direct outlet. This is the paired sample point to W17-SP3

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)	% Cover	Species?	Status
1. *none*			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Rubus spectabilis*	70%	Yes	FAC
2. *Sambucus racemosa*	10%	No	FACU
3.			
4.			
5.			
	80% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *none*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No** _____

Remarks:

SOIL

Sampling Point: W17-SP-3

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[1]	Loc[2]	Texture[3]	Remarks
0-7	10YR 3/2	100					GrL	
7-16	2.5YR 4/2	80	10YR 4/6	20	C	M	GrSaL	

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

[3]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):

- ___ Histosol (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)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- X 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)

- X 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 X	Depth (inches): _____	
Water Table Present?	Yes X	No _____	Depth (inches): 1	
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): surface (0)	

Wetland Hydrology Present? **Yes** X **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: Federal Way City Center Access City/County: Federal Way/King Sampling Date: 1/7/2021

Applicant/Owner: City of Federal Way State: Washington Sampling Point: **W18-SP-1**

Investigator(s): Trey Parry, Aaron Thom Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A)) Lat: 47.309986 Long: -122.289688 Datum: NAG 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No **X**	**Is the Sampled Area within a Wetland?**	**Yes** _____ **No** **X**
Hydric Soil Present?	Yes _____	No **X**		
Wetland Hydrology Present?	Yes _____	No **X**		

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

Remarks:
This sample plot is located upslope and outside of wetland W18.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)		% Cover	Species?	Status
1.	*Thuja plicata*	50%	Yes	FAC
2.				
3.				
4.				
		50%	= Total Cover	
Sapling/Shrub Stratum (Plot size: r=2m)				
1.	*Gaultheria shallon*	25%	Yes	FACU
2.	*Rubus ursinus*	5%	No	FACU
3.				
4.				
5.				
		30%	= Total Cover	
Herb Stratum (Plot size: r=1m)				
1.	*Polystichum munitum*	30%	Yes	FACU
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		30%	= Total Cover	
Woody Vine Stratum (Plot size: r=2m)				
1.	*none*			
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** _____ **No** **X**

Remarks:

SOIL

Sampling Point: **W18-SP-1**

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[1]	Loc[2]	Texture[3]	Remarks
0-7	10YR 3/2	100					L	
7-16	7.5YR 5/8	100					GrL	

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

[3]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)

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

- ___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** **X**

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

Wetland Hydrology Present? **Yes** ___ **No** **X**

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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 1/7/2021

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W18-SP-2**

Investigator(s): Trey Parry, Aaron Thom | Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): concave | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.309940 | Long: -122.289696 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No _____	**Is the Sampled Area within a Wetland?**	**Yes X** **No** _____
Hydric Soil Present?	Yes **X**	No _____		
Wetland Hydrology Present?	Yes **X**	No _____		

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

Remarks:
This sample plot is located within wetland W18 and is the paired sample plot to W18-SP1. This wetland has a highly constricted outlet that discharges downslope during periods of heavy rain (1/7/21 oberservation).

VEGETATION

Tree Stratum (Plot size: r=3m)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Rubus spectabilis*	40%	Yes	FAC
2.	20%	Yes	FAC
3.			
4.			
5.			
	60% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *none*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 40%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No** _____

Remarks:
Vegetation cover estimated from photo.

SOIL

Sampling Point: W18-SP-2

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[1]	Loc[2]	Texture[3]	Remarks
0-4	10YR 3/4	100					L	
4-12	10YR 2/2	87	10YR 4/6	10	C	M	L	
4-12				3	D	M	L	
12-16	10YR 3/3	80	10YR 3/6	20	C	M	L	

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

[3]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):

- ___ Histosol (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)
- X Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

[3]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** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X 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)
- X 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 X	Depth (inches): ___	
Water Table Present?	Yes X	No ___	Depth (inches): surface (0)	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): surface (0)	

Wetland Hydrology Present? **Yes** X **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: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 1/7/2021

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W18-SP-3**

Investigator(s): Trey Parry, Aaron Thom | Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): swale | Local relief (concave, convex, none): none | Slope (%): 3-5%

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.309280 | Long: -122.290070 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No _____	**Is the Sampled Area within a Wetland?** **Yes X** **No _____**
Hydric Soil Present?	Yes **X**	No _____	
Wetland Hydrology Present?	Yes **X**	No _____	

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

Remarks:
This sample plot is located in a gentle swale that connects two distinct wetlands upslope and downslope. It is within wetland 18 and is the paired sample plot to W18-SP4.

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)	% Cover	Species?	Status
1. *Thuja plicata*	100%	Yes	FAC
2.			
3.			
4.			
	100% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Thuja plicata*	70%	Yes	FAC
2. *Rubus spectabilis*	15%	No	FAC
3.			
4.			
5.			
	85% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *none*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 30%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No _____**

Remarks:

SOIL

Sampling Point: W18-SP-3

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[1]	Loc[2]	Texture[3]	Remarks
0-4	10YR 3/2	100					L	
4-16	10YR 6/2	90	10YR	10	C	M,PL	L	oxidized rhizospheres

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

[3]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):

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- X 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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- X High Water Table (A2)
- X 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 X	No ___	Depth (inches): 0.5
Water Table Present?	Yes X	No ___	Depth (inches): surface (0)
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): surface (0)

Wetland Hydrology Present? Yes X No ___

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

Remarks:

This sample plot is located at the toe of slope where ponded water flows through to the distinct wetland below. Oxidized rhizospheres were present from 4 to 16 inches.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 1/7/2021

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W18-SP-4**

Investigator(s): Trey Parry, Aaron Thom | Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): none | Slope (%): >10%

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.309300 | Long: -122.290054 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No **X**
Hydric Soil Present?	Yes _____	No **X**
Wetland Hydrology Present?	Yes _____	No **X**

Is the Sampled Area within a Wetland? **Yes** _____ **No** **X**

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

Remarks:
This sample plot is located upslope of W18-SP3 and wetland W18 as a whole.

VEGETATION

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)	% Cover	Species?	Status
1. *none*			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Thuja plicata*	20%	Yes	FAC
2.			
3.			
4.			
5.			
	20% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *Gaultheria shallon*	10%	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	10% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** _____ **No** **X**

Remarks:

SOIL

Sampling Point: W18-SP-4

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[1]	Loc[2]	Texture[3]	Remarks
0-3	10YR 2/2	100					L	
3-10	10YR 5/3	100					CbL	

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

[3]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):

- ___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

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

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

Positioned approximately 6 linear feet and 3 vertical feet above W18-SP3

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 1/11/2021

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W18-SP-5**

Investigator(s): Trey Parry, Aaron Thom | Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.309830 | Long: -122.289200 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No _____	**Is the Sampled Area within a Wetland?**	**Yes X** **No** _____
Hydric Soil Present?	Yes **X**	No _____		
Wetland Hydrology Present?	Yes **X**	No _____		

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

Remarks:
This sample plot is located near Lake Access Rd in a depression approximately 30ft west of road. Shallow rooted downed trees were observed near and in wetland. It is the paired wetland plot with W-18-SP6.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status
1. *none*				
2.				
3.				
4.				
		0%	= Total Cover	
Sapling/Shrub Stratum	(Plot size: r=2m)			
1. *none*				
2.				
3.				
4.				
5.				
		0%	= Total Cover	
Herb Stratum	(Plot size: r=1m)			
1. *Poa pratensis*		20%	Yes	FAC
2. *Juncus effusus*		15%	Yes	FACW
3. *Ranunculus repens*		2%	No	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		37%	= Total Cover	
Woody Vine Stratum	(Plot size: r=2m)			
1. *none*				
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum 20%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No** _____

Remarks:

SOIL

Sampling Point: W18-SP-5

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[1]	Loc[2]	Texture[3]	Remarks
0-2	2.5Y 3/2	90	2.5Y 4/2	10	D	M	SaL	
2-7	2.5Y 5/1	90	2.5Y 4/2	10	D	M	SaL	
7-16	5Y 6/1	93	5YR 3/2	5	C	M	SiClay	
			7.5 YR5/6	2	C	M		

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

[3]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):

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- X 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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X 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)
- X 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 X	Depth (inches): _____	
Water Table Present?	Yes X	No _____	Depth (inches): 2	
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): surface (0)	

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks:

Ponded water was observed 3 linear fee and 4 vertical inches away from sample plot.

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

Project/Site: Federal Way City Center Access City/County: Federal Way/King Sampling Date: 1/11/2021

Applicant/Owner: City of Federal Way State: Washington Sampling Point: **W18-SP-6**

Investigator(s): Trey Parry, Aaron Thom Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): convex Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A)) Lat: 47.309815 Long: -122.289230 Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No **X**
Hydric Soil Present?	Yes _____	No **X**
Wetland Hydrology Present?	Yes _____	No **X**

Is the Sampled Area within a Wetlan **Yes** _____ **No** **X**

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

Remarks:
This sample plot is located upslope of of W18-SP6

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status
1. *none*		100%	Yes	FAC
2.				
3.				
4.				
		100%	= Total Cover	
Sapling/Shrub Stratum	(Plot size: r=2m)			
1. *Gaultheria shallon*		97%	Yes	FACU
2. *Rubus ursinus*		3%	No	FACU
3.				
4.				
5.				
		100%	= Total Cover	
Herb Stratum	(Plot size: r=1m)			
1. *none*				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		0%	= Total Cover	
Woody Vine Stratum	(Plot size: r=2m)			
1. *none*				
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** _____ **No** **X**

Remarks:

SOIL

Sampling Point: W18-SP-6

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[1]	Loc[2]	Texture[3]	Remarks
0-4	10YR 2/1	100					L	
4-9	7.5 YR 3/3	100					SiL	
9-16	2.5 Y 4/2	95	2.5 Y 4/3	5	C	M	SaL	

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

[3]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):

- ___ Histosol (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[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

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)
- X 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? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

Ponded water was observed 3 linear fee and 4 vertical inches away from sample plot.

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

Project/Site: Federal Way City Center Access | City/County: Federal Way/King | Sampling Date: 1/11/2021

Applicant/Owner: City of Federal Way | State: Washington | Sampling Point: **W19-SP-1**

Investigator(s): Trey Parry, Aaron Thom | Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.310047 | Long: -122.288963 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric | NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No **X**	**Is the Sampled Area within a Wetlan**	**Yes X** **No** _____
Hydric Soil Present?	Yes **X**	No _____		
Wetland Hydrology Present?	Yes **X**	No _____		

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

Remarks:
This sample plot is located in a ponded area to the east of the east of the fish access road. The vegetation here is problematic but the soils and hydrology are convincing. W19-SP1 is within Wetland 19 and is the paired sample plot to W19-SP2.

VEGETATION

Tree Stratum (Plot size: r=3m)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)			
1. *Gaultheria shallon*	80%	Yes	FACU
2.			
3.			
4.			
5.			
	80% = Total Cover		
Herb Stratum (Plot size: r=1m)			
1. *none*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)			
1. *none*			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species		x 4 =	
UPL species	0	x 5 =	0
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- _____ 1 - Rapid Test for Hydrophytic Vegetation
- _____ 2 - Dominance Test is >50%
- _____ 3 - Prevalence Index is ≤3.0[1]
- _____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- _____ 5 - Wetland Non-Vascular Plants[1]
- X Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No X**

Remarks:
This sample plot is located at an identical elevation to nearby *Spiraea douglasii, Juncus effusus*, *Salix* sp., and *Athyrium cyclosorum.* Despite the nearby vegetation this plot is only containen *Gaultheria shallon* due to large amounts of downed wood from logging practices.

SOIL

Sampling Point: W19-SP-1

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[1]	Loc[2]	Texture[3]	Remarks
0-8	10YR 2/1	100					Organic	
8-16	10YR 2/2	97	10YR 6/6	3	C	M	SiL	

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

[3]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):

- X Histosol (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[3]:

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

[3]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 X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X 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)
- X 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 X No ___	Depth (inches): 1	
Water Table Present?	Yes X No ___	Depth (inches): surface (0)	
Saturation Present? (includes capillary fringe)	Yes X No ___	Depth (inches): surface (0)	

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Sample plot is located in a small but deeply (2 feet) poned area of Wetland W19.

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

Project/Site: Federal Way City Center Access City/County: Federal Way/King Sampling Date: 1/11/2021

Applicant/Owner: City of Federal Way State: Washington Sampling Point: **W19-SP-2**

Investigator(s): Trey Parry, Aaron Thom Section, Township, Range: T21N R04E S15

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A)) Lat: 47.310085 Long: -122.288979 Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - AgB - Not Hydric NWI classification: None

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 site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No **X**
Hydric Soil Present?	Yes _____	No **X**
Wetland Hydrology Present?	Yes _____	No **X**

Is the Sampled Area within a Wetlan **Yes** _____ **No** **X**

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

Remarks:
This sample plot is upslope and north of W19-SP1.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status
1. *none*		90%	Yes	FACU
2.				
3.				
4.				
		90%	= Total Cover	
Sapling/Shrub Stratum	(Plot size: r=2m)			
1. *Gaultheria shallon*		90%	Yes	FACU
2. *Rubus ursinus*		2%	No	FACU
3.				
4.				
5.				
		92%	= Total Cover	
Herb Stratum	(Plot size: r=1m)			
1. *none*				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		0%	= Total Cover	
Woody Vine Stratum	(Plot size: r=2m)			
1. *none*				
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum 10%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** _____ **No** **X**

Remarks:

SOIL

Sampling Point: W19-SP-2

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[1]	Loc[2]	Texture[3]	Remarks
0-4	10YR 2/2	100					L	
4-16	10YR 3/2	100					L	

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

[3]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):

- ___ Histosol (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[3]:

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

[3]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 X

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

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Sample plot is located in a small but deeply (2 feet) poned area of Wetland W19.

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

Project/Site: City Center Access | City/County: Federal Way / King | Sampling Date: 5/03/2021

Applicant/Owner: WSDOT | State: WA | Sampling Point: **W20-SP-1**

Investigator(s): Josh Wozniak, Amanda Weiss | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): Swale | Local relief (concave, convex, none): concave | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.302948 | Long: -122.301559 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - 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 **X**	No ____
Hydric Soil Present?	Yes **X**	No ____
Wetland Hydrology Present?	Yes **X**	No ____

Is the Sampled Area within a Wetland? **Yes X** **No ____**

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

Remarks:
This is the wetland sample point for Wetland 20. It occurs within a grassy slope alongside I5 N.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)		% Cover	Species?	Status
1.	*none*			
2.				
3.				
4.				
		0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=2m)				
1.	*none*			
2.				
3.				
4.				
5.				
		0% = Total Cover		
Herb Stratum (Plot size: r=1m)				
1.	*Holcus lanatus*	40%	Yes	FAC
2.	*Poa pratensis*	40%	Yes	FAC
3.	*Phalaris arundinacea*	10%	No	FACW
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		90% = Total Cover		
Woody Vine Stratum (Plot size: r=2m)				
1.				
2.				
		0% = Total Cover		

% Bare Ground in Herb Stratum 10%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes X** **No ____**

Remarks:

SOIL

Sampling Point: W20-SP-1

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[1]	Loc[2]	Texture[3]	Remarks
0-6	2.5Y 4/1	100					CoL	
6-10	2.5Y 5/2	80	10YR 4/6	5	C	M	GrL	
			10YR 6/6	15	C	M		
10-16	5Y 5/1	80	10YR 5/6	20	C	M	GrL	

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

[3]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):

- ___ Histosol (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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X 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)
- X 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 X	Depth (inches): _____	
Water Table Present?	Yes X	No _____	Depth (inches): 9	
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 7	

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks:

Oxidized rhizospheres start at 6 inches below surface.

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

Project/Site: City Center Access | City/County: Federal Way / King | Sampling Date: 5/03/2021

Applicant/Owner: WSDOT | State: WA | Sampling Point: **W20-SP-2**

Investigator(s): Josh Wozniak, Amanda Weiss | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): none | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.302868 | Long: -122.301422 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - 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 **X**	No ____
Hydric Soil Present?	Yes ____	No ____
Wetland Hydrology Present?	Yes ____	No **X**

Is the Sampled Area within a Wetland? **Yes** ____ **No** **X**

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

Remarks:
This sample point is located approximately 30 ft upslope and to the east of SP-1.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status
1. *none*				
2.				
3.				
4.				
		0%	= Total Cover	
Sapling/Shrub Stratum	(Plot size: r=2m)			
1. *none*				
2.				
3.				
4.				
5.				
		0%	= Total Cover	
Herb Stratum	(Plot size: r=1m)			
1. *Poa pratensis*		40%	Yes	FAC
2. *Holcus lanatus*		20%	Yes	FAC
3. *Anthoxanthum odoratum*		20%	Yes	FACU
4. *Schedonorus arundinaceus*		20%	Yes	FAC
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		100%	= Total Cover	
Woody Vine Stratum	(Plot size: r=2m)			
1.				
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: **W20-SP-2**

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[1]	Loc[2]	Texture[3]	Remarks
0-7	10YR 3/2	100					L	
7-15	5Y 5/1	80	7.5YR 4/6	25	C	PL,M	GrL	
15-18	10YR 2/2	100						

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

[3]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):

- ___ Histosol (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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **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 X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

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: City Center Access | City/County: Federal Way / King | Sampling Date: 5/03/2021

Applicant/Owner: WSDOT | State: WA | Sampling Point: **W20-SP-3**

Investigator(s): Josh Wozniak, Amanda Weiss | Section, Township, Range: T21N R04E S16

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): none | Slope (%): <3%

Subregion (LRR): Northwest Forests and Coast (LRR A)) | Lat: 47.304916 | Long: -122.300903 | Datum: NAD 1983 (HARN)

Soil Unit (Name-ID-Hydric Rating): Alderwood gravelly sandy loam - 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 ____	No **X**
Hydric Soil Present?	Yes **X**	No ____
Wetland Hydrology Present?	Yes ____	No **X**

Is the Sampled Area within a Wetland? **Yes** ____ **No** **X**

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

Remarks:
This sample point is located further upslope and east of SP-2.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum (Plot size: r=3m)		% Cover	Species?	Status
1.	*none*			
2.				
3.				
4.				
		0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: r=2m)				
1.	*none*			
2.				
3.				
4.				
5.				
		0%	= Total Cover	
Herb Stratum (Plot size: r=1m)				
1.	*Anthoxanthum odoratum*	47%	Yes	FACU
2.	*Poa pratensis*	47%	Yes	FAC
3.	*Holcus lanatus*	2%	No	FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		96%	= Total Cover	
Woody Vine Stratum (Plot size: r=2m)				
1.				
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation (Explain)[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks:

SOIL

Sampling Point: W20-SP-3

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[1]	Loc[2]	Texture[3]	Remarks
0-7	10YR 4/2	100					CoL	
7-15	2.5Y 5/1	80	10YR 5/6	10	C	M	GrL	
			7.5YR 5/8	10	C	M		
15+	2.5Y 5/1						GrL	

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

[3]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):

- ___ Histosol (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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **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 X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks: