City Center Access Project Draft Ecosystems Discipline Report

Prepared for



March 2025



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Prepared for

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Acronyms and Abbreviations

BA biological assessment

BMP best management practice

BPA Bonneville Power Administration

BRT bus rapid transit

CFR Code of Federal Regulations

City of Federal Way

Ecology Washington State Department of Ecology

EPA Environmental Protection Agency

ESA Endangered Species Act

FHWA Federal Highway Administration

ft foot/feet

FR Federal Regulations

FWLE Federal Way Link Extension

FWRC Federal Way Revised Code

HGM Hydrogeomorphic Wetland Classification

HOV high-occupancy vehicle

HUC hydrologic unit code

I-5 Interstate 5

IPaC Information for Planning and Consultation

KCC King County Code

LRR land resource region

MBTA Migratory Bird Treaty Act

MLRA major land resource area

MP milepost

NHP Natural Heritage Program

Acronyms and Abbreviations (continued)

NMFS National Marine Fisheries Service

NRCS Natural Resources Conservation Service

OHWM ordinary high-water mark

OMF Operations and Maintenance Facility

PAB palustrine aquatic bed

PEM palustrine emergent

PFO palustrine forested

PGIS pollution-generating impervious surface

project City Center Access Project

PSS palustrine scrub-shrub

sf square foot/feet

Sound Transit Central Puget Sound Transit Authority

SR State Route

TMDL total maximum daily load

USACE U.S. Army Corps of Engineers

U.S. Department of Agriculture

USFWS U.S. Fish and Wildlife Service

WDFW Washington State Department of Fish and Wildlife

WRIA Water Resource Inventory Area

WSDOT Washington State Department of Transportation

1. Introduction

The City Center Access Project, hereafter referred to as "the project," will provide improved multimodal mobility and access for regional and local trips while protecting the interstate system in Federal Way (Figure 1-1). It would provide congestion relief along S 320th Street and expanded multimodal facilities across Interstate 5 (I-5). The project will consist of the following project elements:

- Modification of the S 320th Street interchange by adding braided ramps and access at S 324th Street.
- Construction of a new two-lane bridge over I-5 at S 324th Street.
- Extension of S 324th Street from 23rd Avenue S to Weyerhaeuser Way S.
- Widening S 324th Street from State Route (SR) 99 to 23rd Avenue S.
- Improvements to S 320th Street east of I-5 to add high-occupancy vehicle (HOV) lanes.
- Nonmotorized improvements along 23rd Avenue S, S 320th Street, and S 324th Street.
- Culvert replacement of fish passage barriers.

Correction of four fish passage barriers on WSDOT-owned injunction culverts (WDFW culvert IDs 992364, 995299, 995300) has been determined to be necessary according to a federal permanent injunction requiring the state of Washington to accelerate fish barrier corrections for salmon and steelhead streams in the Puget Sound area (Federal Court Injunction 2013) and the WSDOT Fish Passage Performance Report (WSDOT 2019). These barriers were identified by the Washington State Department of Fish and Wildlife (WDFW) and the Washington State Department of Transportation (WSDOT) (WDFW 2024a). The fourth fish passage barrier correction is a privately owned culvert (WDFW culvert ID 420614), beneath Winged Foot Way) that is directly connected to the WSDOT-owned culvert ID 992364.

The purpose of this report is to identify and describe wetlands, aquatic resources, vegetation habitats, and wildlife that occur within the ecosystem study area, defined as the project footprint and all areas within 300 feet of the footprint for wetlands and streams, and within 200 feet of the footprint for vegetation and wildlife habitats (see Figure 1-2 and Section 1.2). A biological assessment (BA) has been prepared separately to address potential impacts to ESA-listed species (Parametrix 2023). This ecosystem discipline report helps the City of Federal Way (the City) achieve the following:

- Support the National Environmental Policy Act and State Environmental Policy Act documentation for the project.
- Avoid and minimize impacts to wetlands, other aquatic ecosystems, and vegetation during the project design process and construction.
- Document wetland and stream boundary determinations and jurisdictional ditch locations, where right of entry was received, for review by regulatory authorities.
- Estimate unavoidable project impacts to aquatic ecosystems and other habitat, based on the project's preliminary design.
- Determine appropriate mitigation for unavoidable project impacts.

1.1 Proposed Project

1.1.1 Project Location

The study area is largely located within the City and Water Resource Inventory Area (WRIA) 10 (Puyallup/White Watershed). However, the project extends east along S 320th Street into unincorporated King County and WRIA 9 (Green/Duwamish Watershed) as it approaches Military Road South (Figure 1-1).

The center of the project, located at I-5 and S 320th Street, is at latitude 47.314849 and longitude –122.297775. The study area includes parts of Sections 9, 10, 15, 16, and 21 in Township 21 North, Range 4 East, Willamette Meridian, and within U.S. Department of Agriculture (USDA) Major Land Resource Area (MLRA) 2 and USDA Land Resource Region (LRR) A.

1.1.2 Project Purpose

The City initiated the project to determine what transportation system changes are needed to preserve future mobility in the City Center. The Federal Way City Center Core is designated as one of 29 regional growth centers identified in the Vision 2050: A Plan for the Central Puget Sound Region (PSRC 2020). The purpose of the project is to improve the economic vitality of the City Center and to improve the quality of life for people who work, play, and live in the City by increasing multimodal mobility and access to regional and local trips while protecting the integrity of the interstate system. Access and mobility are limited by congestion issues along S 320th Street between Pacific Highway S and Military Road, including to and from I-5, and by the lack of multimodal facilities across I-5.

1.1.3 Preferred Alternative

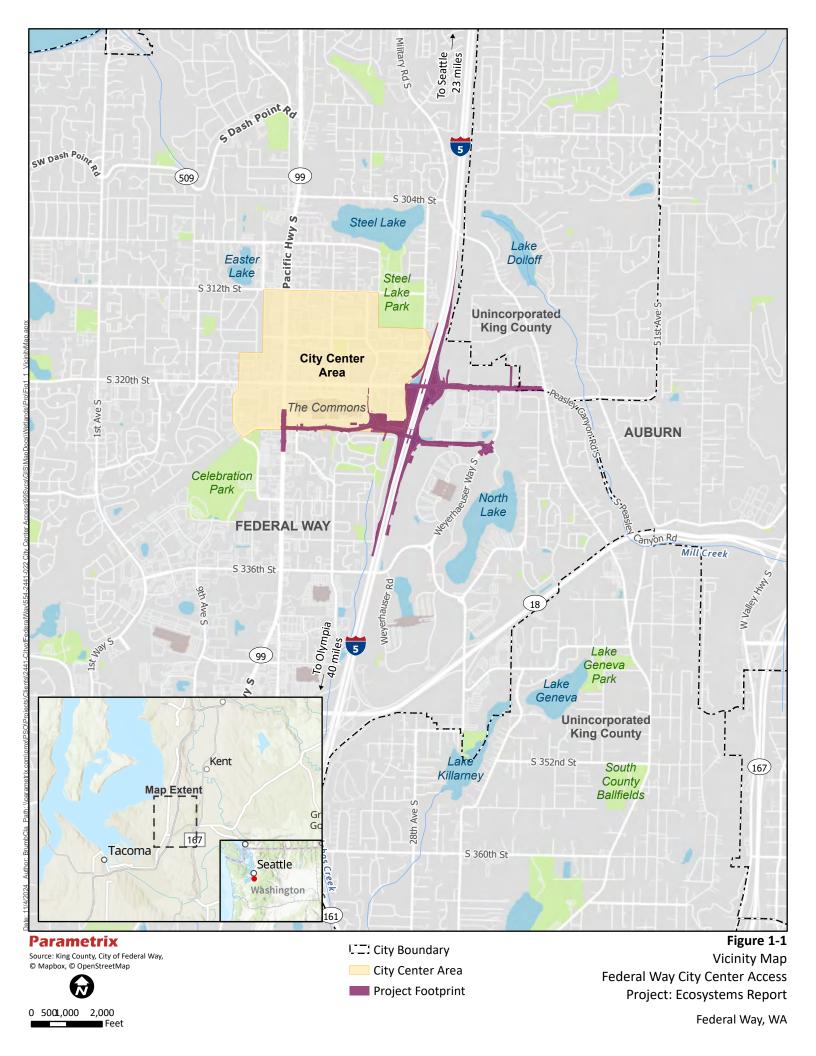
The S 324th Street Interchange Alternative 2I (Grade Separated Ramps Plus Roundabouts at S 324th Street) was identified as the alternative that best meets the purpose and need of the project. Alternative 2I was recommended to the Federal Way City Council in November 2019, based on the results of alternatives analysis screening, and the City Council agreed to move forward with the alternative.

Below is a description of the elements included in the Preferred Alternative. This description is based on the preliminary design, and it is subject to change as design progresses.

1.1.3.1 Access Modifications

The Preferred Alternative includes a modified interchange at S 320th Street, with braided ramps and new access at S 324th Street. There are no new gore points along I-5, but the existing gore points north and south of the S 320th Street interchange will be relocated. The northbound off-ramp gore will move 2,100 feet south, the northbound on-ramp gore will move 150 feet north, the southbound off-ramp gore will move 550 feet north, and the southbound on-ramp gore will move 2,200 feet south.

All on-ramps from S 320th Street and S 324th Street will be metered. They will not include HOV bypasses.



1.1.3.2 S 324th Street Roadway Improvements

The Preferred Alternative includes a new two-lane bridge along S 324th Street, crossing I-5, and roundabouts at the ramp terminals. Both ramp terminals will have single-lane roundabouts with slip lanes in the northwest and southwest quadrants of the S 324th Street/I-5 southbound ramps intersection.

West of the new S 324th Street interchange, S 324th Street will be five lanes from SR 99 to 23rd Avenue S and four lanes from 23rd Avenue S to I-5 southbound ramps. There will be a two-lane roundabout at the S 324th Street/23rd Avenue S intersection. The Preferred Alternative also includes intersection improvements at S 324th Street/SR 99 that will help manage westbound queues from the new interchange, including an additional southbound left-turn lane and an additional northbound left-turn lane.

The City is working with the Central Puget Sound Transit Authority (Sound Transit), Bonneville Power Administration (BPA), and other stakeholders to develop a S 324th Street/23rd Avenue S roundabout design that accommodates existing site constraints and future improvements. BPA's transmission tower relocations surrounding the intersection will be designed to accommodate the proposed Sound Transit Operations and Maintenance Facility (OMF) South project and project improvements.

East of the new S 324th Street interchange, S 324th Street will be three lanes from I-5 northbound ramps to Weyerhaeuser Way S. There will be a single-lane roundabout at S 324th Street/Weyerhaeuser Way S.

1.1.3.3 S 320th Street Roadway Improvements

There are currently HOV lanes in both directions along S 320th Street between SR 99 and 20th Avenue S. The Preferred Alternative for this project includes HOV lanes on S 320th Street in both directions between 20th Avenue S and Military Road to support future bus rapid transit (BRT) along S 320th Street, which is an element of the King County Metro long-range plan. Between 20th Avenue S and the I-5 southbound ramps, a general-purpose lane in each direction will be converted to an HOV lane. Crossing I-5 between I-5 southbound ramps and I-5 northbound ramps, the S 320th Street bridge will be replaced and widened to include a new HOV lane in both directions and a lengthened left-turn lane for the I-5 southbound on-ramp. Between I-5 and Military Road, S 320th Street will be widened to accommodate the added HOV lanes.

1.1.3.4 Nonmotorized Improvements

The Preferred Alternative includes nonmotorized improvements on both S 324th Street and S 320th Street. Between SR 99 and Weyerhaeuser Way, there will be a shared-use path on the north side of S 324th Street and a sidewalk on the south side of S 324th Street. There is potential for the shared-use path to connect to the BPA Trail in the future. A shared-use path on the west side of 23rd Avenue S between S 324th Street and S 320th Street is included. The S 320th Street bridge crossing I-5 will have sidewalks on the north and south side. Between I-5 northbound ramps and Military Road S, there will be sidewalks on the north and south side.

1.1.3.5 Correction of Fish-Passage Barriers

To comply with a federal injunction requiring the state of Washington to correct fish barriers in WRIAs 1 through 23 (United States et al. vs. Washington et al. No. C70-9213 Subproceeding No. 01-1, dated March 29, 2013), three existing crossings conveying East Fork Hylebos Creek –

Tributary 0016A through the project limits will be corrected. All three have been identified as fish barriers by WDFW and the WSDOT Environmental Services Office (Site IDs 995300, 995299, and 992364). One crosses I-5 at the south end of the S 320th Street interchange ramps, one is located under the northbound on-ramp, and one is under the northbound off-ramp. A fourth privately owned culvert (WDFW culvert ID 420614) under Winged Foot Way that connects to culvert ID 992364 will also be corrected.

1.1.3.6 Design Compatibility

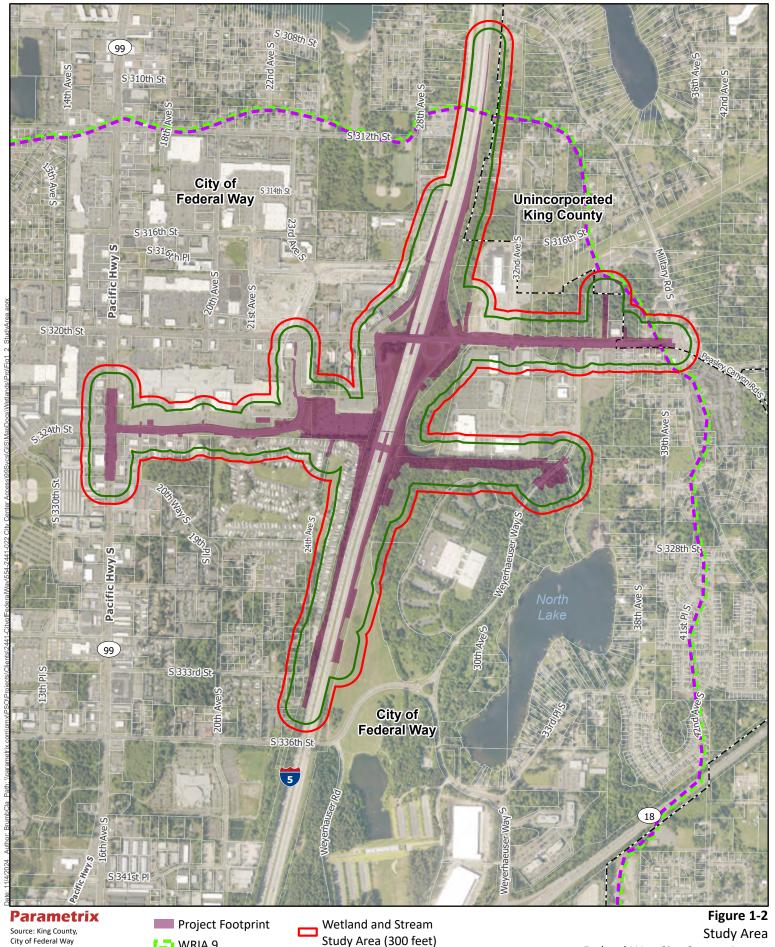
The Preferred Alternative design accommodates the Sound Transit Federal Way Link Extension (FWLE) and OMF South projects, BPA transmission tower relocations, and the future widening of I-5. The Sound Transit FWLE and OMF South WSDOT Compatibility Reports establish the WSDOT Compatibility Line, which the project must adhere to. Other design constraints and considerations include avoiding impacts to the existing bog and minimizing impacts to the BP 14-inch Olympic Pipeline, King County Metro park and ride, and adjacent development. The roadway design incorporates input received from the City, WSDOT, and Sound Transit during design coordination meetings and submittal reviews. Input to design also involved meeting with adjacent commercial and residential developments and WDFW regarding North Lake Access.

1.2 Study Areas

The project footprint consists of construction limits or the largest extents in which clearing, grading, and construction access would occur. The study area for wetland and streams extends 300 feet outward from the edge of the proposed construction limits (Figure 1-2), which include the following:

- I-5 between milepost (MP) 143 and MP 144, including those access ramps serving S 320th Street at Exit 143.
- S 320th Street between 23rd Avenue S to the west and Military Road S to the east.
- S 324th Street from SR 99 to the west to Weyerhaeuser Way S to the east.
- 23rd Avenue S from S 324th Street to the north approximately 500 feet to S 320th Street.
- Those areas between S 324th Street and Weyerhaeuser Way S that are on portions of King County Parcel Nos. 7622400021, 7978200526, 2154650170, 1621049056, 2154650180, 1621049036, and 7978200520.
- Culvert inlets and outlets of four crossings: below the I-5 northbound on-ramp (Site ID 995300), below S 320th Street (Site ID 995299), below I-5 (Site ID 992364), and below a privately owned culvert under Winged Foot Way (Site ID 420614).

The study area for vegetation and wildlife habitat consists of the project footprint plus areas within 200 feet of the footprint. For wildlife, the study area includes areas where project construction could affect species that use habitats in the area as well as habitat quality. The occurrence of sensitive wildlife species was also documented within 0.25 miles of the project footprint to include species that could potentially be affected by airborne noise and human activity.





0 250 500 1,000 ✓ WRIA 9

✓ WRIA 10

Parcel Boundary

Study Area (300 feet)

Vegetation and ■ Wildlife Habitat Study Area (200 feet) Federal Way City Center Access Project: Ecosystems Report

Federal Way, WA

2. Methods

This section describes methods used to evaluate wetland, aquatic, and vegetation and wildlife resources in the study area.

2.1 Review of Existing Information

The following data sources were reviewed for information on precipitation, topography, drainage patterns, soils, vegetation, and potential or known wetlands and streams in the study area:

- Natural Resources Conservation Service (NRCS) Climate Data for King County, Station Seattle Tacoma Airport, Washington (NRCS 2024a) (Appendix A-1 and A-2).
- U.S. Geological Survey Digital Raster Graphics topographic maps (USGS 2024) (Appendix A-3).
- National Wetlands Inventory (maps) (USFWS 2024a) (Appendix A-4).
- NRCS, Soil Survey of King County Washington (NRCS 2024b) and Washington State Hydric Soils (NRCS 2024c) (Appendix A-5).
- Federal Way Critical Areas Map (Federal Way 2016) (Appendix A-6).
- King County iMap Wetlands Inventory Map (King County 2018) (Appendix A-7).
- Mapped wetlands within the Woodbridge Business Park (Talasaea 2020).
- Priority Habitats and Species data (WDFW 2024c).
- Washington State Department of Natural Resources Natural Heritage Program database (WDNR 2024).
- OMF South wetland and stream data (data-sharing agreement with Sound Transit).

2.2 Wetland Resources

Evaluation of wetlands within the study area includes several sources: delineation and remote identification by project biologists; incorporation of data from delineations for Weyerhaeuser Corp (Talasaea 2020); and data from Sound Transit OMF South project, as part of a data-sharing agreement with Sound Transit.

For identification of wetland resources by project biologists, wetlands were either delineated on-site or mapped remotely. Wetlands within the study area where right of entry was not granted were estimated using lidar and aerial imagery. To support future design and environmental permitting, wetland boundaries will be delineated on-site where right of entry was not obtained for this current study. Wetlands within the study area where right of entry was granted were delineated using routine methods described in the following:

- Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987).
- Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) (USACE 2010).

Wetland boundaries were delineated based on on-site observations of vegetation, soils, and hydrology, in conjunction with background information listed above.

Wetlands were classified using the U.S. Fish and Wildlife Service (USFWS) classification system (FGDC 2013) and the Hydrogeomorphic Classification System (HGM) (Brinson 1993). Wetlands were rated using the Washington State Wetland Rating System for Western Washington – 2014 Update (Version 2) (Hruby and Yahnke 2023), as required under both Federal Way Revised Code (FWRC) 19.145.420(1) and King County Code (KCC) 21A.24.318. Scientific plant names and wetland indicator status in this report are from the U.S. Army Corps of Engineers (USACE) National Wetland Plant List, Version 3.3 (USACE 2020).

Federal Way's wetland buffers, as described in FWRC 19.145.420, were applied to the wetlands in the project where they occur within the City limits. Buffer widths within Federal Way range from 50 to 300 feet, depending upon the wetland rating and habitat score.

King County's wetland buffers, as described in KCC 21A.24.325, were applied to the single wetland (W14) within the study area which occurs within unincorporated King County. Buffer widths within unincorporated King County range from 25 to 300 feet, depending on wetland rating, habitat score, and intensity of adjacent land use impacts.

Wetlands in the study area were given unique identifiers using "W" for wetland plus a number (e.g., W1).

2.3 Aquatic Resources

Aquatic resources include aquatic species and habitat that may be affected by the project. This includes the identification of streams, aquatic species protected by the Endangered Species Act (ESA), and fish and wildlife habitat conservations areas regulated by Federal Way (FWMC 19.145.260) as well as aquatic areas regulated by King County (KCC 21A.24.355).

The ordinary high-water mark (OHWM) of the stream within the study area was delineated using USACE guidance for OHWM identification (USACE 2005; USACE 2014). Fish presence is assumed, based on available WDFW Fish Passage Inventory (WDFW 2024a), fish distribution data (WDFW 2024c; NWIFC 2024), and on-site observations by project biologists. Biologists classified streams according to the interim water typing definitions in Washington Administrative Code 222-16-031 and Federal Way code. Federal Way's stream buffer widths, as described within FWRC 19.145.270, were applied to streams in the project.

2.4 Vegetation and Wildlife Resources

Terrestrial vegetation and wildlife resources were identified by reviewing existing conditions and regulatory status of plants and animals that may be affected by the project. This includes identification of species and habitat protected by the ESA, and fish and wildlife habitat conservations areas, as regulated by Federal Way (FWRC 19.145.260), and wildlife conservation areas, as regulated by King County (KCC 21A.24.382).

Vegetation cover types were assessed within 200 feet of the project footprint using aerial photography and on-site observations in the field and include the following:

- Upland mature forest: meets criteria for Mature Forest priority habitat by WDFW, in which mature stands are over 80 years old, have trees exceeding a diameter of 21 inches, and contain high structural complexity. Some mature forests include riparian habitats adjacent to streams and wetlands. Habitat value for terrestrial species is very high. It would take decades to recover this habitat following disturbance.
- Upland young forest: forest dominated by native trees and other plants but does not exhibit size and/or habitat complexity as seen in a mature native forest. Some upland forests

- include riparian habitats adjacent to streams and wetlands. Habitat value for terrestrial species is high. It would take years to decades to recover this habitat following disturbance.
- Shrublands: dominated by shrub species, which may provide habitat for birds and small mammals. Recovery following disturbance could take months to years.
- Upland grasslands: dominated by upland grasses and other herbaceous species and often regularly mown in road right-of-way. Grasslands provide habitat for a number of bird and small mammal species, and recovery after disturbance could take weeks to months.
- Wetland/stream: areas where wetlands and streams were identified. Wetlands and streams provide habitat for terrestrial and aquatic species. It would take months to decades to recover from disturbance, depending on the type of wetland vegetation present (emergent, scrub-shrub, or forested).
- Commercial: consists of heavily developed areas, such as buildings, parking lots, and roads, and their associated landscaped areas. Commercial areas provide habitat for birds and small mammals adapted to urban environments, but overall, they have low habitat value.
- Stormwater pond: created ponds with fluctuating water levels and regular maintenance results in low habitat value.

2.5 Impact Assessment

The impact analysis describes the magnitude and duration of impacts on wetlands, aquatic resources, and vegetation and wildlife. Temporary construction-related impacts are impacts from clearing and grading activities, access areas by machinery, and staging areas that can be restored within 1 to 2 years following disturbance. For this analysis, a full removal of vegetation for construction activities is assumed. Temporary, construction-related impacts that last longer than 1 to 2 years or require the removal of mature or old-growth trees may be considered permanent impacts, even if the area will be replanted. Permanent impacts include operational impacts on resources. Direct impacts on wetlands, streams, and vegetation were determined quantitively by measuring the acreage where resources would be altered or eliminated. Wetlands where at least one half of the area would be permanently impacted were counted as fully impacted. Impacts on species were assessed qualitatively by analyzing the project's impacts on overall habitat quality.

Determination of whether the impacts to wetlands, aquatic resources, and vegetation and wildlife is significant is based on whether the project can practicably apply the mitigation sequencing requirement as defined by USACE (33 Code of Federal Regulations [CFR] 325/332) and the Environmental Protection Agency (EPA) (40 CFR 230), the Washington State Department of Ecology (Ecology)(WAC 197-11-768), and City of Federal Way (FWC 19.145.130). Mitigation sequencing as defined by Federal Way (FWC 19.145.130) is:

- 1. Avoiding the impact altogether by not taking a certain action or parts of an action;
- 2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;
- 3. Rectifying the impact to the critical area by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of initiation of the project;
- 4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

- 5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and
- 6. Monitoring the hazard or other required mitigation and taking remedial action when necessary.

See Section 5 for project specific description of mitigation sequencing requirements.

3. Existing Conditions

3.1 Landscape Setting

The study area is located within the Puget Sound lowlands and near Federal Way's City Center. It is centered on the I-5 freeway corridor (Figures 1-1 and 1-2). The project is located on a topographic ridge, with most of the project occurring in WRIA 10 (Puyallup/White) and a small portion of the project occurring WRIA 9 (Green/Duwamish). The study area is in a highly urbanized land-use area that includes commercial, light industrial, office, residential, and recreational uses. Patches of relatively undisturbed forest occur east of I-5, both north and south of S 320th Street.

3.2 Watershed Description

The project is largely located in the Hylebos Creek – Frontal Commencement Bay watershed (hydrologic unit code [HUC] 171100190205) of WRIA 10: Puyallup/White, with a small portion along the eastern edge of the project, near the S 320th Street intersection with Military Road, extending into the Green River watershed (HUC 1711003130305) within WRIA 9: Green/Duwamish. The project falls within USDA MLRA 2 and USDA LRR A.

While the project is mapped in both WRIA 9 (Green/Duwamish) and WRIA 10 (Puyallup/White), surface flow in the study area appears to enter only aquatic ecosystems in WRIA 10 (Puyallup/White). None of the observed aquatic ecosystems identified in WRIA 9 (Green/Duwamish) drain towards the Green/Duwamish waterway or its tributaries. Therefore, discussion herein will be focused on aquatic ecosystems in WRIA 10 (Puyallup/White) and, more specifically, the Hylebos Creek basin.

The Hylebos Creek basin is heavily developed, and it includes several reaches downstream and within other tributaries that are impaired by dissolved oxygen, bacteria, mercury, temperature, copper, lead, zinc, and pH (Ecology 2024). Hylebos Creek drains to Commencement Bay near the Port of Tacoma, where there is an approved total maximum daily load water quality plan established to control dioxin. Major land uses within the Hylebos Creek basin include heavy and light industrial, commercial, office, and residential.

3.3 Climate, Precipitation, and Growing Season

According to the Climate Analysis for Wetlands Tables for the Seattle-Tacoma Airport Weather Station (NRCS 2020a), the average mean temperature for the 30-year period between 1991 and 2020 was 53.7°F, falling within an average range of 46.1°F to 61.3°F. The growing season (28°F or greater) has a 50% probability of occurring between February 8 and December 14 (309 days). Therefore, all fieldwork occurred during the growing season (Appendix A-1).

The Regional Delineation Supplement Version 2.0 (USACE 2010) recommends using the methods described in Chapter 19 in the Engineering Field Handbook (NRCS 2015) to determine whether precipitation occurring in the 3 full months prior to the site visit was normal, drier than normal, or wetter than normal. The actual rainfall for the 3 months prior to field work ranged from drier to wetter than normal based on the 30-year average from 1991 through 2020. Light precipitation was recorded in the 10 days preceding each field work session: April 30, 2019; July 24, 2020; August 13, 18, and 19, 2020; September 2, 2020; November 11, 2020; and January 7 and 11, 2021 (Appendix A-2).

3.4 Wetlands

3.4.1 Overview

A total of 32 wetlands were identified throughout the study area. Wetland identification field work occurred between April 2019 and May 2021. Parametrix mapped 16 wetlands in the study area. Figures 3-1 through 3-17 present the wetland locations mapped by project biologists, mapping data from previous work (Talasaea 2020), data from the data-sharing arrangement with the OMF South project, and estimated boundaries observed from adjacent roadways. W6, W15, W21, W22, W23, W25, W26, W27, W28, W29, W30 were delineated by the OMF South project between 2019 and 2023. Wetlands W31, W32, W33, and W34 were mapped previously by Talasaea Consultants Inc. (Talasaea 2020), and boundaries were verified by project biologists. Wetland classifications, ratings, and buffers are summarized below in Table 3-1.

Table 3-1. Wetlands Within the Study Area

	Wetland Classification					
Wetland	USFWS Class a	HGM Class b	Ecology Rating °	Total Wetland Acreage	Total Wetland Area (sf)	Buffer Width (ft)
W1	PEM, PSS	Slope, Depressional	IV	0.16	7,120	50
W2	PEM, PSS	Depressional	III	0.03	1,255	80
W3	PEM	Depressional	III	0.02	670	80
W5	PEM, PSS, PFO	Slope, Depressional, Riverine	1/11	1.76 (bog), 4.50 (lagg ^g)	76,465 (bog), 195,930 (lagg)	250/150
W6e	PEM, PSS	Riverine	III	0.19	8,130	80
W7	PEM	Depressional	III	0.18	7,930	80
W9	PEM	Slope	III	0.01	555	80
W10	PAB, PEM, PSS, PFO	Depressional	III	0.23	9,890	80
W11	PAB, PEM, PSS, PFO	Depressional	II	5.09	221,925	150
W12	PEM	Depressional	IV	0.20	8,875	50
W13	PEM, PSS, PFO	Depressional	II	0.45	19,630	100
W14	PSS, PFO	Depressional	III	0.26	11,475	80
W15 ^e	PEM, PSS	Depressional	III	0.40	17,585	80
W17	PFO	Depressional	III	0.13	5,500	80
W18	PAB, PSS, PFO	Depressional, Lake Fringe	II	13.08	569,640	150
W19	PAB, PEM, PSS, PFO	Depressional, Lake Fringe	II	15.25	664,350	150
W20	PEM	Slope	IV	0.17	7,295	50
W21 e	PEM, PFO	Depressional	III	0.34	14,720	80
W22 e	PFO	Riverine	III	0.95	41,580	80

Table 3-1. Wetlands within the Project Study Area (continued)

	W	etland Classification		-		- -
Wetland	USFWS Class a	HGM Class b	Ecology Rating c	Total Wetland Acreage	Total Wetland Area (sf)	Buffer Width (ft) d
W23 e	PSS, PFO	Riverine	II	0.38	16,765	150
W26 e	PFO	Riverine	III	0.10	4,425	80
W27 e	PEM, PSS	Riverine	III	0.13	5,750	80
W28 e	PSS	Slope	IV	0.02	760	50
W29 e	PEM, PSS	Depressional	III	0.03	1,220	80
W30 e	PEM, PSS, PFO	Riverine	III	0.63	27,255	80
W31 ^f	PEM	Slope	IV	0.07	3,200	50
W32 ^f	PFO	Depressional	III	0.08	3,660	80
W33 ^f	PSS	Depressional	III	0.17	7,530	80
W34 f	PFO	Depressional	III	0.01	390	80

ft = feet; Ecology = Washington State Department of Ecology; HGM = Hydrogeomorphic Classification System; sf= square feet; USFWS = U.S. Fish and Wildlife Service.

Nine wetlands are associated with East Fork Hylebos Creek Tributary 0016A: W5, W6, W10, W11, W22, W23, W26, W27, and W30. W11 and W10 are the headwaters of the East Fork Hylebos Creek Tributary 0016A. W5 is a large wetland containing a peatland bog vegetation community.

Detailed information on each wetland evaluated by project biologists is provided in Appendix B. Wetland delineation data sheets and rating forms are provided in Appendix C and D, respectively. Photographs of the wetlands are included in Appendix E.

Additionally, several constructed stormwater ponds and other facilities identified within the study area are included for context (Figures 3-1 through 3-17). As these stormwater ponds and features are artificial and were constructed for the express purposes of conveying, storing, and treating stormwater, they are not regulated wetlands.

a PAB = palustrine aquatic bed; PEM = palustrine emergent; PFO = palustrine forested; PSS = palustrine scrub-shrub (FDGC 2013; Cowardin et al. 1979).

b Brinson et al. 2005.

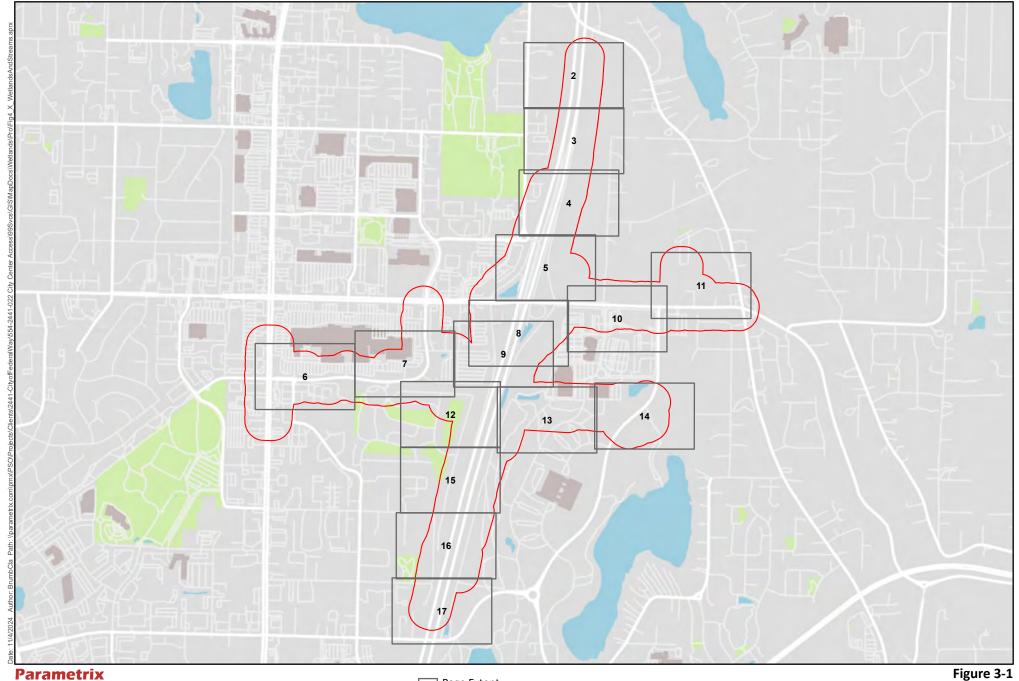
^c Hruby and Yahnke 2023.

d Federal Way wetland buffer width based on wetland category, habitat score, and wetland size (FWRC 19.145.420). W14 is in unincorporated King County and buffer widths are based on wetland category, habitat score and intensity of adjacent land use (KCC 21A.24.325). Assigned buffer widths based on high intensity land use.

^e Wetland boundary and wetland rating from OMF South.

f Wetland boundary and wetland rating from Talasaea (2020).

g A lagg is the peripheral moat wetland area surrounding the peatland bog.



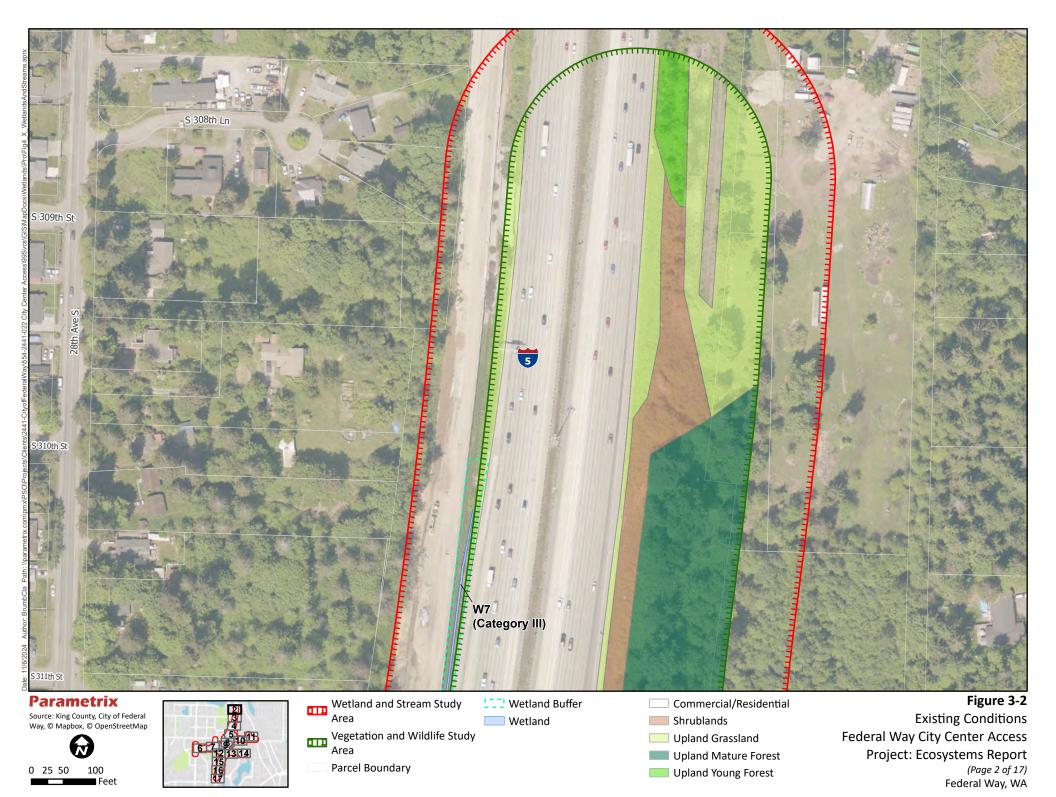
Source: King County, City of Federal Way, © Mapbox, © OpenStreetMap



0 400 800 1,600 US Feet

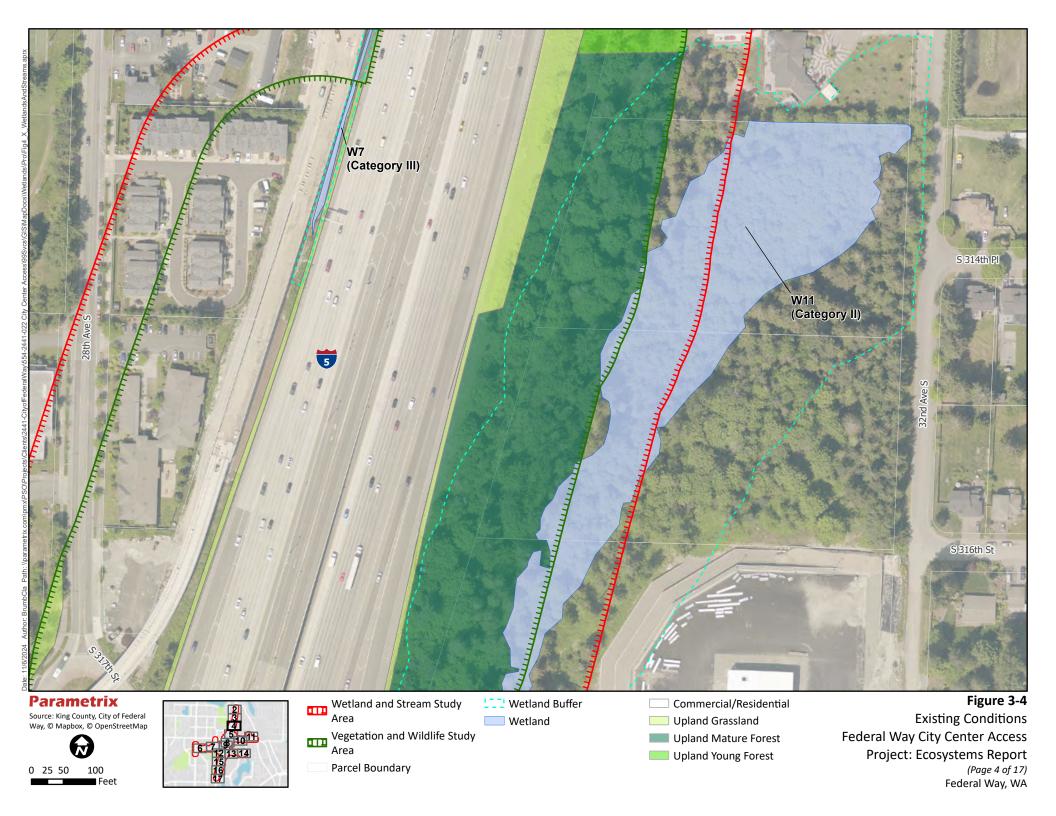
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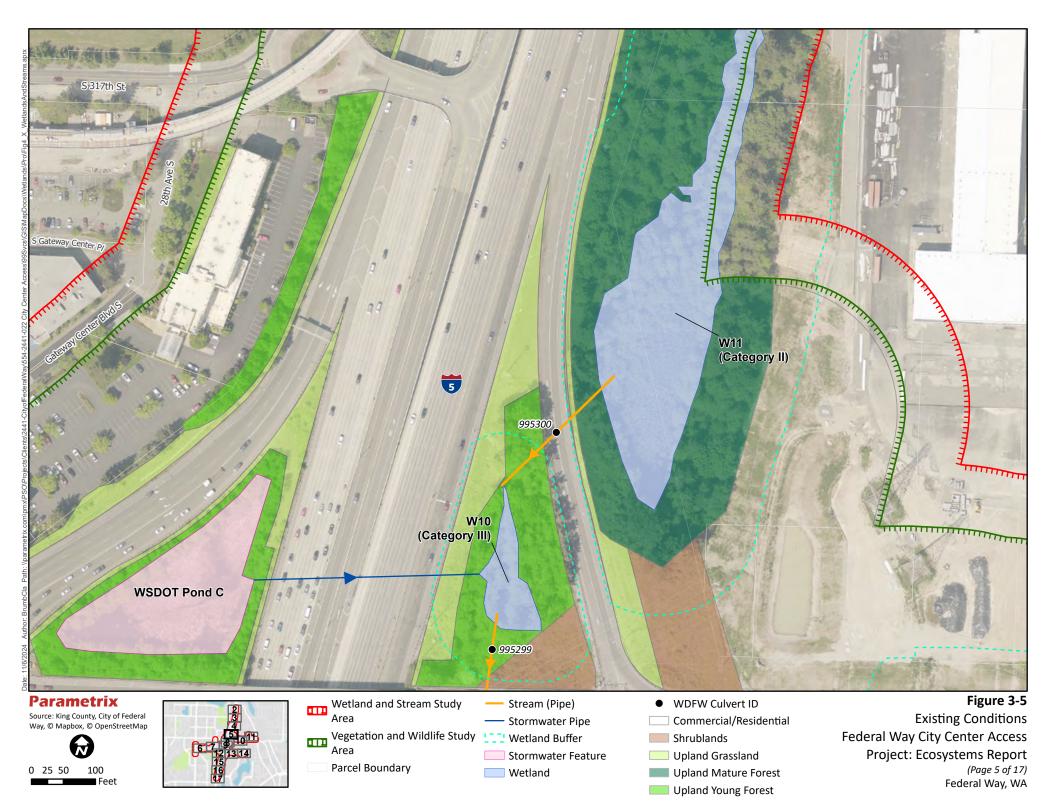
Figure 3-1
Existing Conditions
Federal Way City Center Access
Project: Ecosystems Report
(Page 1 of 17)
Federal Way, WA





Federal Way, WA









0 25 50 100



Parcel Boundary

Project: Ecosystems Report

(Page 6 of 17) Federal Way, WA





0 25 50 100



Vegetation and Wildlife Study

Parcel Boundary

Wetland Buffer

Stream Buffer

Stormwater Feature

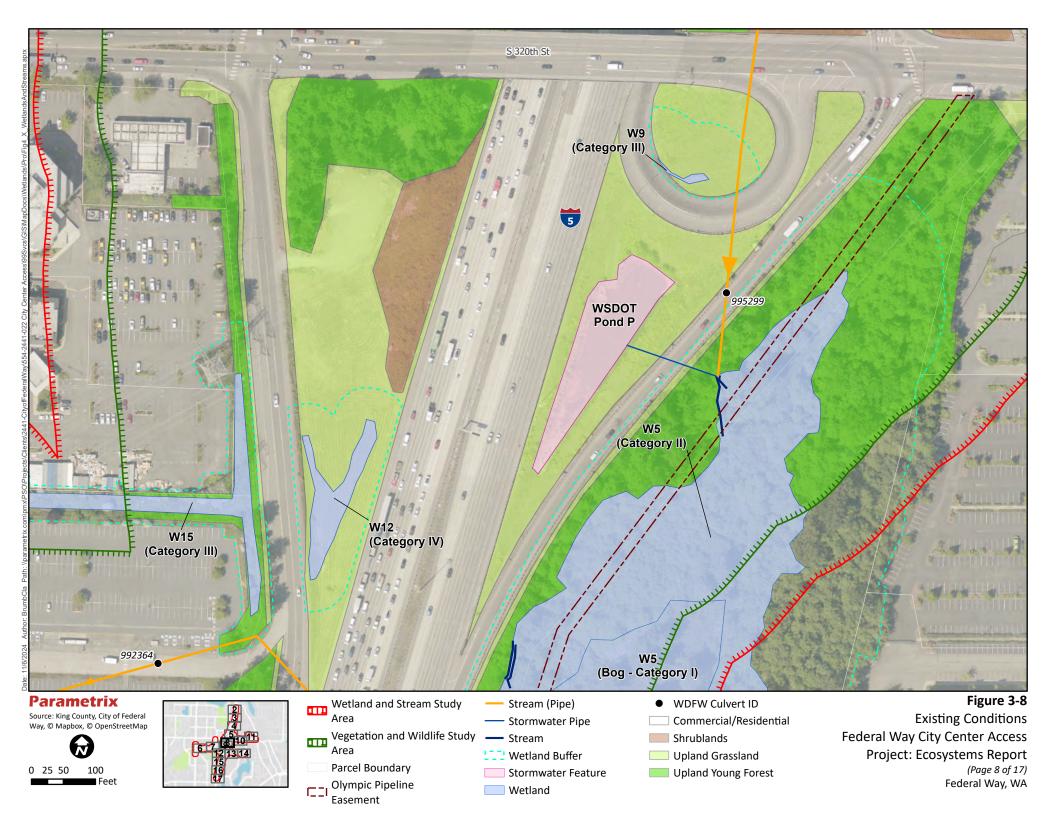
Wetland

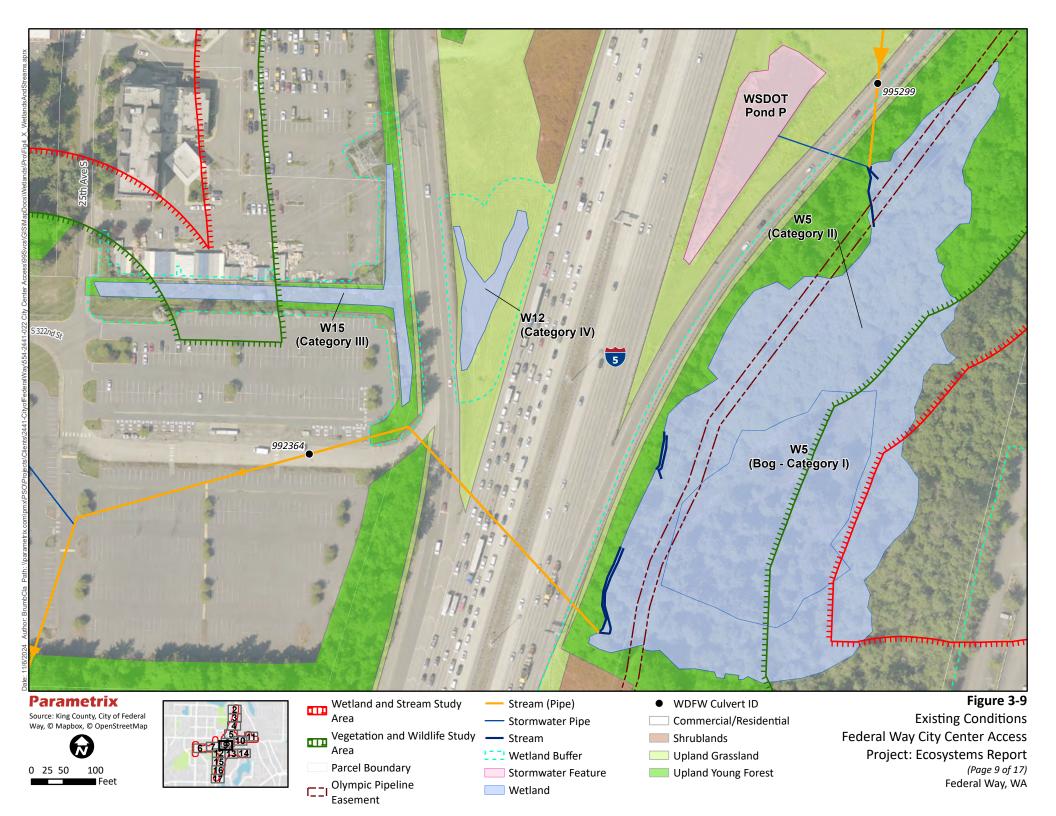
Shrublands

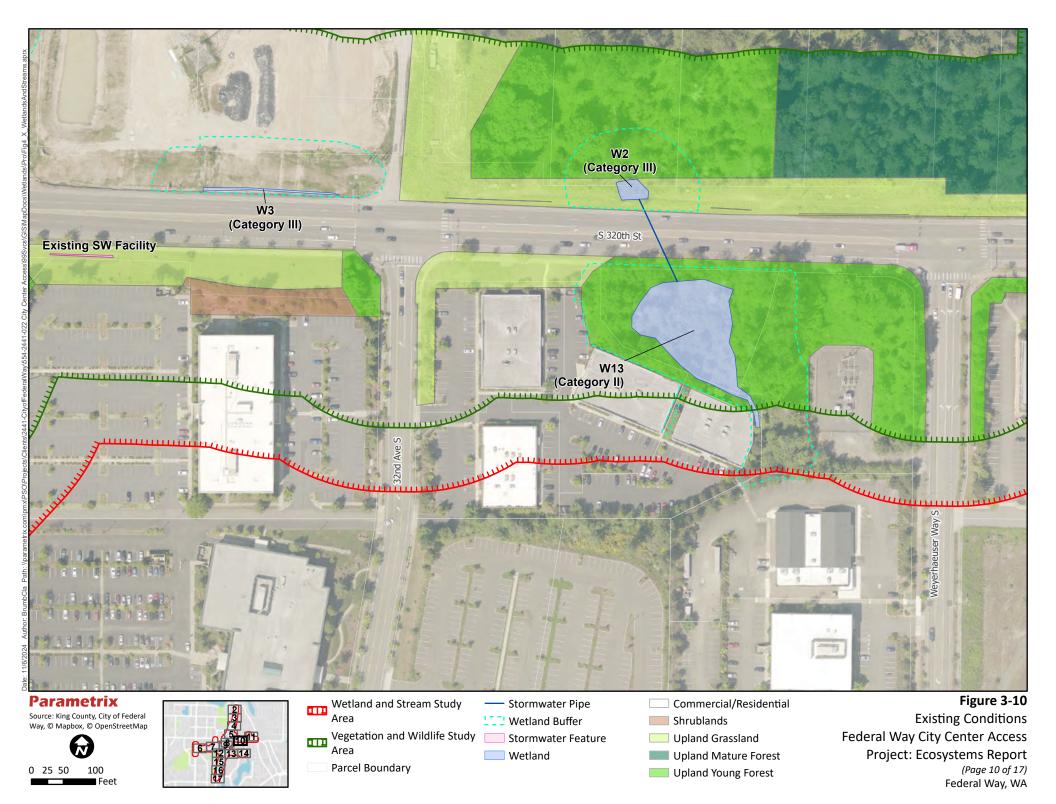
Upland Grassland

Upland Mature Forest Upland Young Forest

Project: Ecosystems Report (Page 7 of 17) Federal Way, WA











Stream

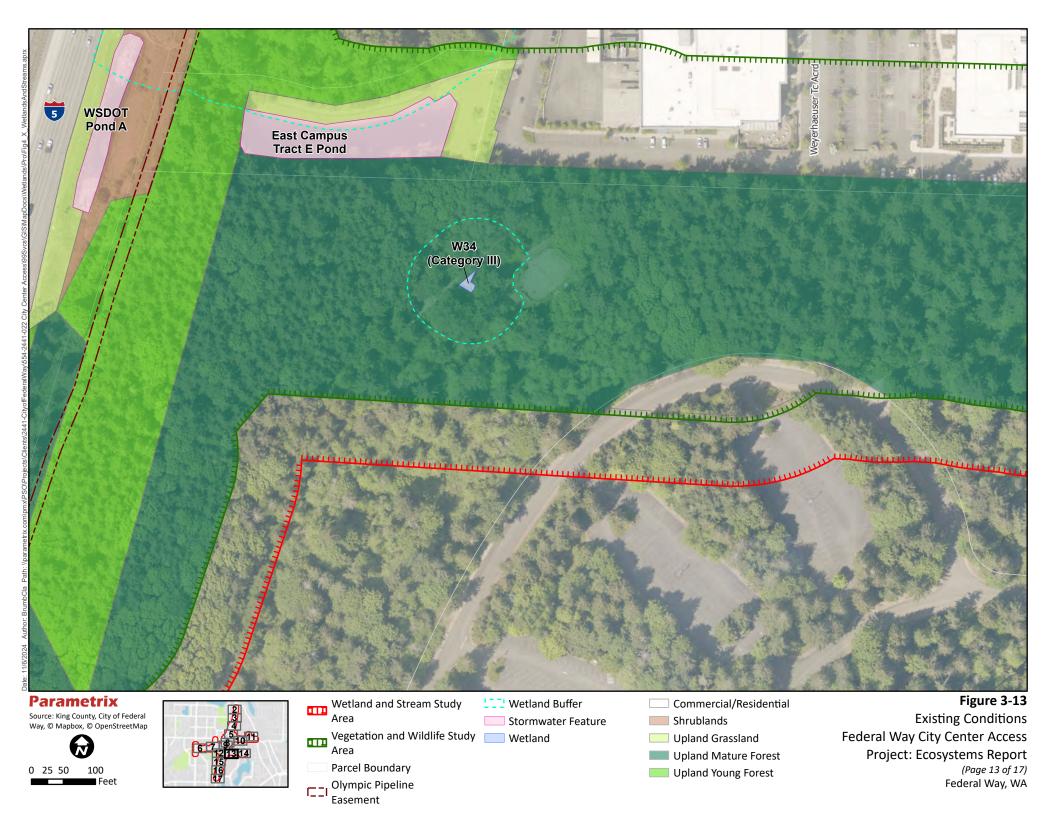


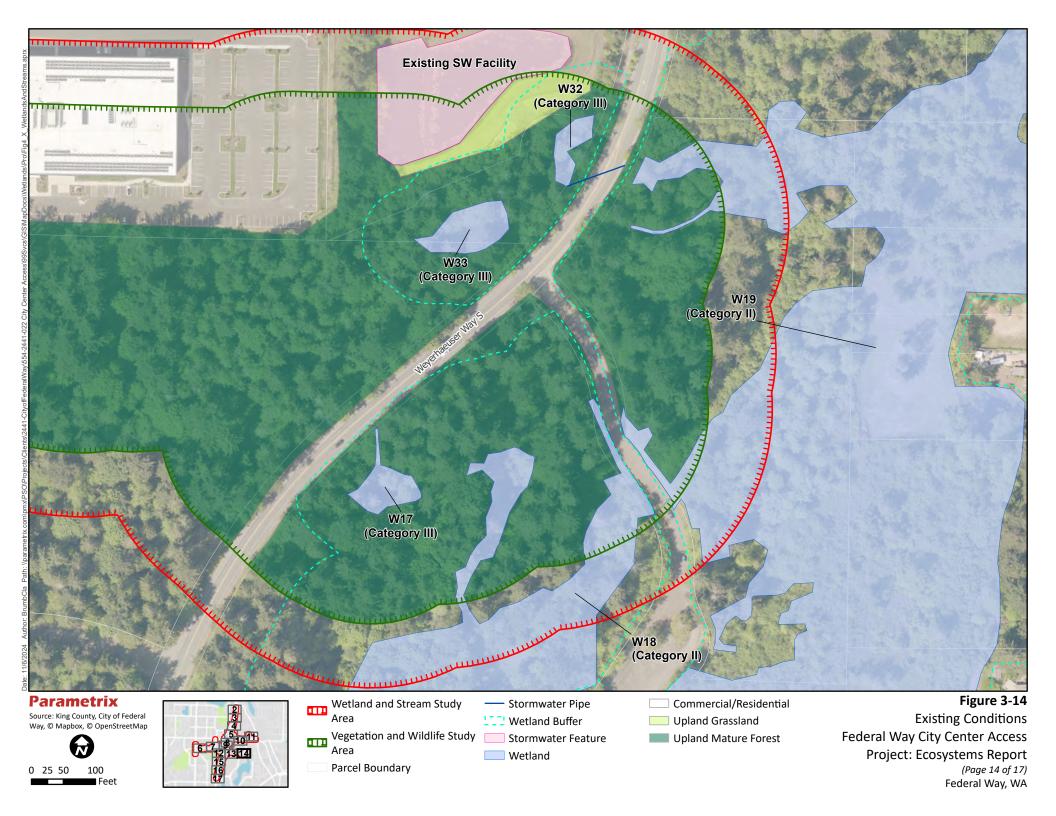
0 25 50 100

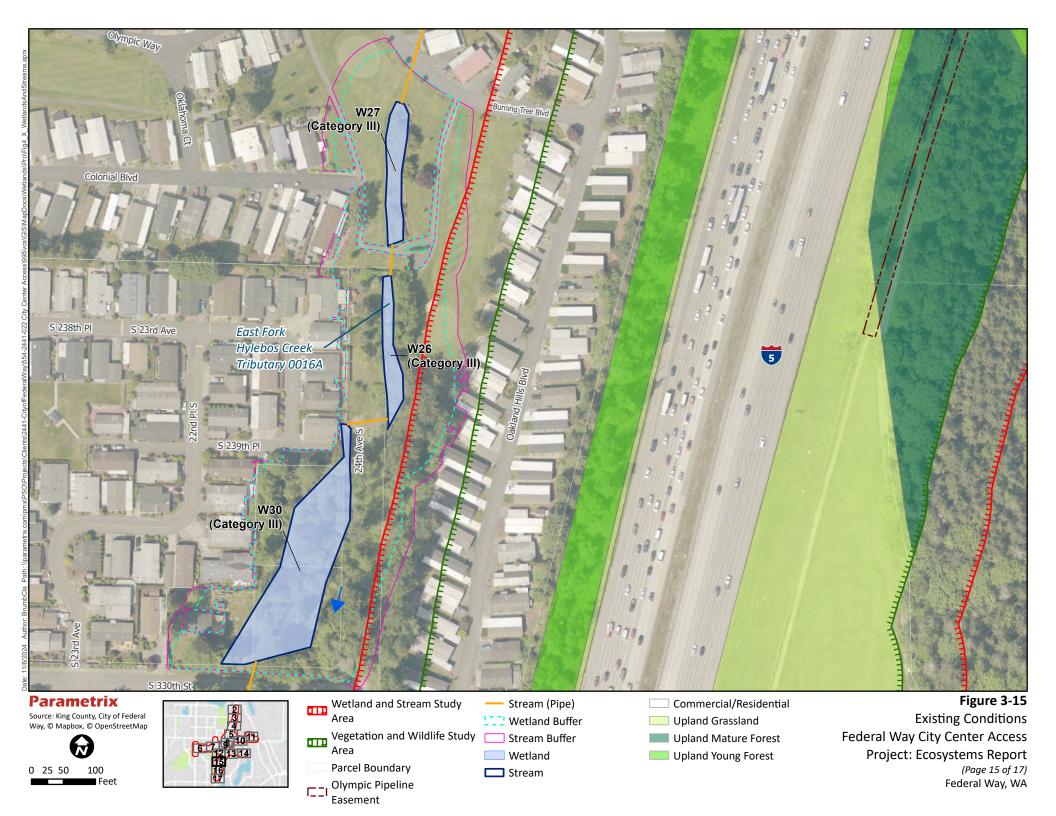


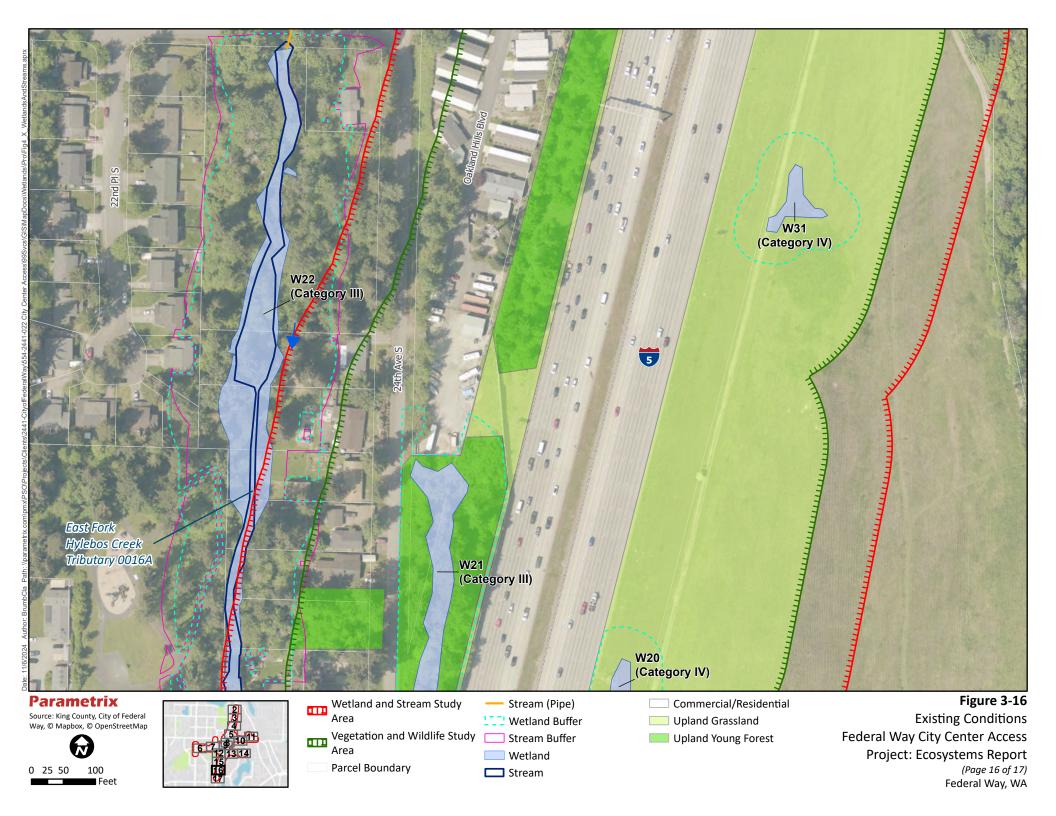
- Vegetation and Wildlife Study ш
- Parcel Boundary
- Olympic Pipeline Easement

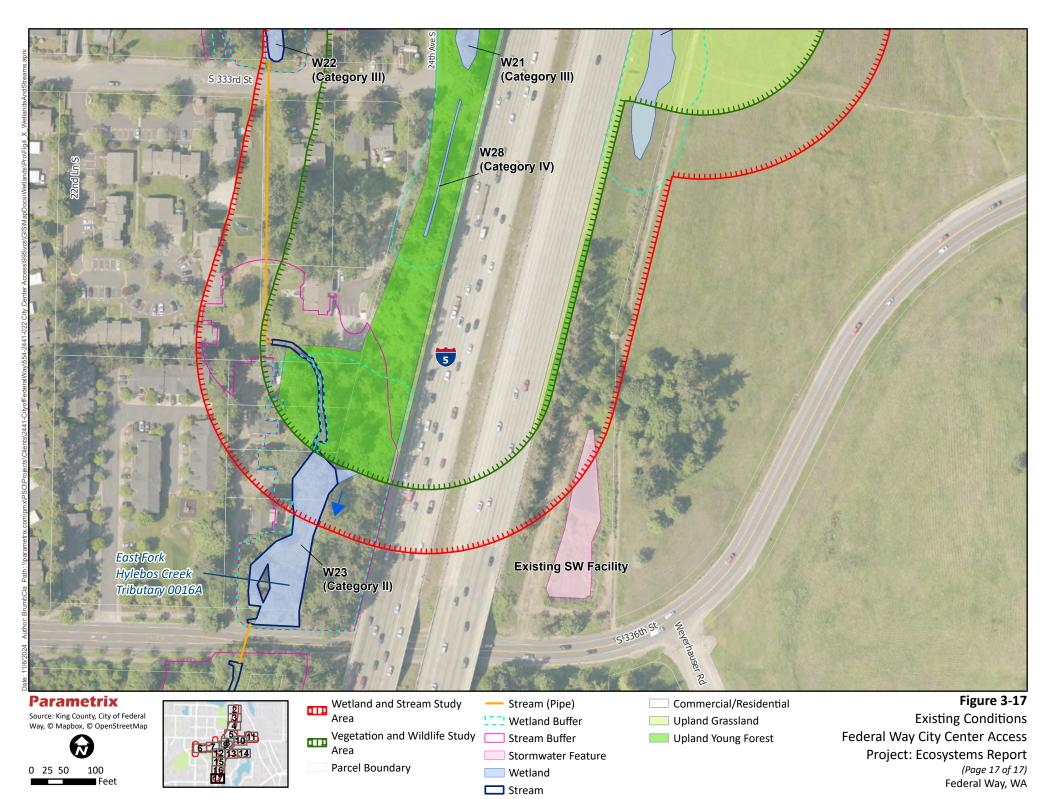
- Shrublands Stream Buffer
- Upland Grassland Wetland
 - Upland Mature Forest Upland Young Forest
- Federal Way City Center Access Project: Ecosystems Report (Page 12 of 17) Federal Way, WA











3.4.2 Vegetation

Wetland vegetation communities in the study area range from those communities typical of highly disturbed environments within urban communities to those communities typical of relatively undisturbed forested and wetland environments. The vegetation communities within disturbed environments through the City core and surrounding urban development are typified by landscaped ornamental and native plantings with fragmented palustrine emergent and scrub-shrub wetlands dominated by reed canarygrass (*Phalaris arundinacea*), Himalayan blackberry (*Rubus armeniacus*), and red-osier dogwood (*Cornus alba*). Dominant vegetation within relatively undisturbed forested communities includes upland species, such as bigleaf maple (*Acer macrophyllum*) and Douglas-fir (*Pseudotsuga menziesii*), and dominant wetland species, such as red alder (*Alnus rubra*), Oregon ash (*Fraxinus latifolia*), and black cottonwood (*Populus balsamifera*).

Those relatively undisturbed wetland communities within the study area include palustrine aquatic bed, palustrine emergent, palustrine scrub-shrub, and palustrine forested communities dominated by sedges (*Carex* sp.), common ladyfern (*Athyrium cyclosorum*), creeping buttercup (*Ranunculus repens*), salmonberry (*Rubus spectabilis*), and red alder. A bog that is located within the study area is dominated by western hemlock (*Tsuga heterophylla*), bog laurel (*Kalmia polifolia*), and Labrador tea (*Ledum groenlandicum*).

3.4.3 **Soils**

Nine soil types are mapped by NRCS within the study area (NRCS 2024a):

- Alderwood gravelly sandy loam AgB, 0% to 8% slopes; Hydric Rating: 10.
- Alderwood gravelly sandy loam AgC, 8% to 15% slopes; Hydric Rating: 5.
- Alderwood gravelly sandy loam AgD, 15% to 30% slopes; Hydric Rating: 5.
- Arents, Alderwood material AmB, 0% to 6% slopes; Hydric Rating: 0.
- Arents, Alderwood material AmC, 6% to 15% slopes; Hydric Rating: 0.
- Everett-Alderwood gravelly sandy loam EwC, 6% to 15% slopes; Hydric Rating: 5.
- Tukwila muck Tu; Hydric Rating: 100.
- Orcas peat Or; Hydric Rating: 100.
- Seattle muck Sk; Hydric Rating: 100.

The predominant soil mapped in the study area is Alderwood gravelly sandy loam, with 0% to 8% slopes. Apart from soils mapped as muck or peat, all soils are moderately well drained and do not have hydric soil conditions (NRCS 2024b). A soil survey map is included in Appendix A. Based on field observations, soils in the study area are primarily silt-, sand-, and clay-loams as well as peat.

3.4.4 Hydrology

Wetlands hydrology in much of the study area is supported by a high groundwater table, precipitation, surface runoff from adjacent roads, and overbank flooding from the East Fork Hylebos Creek Tributary 0016A. Many of the wetlands are depressional systems adjacent to major roadways. These wetlands likely receive their hydrology from stormwater inputs, road runoff and a high groundwater table. Riverine wetlands associated with East Fork Hylebos Creek Tributary 0016Aare hydrologically supported by the stream and a high groundwater table.

3.4.5 Wetland Buffers

Wetland buffers range from a variety of habitats that are moderately to highly disturbed. Wetland buffers include forests, shrub, and herbaceous habitats. Disturbance types include regularly mown roadside grasses, access roads, and adjacent roadways. Wetland buffers that are not functional, such as structures, roads, or parking lots, have been removed from the analysis, pursuant to FWRC 19.145.440(4). Wetland buffers shown on Figure 3-1 to 3-17 have been clipped to the edge of structures or impervious surfaces.

3.5 Aquatic Resources

This section describes streams, riparian and in-stream habitat, and fish use within the study area. Relevant habitats and species of local importance, identified in Federal Way's fish and wildlife habitat conservations areas regulations (FWRC 19.145.260) are also discussed. No streams in the study are in unincorporated King County. Mapped streams are shown in Figures 3-1 to 3-17.

3.5.1 East Fork Hylebos Creek Tributary 0016A

One stream is in the study area: the East Fork Hylebos Creek Tributary 0016A. Summary information for East Fork Hylebos Creek Tributary 0016A is presented in Appendix B. The intermittently flowing stream generally flows northeast to southwest through the study area.

Wetland W11, located north of S 320th Street and east of I-5, is the headwater of East Fork Hylebos Creek Tributary 0016A. Surface water exits W11 through a 30-inch concrete pipe (Site ID 995300) for approximately 245 feet below the I-5 northbound on-ramp and discharges into W10. W10 is a permanently ponded wetland bordered by S 320th Street to the south, I-5 to the west, and the northbound I-5 on-ramp to the northeast. Water exits W10 through a submerged 30-inch concrete pipe (Site ID 995299) for approximately 665 linear feet, crossing under S 320th Street and I-5 northbound on-ramps to the south before discharging in the northwest side of W5.

The upper limits of the defined stream channel begin at the outlet of the S 320th Street crossing (Site ID 995299), where flow enters W5. Surface flow travels approximately 50 feet within a defined channel to the southeast towards the Olympic Pipeline easement. The channel loses definition where it intersects the Olympic Pipeline easement and water slowly moves down-gradient through a palustrine scrub-shrub vegetation community and partially into the delineated bog interior within W5, east of the Olympic Pipeline easement. The stream becomes channelized again for approximately 325 feet at the southeast side of the wetland along the toe of the I-5 fill slope. Water exits the wetland and stream through approximately 1,640 linear feet of pipe below I-5 (Site ID 992364) and the King County Metro Park and Ride (Site ID 420614) before daylighting in a straightened and incised channel within the Belmor Park Golf & Country Club.

The East Fork Hylebos Creek Tributary 0016A continues south for approximately 2.1 miles, flowing through a series of piped and open-channel segments with wetlands, before turning east near S 356th Street and crossing I-5, where it converges with other incoming tributaries and forms East Fork Hylebos Creek. East Fork Hylebos Creek continues to flow on the east side of I-5 and converges with West Fork Hylebos Creek near the Porter Way crossing of I-5. From this point, the stream continues as Hylebos Creek, crossing back to the west side of I-5 and discharging to the Hylebos Waterway in Tacoma.

3.5.2 Aquatic Habitat

The low-gradient stream segment within W5 is located at the toe of the I-5 embankment. The defined channel is relatively straight. Streambed material consists of sand, gravel, and cobbles near the culvert outlet. Dense upland and wetland forest adjacent to the stream provide input of small woody debris and organic matter into the stream. The stream is shaded by forest through its extents.

Downstream west of I-5, the East Fork Hylebos Creek Tributary 0016A daylights within Belmor Park Golf & Country Club in a ditch-like linear channel that also supports wetlands conditions (W6). The stream is low-gradient, and the streambed consists of fine sediments, which supports an abundance of reed canarygrass, a non-native, invasive grass within the stream. South of Belmor Park, the stream is generally straight and still confined by residential development and culverts.

Riparian vegetation immediately adjacent to the stream west of I-5 consists of native and non-native shrubs and herbaceous vegetation with a mostly native forest canopy. In general, riparian areas are narrow and constrained by development on both sides of the stream. Due to the proximity of residential housing, a golf course, roads, and parks, the riparian habitat is highly disturbed with pollution, noise, and light intrusions.

Other aquatic habitats include wetland habitat. Wetlands are described in Section 3.4 and Appendix B.

3.5.3 Aquatic Species

Several aquatic ESA-listed species are mapped as potentially occurring within the study area; however, due to reasons stated below and described in the BA (Parametrix 2023), no ESA-listed aquatic species occur within the study area. The USFWS Information for Planning and Consultation program (IPaC) listed bull trout (Salvelinus confluentus) as potentially being located within the study area. ESA-listed aquatic species under the National Marine Fisheries Service (NMFS) jurisdiction include a Chinook salmon (Oncorhynchus tshawytscha) Puget Sound Evolutionarily Significant Unit and a steelhead (O. mykiss) Puget Sound Distinct Population Segment. Chinook salmon and coho salmon (O. kisutch) are WDFW Priority Species in Washington State; however, WDFW (2024c) does not identify any observations of state-listed aquatic species in the study area. The study area does not contain aquatic species of local importance identified by Federal Way (FWRC 19.145.260(6)) or King County (2016).

Anadromous salmonid fish use is not mapped, documented, or presumed in East Fork Hylebos Creek Tributary 0016A within the study area (NWIFC 2024). Under current conditions, human-created barriers to fish passage prevent anadromous salmonids from entering stream reaches in the study area (WDFW 2024a, 2024c). Resident fish may be present within the East Fork Hylebos Creek Tributary 0016A; however, intermittent stream flows and fish passage barriers between the study area and potential population sources downstream or upstream may reduce the likelihood that they occur in the study area. The basin size, channel width, and gradient of the stream indicate the potential to support fish in the future. For this reason, the stream is classified as a Type F stream, in accordance with FWRC 19.145.260, which has a required buffer width of 100 feet. Stream buffers that are not functional, such as structures, roads, or parking lots, have been removed from the analysis. Stream buffers shown on the figures have been clipped to the edge of structures or impervious surfaces.

For the reasons stated above, bull trout do not occur within the study area. Furthermore, USFWS issued a letter of concurrence following a request for formal consultation stating that none of the

waterbodies in the study area support or are mapped to support anadromous fish due to fish passage barriers and intermittent flow (Tanner 2023).

The documented distribution of Chinook salmon in the Hylebos Creek watershed does not extend upstream into East Fork Hylebos Creek or its tributaries (WDFW 2024a). Chinook salmon are presumed to be present in East Fork Hylebos Creek only in the lowest 700 feet of the stream (WDFW 2024a), approximately 1.24 miles downstream of the study area (WDFW 2024a). Chinook salmon are not presumed to use habitats in East Fork Hylebos Creek or its tributaries upstream of that point, but there are no gradient barriers that preclude access to East Fork Hylebos Creek Tributary 0016A in the study area (WDFW 2024a).

Coho salmon and winter-run steelhead have been documented in East Fork Hylebos Creek approximately 1.1 miles downstream of the study area (WDFW 2024a). As noted above, the basin size, channel width and gradient of East Fork Hylebos Creek Tributary 0016A in the study area indicate the potential to support these species in the future.

3.6 Vegetation and Wildlife

This section describes vegetation cover habitat types and addresses terrestrial species and habitats of concern, which includes wildlife habitat conservations areas, as defined by Federal Way (FWRC 19.145.260) and King County (KCC 21A.06.1423). A discussion about ESA-listed species in relation to the study area is included in the BA (Parametrix 2023), except for discussions about the northwestern pond turtle (*Actinemys marmorata*), monarch butterfly (*Danaus plexippus*), and Suckley's cuckoo bumblebee (*Bombus suckleyi*), which are included below. Vegetation cover types identified in the study area are mapped in Figures 3-1 to 3-17.

3.6.1 Vegetation Cover

Through a review of the Natural Heritage Program (NHP), vegetation in the study area was evaluated for the presence of rare plants and priority ecosystems (WDNR 2024). No documented populations of rare plants or priority ecosystems were in the study area. The nearest NHP occurrences are a Douglas spirea shrub wetland 1.12 miles to the southwest, and a population of Canadian St. John's wort (*Hypericum majus*) 0.61 miles to the southeast.

Habitats mapped within the study area are:

- Upland mature and young forests.
- Shrublands.
- Upland grasslands.
- Wetlands (forested, shrub, and emergent).
- Streams.
- Commercial or residential areas.
- Stormwater ponds.

The majority of the study area contains commercial/residential areas, which largely surround other vegetated areas in this urban environment. Commercial/residential areas are often dominated by non-native lawn grasses, shrubs, and trees. Upland grasslands and shrublands occur primarily adjacent to roads. Shrublands areas contain a mixture of native and non-native shrub species, such as Himalayan blackberry, salmonberry, and willows, and grassland areas contain a mixture of native

and non-native grasses and herbaceous plants. These areas provide habitat for birds and small mammals. Grasslands and shrublands disturbed by construction could be replaced within weeks to years, depending on vegetation type. Stormwater ponds, located adjacent to roads and commercial development, have fluctuating water levels and regular maintenance, resulting in low habitat value for wildlife. Wetland and riparian habitat types are discussed in their corresponding sections (Section 3.4 and 3.5).

The analysis focuses primarily on forests, which comprise the most common vegetated habitat; therefore. Two upland forest types were identified: mature forest and young forest. Some upland forests include riparian habitats adjacent to streams and wetlands. Mature forests in the study area meet the WDFW criteria for Mature Forest priority habitat, where mature stands are over 80 years old, with trees exceeding 21 inches in diameter and having high structural complexity (WDFW 2024c). It would take decades to recover this habitat following disturbance. Within the study area, upland mature forests are dominated by Douglas-fir trees and high structural complexity, with dense shrubs (salmonberry, salal) and herbaceous vegetation (sword fern, lady fern), logs, and snags. Several trees, particularly near North Lake, exceed 36 inches in diameter. Young forests are dominated by native trees but do not exhibit size and/or habitat complexity as seen in a mature native forest. It would take years to decades to recover this habitat following disturbance. Young upland forests are dominated by Douglas-fir or red alder trees. The understory of young Douglas-fir forests is sparse with little structural complexity. Red alder-dominated forests are more complex, with shrubs (salmonberry, osoberry) and herbaceous vegetation (sword fern and other forbs), snags, and logs. Invasive plants, such as Himalayan blackberry, are found on the out edges of the red alder forest.

The study area comprises 15% upland mature forests (approximately 46 acres) and 9% upland young forests (approximately 29 acres). The largest patches of forest are north of S 320th Street, between I-5 and Weyerhaeuser Way S, where the S 324th Street extension is proposed; south of S 320th Street; and east of I-5, adjacent to W5. The habitat value for birds and small mammals in this area is high, especially in the highly urbanized City, where large patches of undisturbed forest are uncommon. However, the lack of continuous wildlife corridors hinders movement of wildlife between these forests and other habitats.

3.6.2 Terrestrial Wildlife

The habitats described above have been highly fragmented from urban development and lack corridors between these resources and other habitats beyond the study area. Therefore, wildlife observed during field visits include species typically accustomed to human activities, such as American robin (*Turdus migratorius*), song sparrow (*Melospiza melodia*), Pacific wren (*Troglodytes pacificus*), red-winged blackbird (*Agelaius phoeniceus*), American crow (*Corvus brachyrhynchos*), rock pigeon (*Columba livia*), eastern cottontail (*Sylvilagus floridanus*), deer (*Odocoileus virginianus*) and bullfrogs (*Rana catesbeiana*).

Mature and young native forests, including riparian habitat associated with East Fork Hylebos Creek Tributary 0016A, and a variety of wetland types provide habitat important for wildlife. These habitats provide food, cover, and nesting for species typically found in urban Puget Sound habitats. Additionally, the stormwater features in the study area provide low to moderate habitat value for wildlife.

USFWS IPaC list identifies several listed species that potentially occur within the study area: marbled murrelet (*Brachyramphus marmoratus*), streaked horned lark (*Eremophila alpestris strigata*), yellow-billed cuckoo (*Coccyzus americanus*; Western DPS), Taylor's checkerspot (*Euphydryas editha taylori*), and the North American wolverine (*Gulo gulo luscus*). These terrestrial ESA-listed species are

not known to occur within the study area, and the project will have no effect on these species, as demonstrated in the BA developed for this project.

WDFW (2024c) does not identify any observations of state-listed terrestrial species in the study area. The study area does not contain habitats and species of local importance identified by Federal Way (FWRC 19.145.260(6)) or King County (2016). In addition, King County protects bald eagles (Haliaeetus leucocephalus), great blue herons (Ardea herodias) and ospreys (Pandion haliaetus) under its wildlife conservation areas regulations (KCC 21A.24.382). Bald eagles, protected under the Bald and Golden Eagle Protection Act, were not observed during field studies, but were sighted at North Lake in recent years (eBird 2024). One osprey nest is on a cellular tower at the southern end of the study area between 24th Avenue S and I-5.

The Migratory Bird Treaty Act (MBTA), administered by USFWS, makes it unlawful to take any migratory bird, or the parts, nests, or eggs of any such bird, except under the terms of a valid permit. In context of this Act, "take" is defined as "pursue, hunt, shoot, capture, collect, kill or attempt to pursue, hunt, shoot, capture, collect, or kill" (16 U.S. Code §715n). Nearly all bird species that may be present in the ecosystem study area are protected under the MBTA. The proposed project will include tree removal and vegetation clearing. Additional possible stressors include elevated noise from construction equipment and a disruption of prey species. To minimize the risk of harm to species protected under the MBTA, the City would consult with staff from WDFW and/or USFWS about measures to conserve migratory birds and their nests.

3.6.2.1 Northwestern Pond Turtle

Northwestern pond turtles are semiaquatic, which means they require both aquatic and terrestrial habitats that are within close proximity and connected to one another. In Washington, northwestern pond turtles are found associated with ponds, small lakes, and wetlands at elevations below 1,000 feet (Hallock et al. 2017).

Terrestrial environments are required for nesting, overwintering and aestivation (warm season dormancy), basking, and movement/dispersal. Aquatic environments are required for breeding, feeding, overwintering and sheltering, basking, and movement/dispersal. Pond turtles can be found in both lotic waterbodies (e.g., streams, rivers, ditches) and lentic waterbodies (e.g., ponds, lakes, reservoirs). The northwestern pond turtle is omnivorous and considered a dietary generalist, consuming a wide variety of food items (USFWS 2023).

Consistent with the requirements of ESA section 7(c), the Federal Highway Administration (FHWA) requested consultation with the NMFS and USFWS on March 28, 2023. On December 18, 2023, USFWS issued a letter of concurrence with FHWA's determination that the project is not likely to adversely affect species and critical habitats under USFWS jurisdiction. Consultation with NMFS is ongoing.

After consultation with USFWS was completed, USFWS issued a proposal to list the northwestern pond turtle as threatened (88 Federal Regulations [FR] 68370, October 3, 2023). If the pond turtle is listed prior to construction, a no-effect determination is recommended. The study area is in the historic range of the species, but northwestern pond turtles have largely disappeared from the Puget Sound lowlands since the 1980s (WDFW 2024b). The nearest known extant population (reestablished through a captive breeding program) is more than 10 miles away and separated from the study area by rivers, highways, and railroad tracks that pose barriers to dispersal. Currently there are only six populations of northwestern pond turtle that occur in Washington State. Of those six, two are in South Puget Sound (Mason and Pierce Counties), while the rest reside in the Columbia River Gorge.

3.6.2.2 Monarch Butterfly

The monarch butterfly was proposed for listing as threatened (89 FR 100662, December 12, 2024) after consultation with USFWS was completed, and the species is included in the current IPaC species list (January 2025) for the study area. Monarch butterflies are migratory. Most individuals from the western population overwinter in coastal California and then migrate north to the Pacific Northwest and east toward the Rocky Mountains; some western individuals overwinter in Mexico (USFWS 2024b). The availability of milkweed (Asclepias spp.) is essential to monarch reproduction and survival; monarchs require healthy and abundant milkweed for oviposition and as a larval food source (USFWS 2024b). In Washington State, milkweed populations are native only to areas east of the Cascade Mountains (Giblin and Legler 2025). There has been one record of monarch butterflies breeding in western Washington—an unverified report of larvae on a cultivated milkweed plant near Auburn in 1984 (Xerces Society 2025). Should the species become listed prior to project construction, a no-effect determination is recommended.

3.6.2.3 Suckley's Cuckoo Bumble Bee

The Suckley's cuckoo bumble bee (*Bombus suckleyi*) was also proposed for listing as endangered (89 FR 102074, December 17, 2024) after consultation with USFWS was completed. This species is included in the current IPaC species list (January 2025) for the study area. As an obligatory social parasite, Suckley's cuckoo bumble bees are dependent on host species for much of their life cycle (USFWS 2024c).

Historically, Suckley's cuckoo bumble bee was found in a wide range of habitats throughout much of North America, including Washington State (USFWS 2024c). Despite intensive survey efforts, however, no individuals of this species have been observed in the state in more than 20 years (USFWS 2024c). Should the species become listed prior to project completion, we propose a no-effect determination.

4. Project Impacts

The project will have direct and indirect impacts on wetlands, streams, and their buffers. Direct impacts will include permanent impacts (the cut and fill limits) as well as temporary construction-related impacts on adjacent areas when providing construction access.

4.1 Wetland Impacts

Direct permanent and temporary wetland impacts are detailed in Table 4-1. Project impacts on resources are shown in Figures 4-1 to 4-17.

4.1.1 Permanent Impacts

Permanent project impacts to wetlands occur where project actions cause a permanent loss of wetland area and/or functions. These impacts arise from the modification of existing roads and construction of new roads, roundabouts, and stormwater facilities. Other permanent impacts may be incurred from conversion of wetland vegetation type (e.g., forested vegetation to emergent vegetation). Wetland hydrology may also be altered because hydrological inputs may change due to altered discharge volumes and sources from new and modified stormwater facilities; alteration of flow paths from installation of fish-passable culverts and new stream channels; and interception of precipitation by elevated structures. Wetlands may also experience increased shading from new bridges, reducing the duration of sunlight that plants receive, which could adversely impact wetland vegetation communities.

The analysis of permanent impacts does not differentiate between at-grade and elevated structures; therefore, impact numbers presented in Table 4-1 are conservative estimates. As such, the majority of permanent wetland impacts are to the western edge of W5. However, some of these impacts are due to a new elevated northbound I-5 on-ramp from S 324th Street. Therefore, a portion of the impacts would not be due to a loss of wetland area but a conversion of wetland vegetation community type because tall trees may not grow under the elevated on-ramp.

Permanent project impacts would also affect approximately 4.26 acres (185,735 square feet) of wetland buffer. Due to their close proximity, some wetland buffers overlap; therefore, buffer impacts are reported as an aggregate instead of individually to avoid double counting of buffer impacts. However, buffer impact areas are reported separately for wetlands and stream and are therefore double counted where stream and wetland buffers overlap.

Permanent removal of vegetation in wetland buffers would also result in decreased buffer functions to improve water quality, reduce sedimentation, attenuate surface runoff, and provide an auditory and visual block between human activities and wildlife that use wetland habitats. Many wetland buffers in the study area consist of young and mature forests. Most wetland buffers in the study area are already truncated due to their proximity to developed areas; the project will further degrade valuable wetland buffer functions by removing additional buffer area between roads and wetlands. Many wetlands, in particular W5, W10, W14, W17, W18, W21, W28, W31, W33, and W34, would experience severely reduced buffer functions because new project elements would abut the wetlands.

4.1.2 Temporary Construction-Related Impacts

Direct, temporary construction-related impacts on wetlands or wetland buffers occur when resources are disturbed by the clearing of vegetation and ground disturbances but are restored to preexisting

conditions. As such, construction-related impacts are generally limited in duration. Temporary construction-related impacts may be considered short term or long term, depending on the type of vegetation impacted and on the length time between the disturbance and restoration. For example, following restoration, emergent vegetation is expected to quickly reestablish. However, shrubs and trees could potentially take years to decades to reestablish and this impact would be considered a long-term temporary impact or even a permanent impact. For example, removal of mature forests may be considered a permanent impact. This analysis does not distinguish between long-term temporary construction-related impacts, short-term temporary construction-related impacts, or construction-related impacts that may be considered permanent—those will be determined during future permitting phases of the project.

Types of temporary construction impacts that may occur for this project include temporary alteration of wetland area, soils, hydrology, and/or vegetation. Construction activities that incur temporary construction-related impacts may include use of staging areas, access roads, temporary work areas, clearing, grading, erosion and sediment control, and temporary structures needed for construction activities. Other temporary construction-related impacts may include soil compaction, accidental spills of hazardous substances, noise, light, sedimentation, and introduction of invasives species. This analysis assumes that construction-related impacts would be minimized through the use of appropriate best management practices (BMPs). Direct, temporary construction-related impacts on wetlands are shown in Table 4-1.

Approximately 205,370 square feet (4.72 acres) of wetland buffers would be affected by temporary construction-related impacts.

Resource	Total Wetland Size (sf)	Permanent Impacts (sf)	Temporary Construction-Related Impacts (sf)
W2 a	1,255	640	615
W3	670	670	0
W5 (lagg, Category II)	195,930	8,730	15,380
W5 (bog, Category I)	76,465	0	0
W6	8,130	15	0
W7	7,930	0	200
W9	555	0	555
W10	9,890	0	9,890
W12	8,875	3,705	5,170
W14	11,475	1,550	2,630
W17	5,500	15	1,320
W21	14,720	0	9,060
W22	41,580	0	200
W28	760	0	760
W29	1,220	55	1,165
W33	7,530	0	10
W34	390	55	5
Total		15,435 (0.35 acres)	46,960 (1.08 acres)

Table 4-1. Direct Impacts on Wetlands in the Study Area

sf = square feet.

a The wetland was counted as fully impacted due to the large amount of area receiving direct permanent impacts.

4.2 Aquatic Resource Impacts

Direct permanent and temporary construction-related impacts to streams are detailed in Table 4-2 and shown in Figures 4-1 to 4-16. This section also addresses impacts to riparian habitat and species.

Ground disturbance work in and around streams could potentially cause the following impacts:

- Loss or modification of physical riparian habitat.
- Introduction of sediment and contaminants into the water.
- Degradation of water quality (increased temporary turbidity, loading of heaving metals and hydrocarbons).
- Vegetation disturbance/clearing in wetlands and riparian habitat.
- Altered hydrology.

4.2.1 Permanent Impacts

Permanent impacts or operational effects on aquatic resources would occur where project features alter in-stream habitat or riparian functions. Modifications to the in-stream habitat would be related to the installation of fish-passable culverts between W5 and W6/East Fork Hylebos Creek Tributary 0016A, where the existing stream channel may be replaced by fish-passable culverts or modified with new streambed material. Permanent removal of riparian vegetation for the elevated on-ramp to northbound I-5 from S 324th Street, adjacent to the stream west of I-5, may degrade riparian functions by increasing water temperatures from more exposure to sunlight and decreasing the input of woody debris and organic matter. This may result in a reduction of habitat used by aquatic species that depend on upland habitats adjacent to streams and wetlands. The construction of the I-5 northbound on-ramp from S 324th Street may influence water temperatures and potentially increase shade over the stream outlet adjacent to W5. Shading may affect fish behavior of juvenile salmonids and result in increased vulnerability to predation. Shading may also provide cover for predators. Stream hydrology may be altered with installation of the new fish-passable box culvert under I-5; however, the culverts were designed to avoid alteration to stream and wetland hydrology (see Section 4.3).

Fish-passable culvert replacements and new stream channel would facilitate fish access to headwater habitats in East Fork Hylebos Creek Tributary 0016A upstream of the study area. The project would replace approximately 2,470 feet of culverted stream and approximately 215 feet of existing open channel, with approximately 1,035 feet of fish-passable culverts and approximately 1,165 feet of new daylighted channel. Daylighting over 1,000 linear feet of the stream channel would allow for increased interaction between the new stream channel and associated riparian vegetation, thereby restoring natural processes such as organic input.

The project would increase the total area of pollution-generating impervious surfaces (PGIS), which would result in increased levels of contaminants in stormwater runoff. Despite the addition of PGIS in the study area, the proposed stormwater treatment facilities in the project impact area would reduce the amount of untreated PGIS in the study area. However, the residual contaminants in stormwater runoff from PGIS may persist after treatment and may adversely impact fish or their preferred prey species that pass through these watercourses. An in-depth discussion of stormwater facilities and effects may be found in the BA (Parametrix 2023).

Table 4-2 summarizes direct impacts on East Fork Hylebos Creek Tributary 0016A and its buffer.

Table 4-2. Direct Impacts on Streams and Buffer in the Study Area

Resource	Permanent Impacts (sf)	Temporary Construction-Related Impacts (sf)
East Fork Hylebos Creek Tributary 0016A	80	1,375
Stream Buffer a	1,380 (0.03 acres)	780 (0.02 acres)

sf = square feet

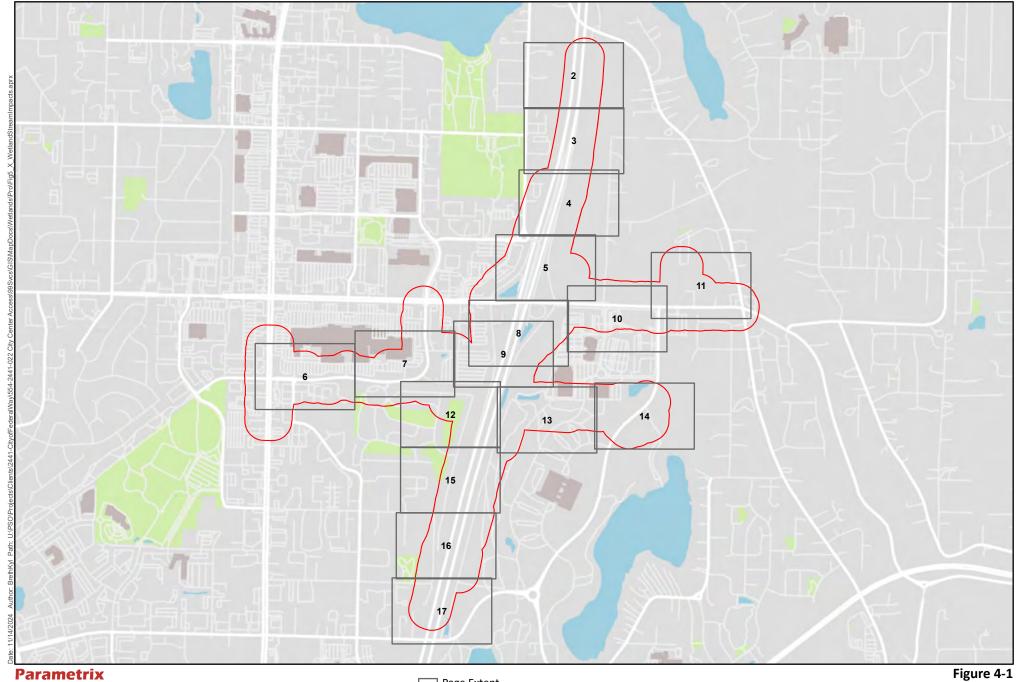
4.2.2 Temporary Construction-Related Impacts

Temporary construction-related impacts on aquatic resources occur where stream and stream buffers are affected by construction activities but are restored following construction. These activities could affect wildlife through elevated noise from construction, ground disturbance, and temporary disruption of movement and migration.

For culvert replacement on the East Fork Hylebos Creek Tributary 0016A, construction activities may include riparian vegetation clearing and ground disturbance for construction access, staging, temporary work areas, erosion and sediment control, dewatering and discharge, and other temporary structures needed for construction activities replacements. These activities may result in the potential to introduce sediment and contaminants into the water. Dewatering may result in a temporary displacement of physical habitat, which would impact fish, amphibians, and invertebrates. However, impacts would be minor, and quick recovery is expected as the stream channel is narrow. These temporary construction-related impacts will be minimized to the extent possible with BMPs and will be restored following construction. If water is present in the stream channel where ground-disturbing work occurs, elevated turbidity could extend up to 100 feet downstream from the project footprint. These impacts will be minimized to the extent possible and are expected to be temporary.

Removing fish-passage barriers will require the clearing of vegetation in the riparian corridor. These cleared areas will be replanted following construction. Potential effects on aquatic wildlife may include harm associated with handling for removal operations. Removing forested riparian habitat would degrade functions because recovery would take years to decades. Furthermore, the potential spread of invasive plant species during construction as a result of vegetation clearing could have a long-term effect on habitat quality through degradation and fragmentation. Measures will be taken to control the potential spread of invasive plant species during construction. Any presence of invasive plant species in the temporarily impacted areas following construction will be identified and controlled during monitoring and maintenance of the restored site.

^a Buffer impact areas are reported separately for wetlands and stream and are therefore double counted where stream and wetland buffers overlap.



Source: King County, City of Federal Way, © Mapbox, © OpenStreetMap



0 400 800 1,600 US Feet

Page Extent

Figure 4-1
Ecosystem Resource Impacts
Federal Way City Center Access
Project: Ecosystems Report
(Page 1 of 17)
Federal Way, WA







Vegetation and Wildlife Study Area

Upland Grassland Upland Mature Forest Upland Young Forest

Permanent Operational

Federal Way City Center Access Project: Ecosystems Report (Page 2 of 17)

Federal Way, WA



Source: King County, City of Federal Way, © Mapbox, © OpenStreetMap



0 25 50 100



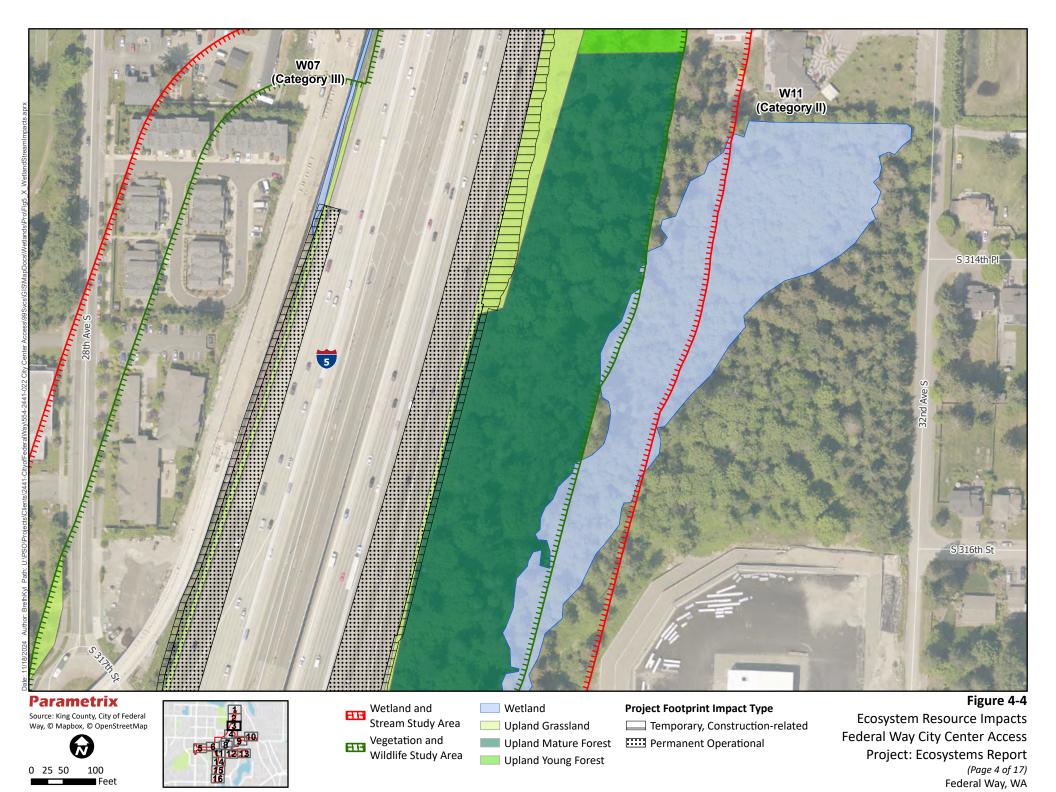
Stream Study Area

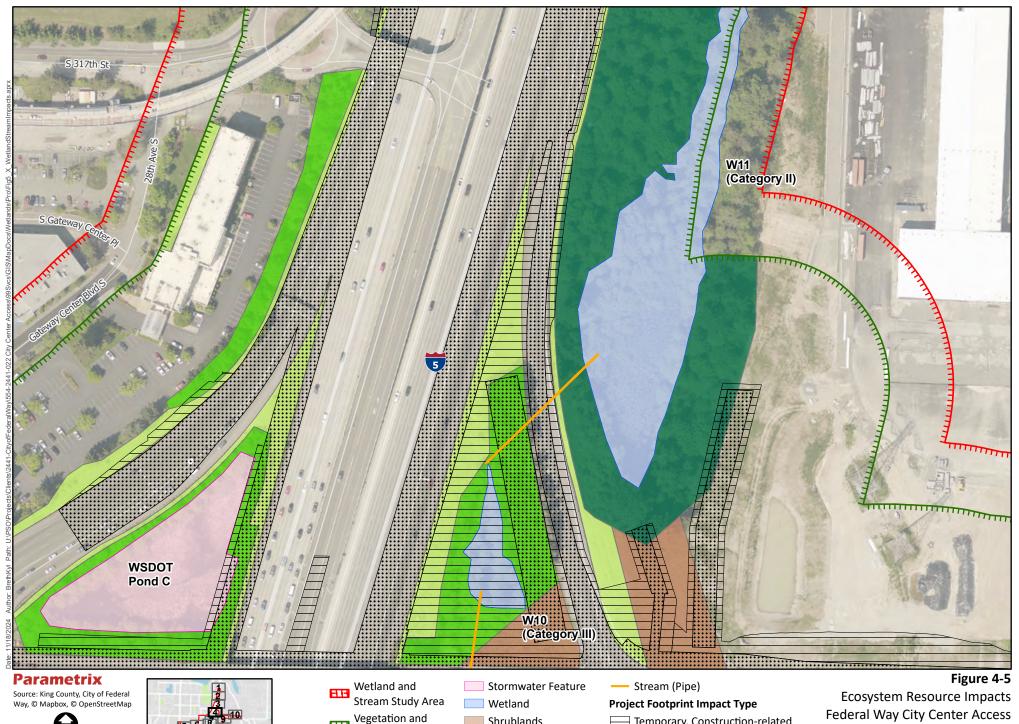
Vegetation and Wildlife Study Area Shrublands **Upland Grassland**

Upland Mature Forest Upland Young Forest

- Temporary, Construction-related
- Permanent Operational

Ecosystem Resource Impacts Federal Way City Center Access Project: Ecosystems Report (Page 3 of 17) Federal Way, WA







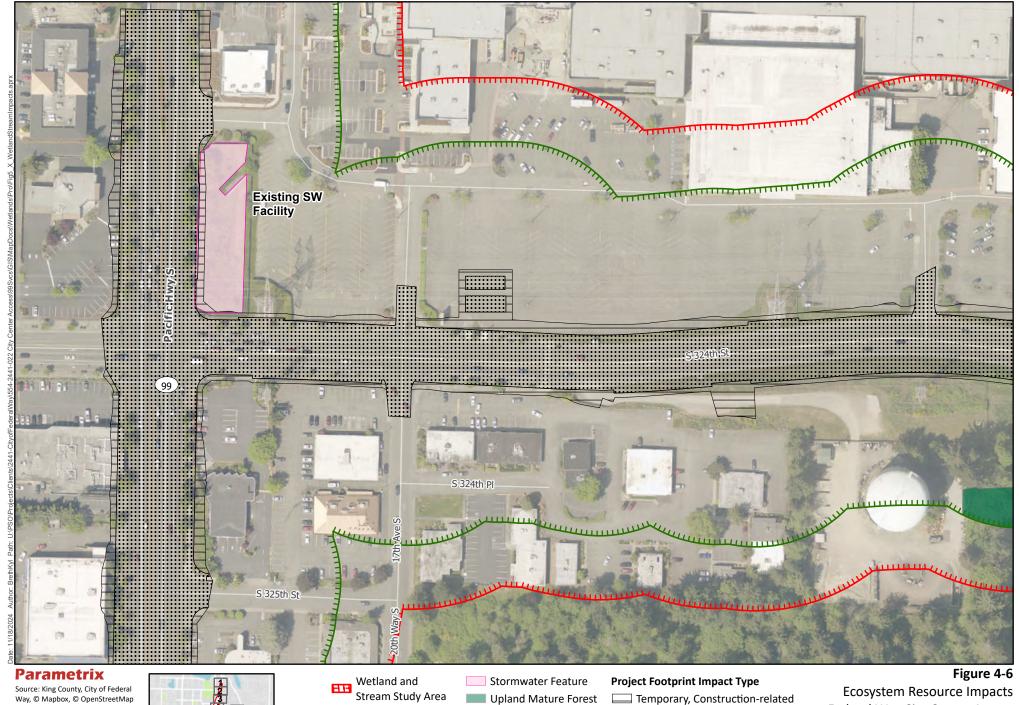
Vegetation and Wildlife Study Area Shrublands **Upland Grassland**

Upland Mature Forest

Upland Young Forest

 □ Temporary, Construction-related Permanent Operational

Project: Ecosystems Report (Page 5 of 17) Federal Way, WA







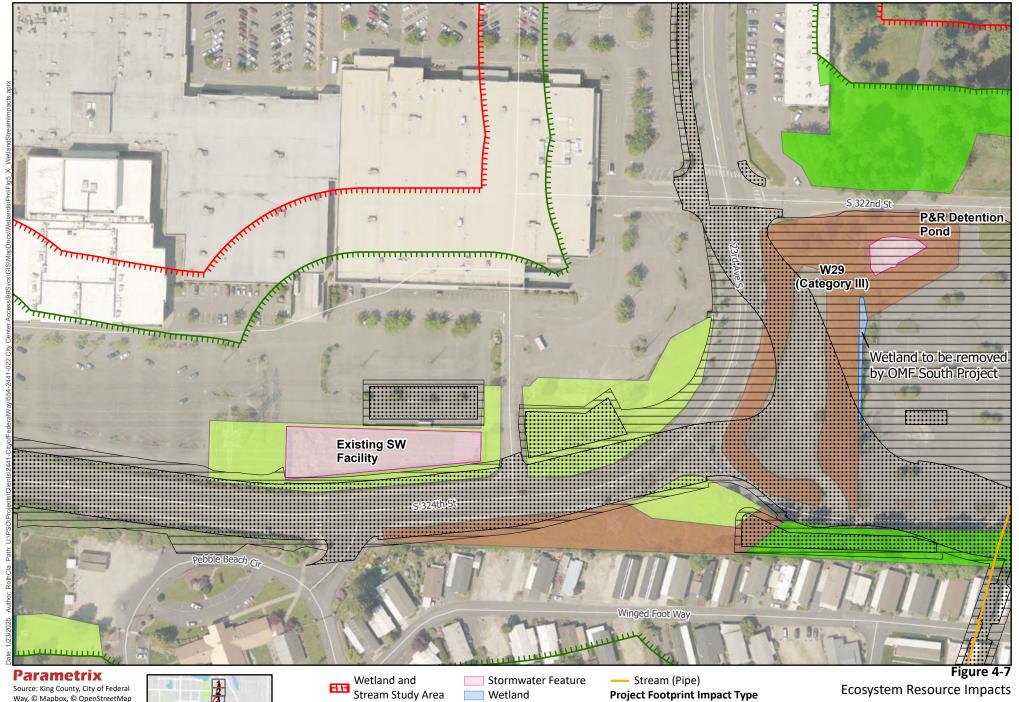
Stream Study Area

Vegetation and Wildlife Study Area Upland Mature Forest

Temporary, Construction-related

Permanent Operational

Ecosystem Resource Impacts Federal Way City Center Access Project: Ecosystems Report (Page 6 of 17) Federal Way, WA



Way, © Mapbox, © OpenStreetMap



0 25 50 100



Stream Study Area Vegetation and

Wildlife Study Area

Wetland Shrublands **Upland Grassland**

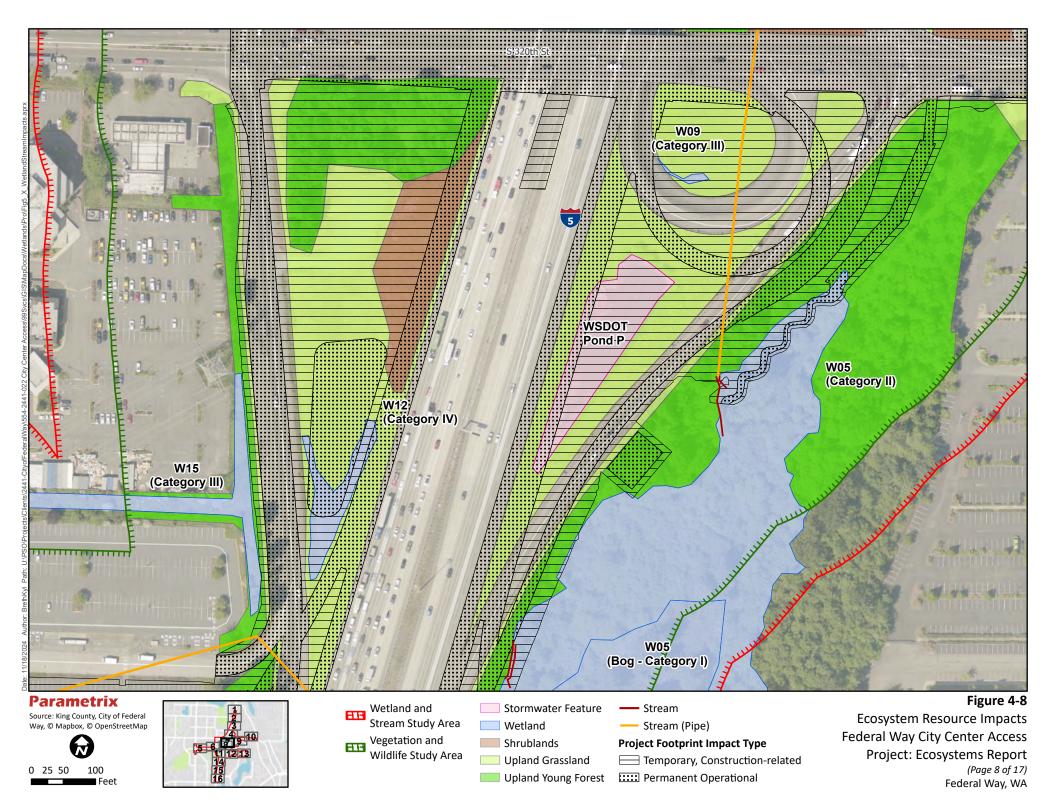
Upland Mature Forest Upland Young Forest

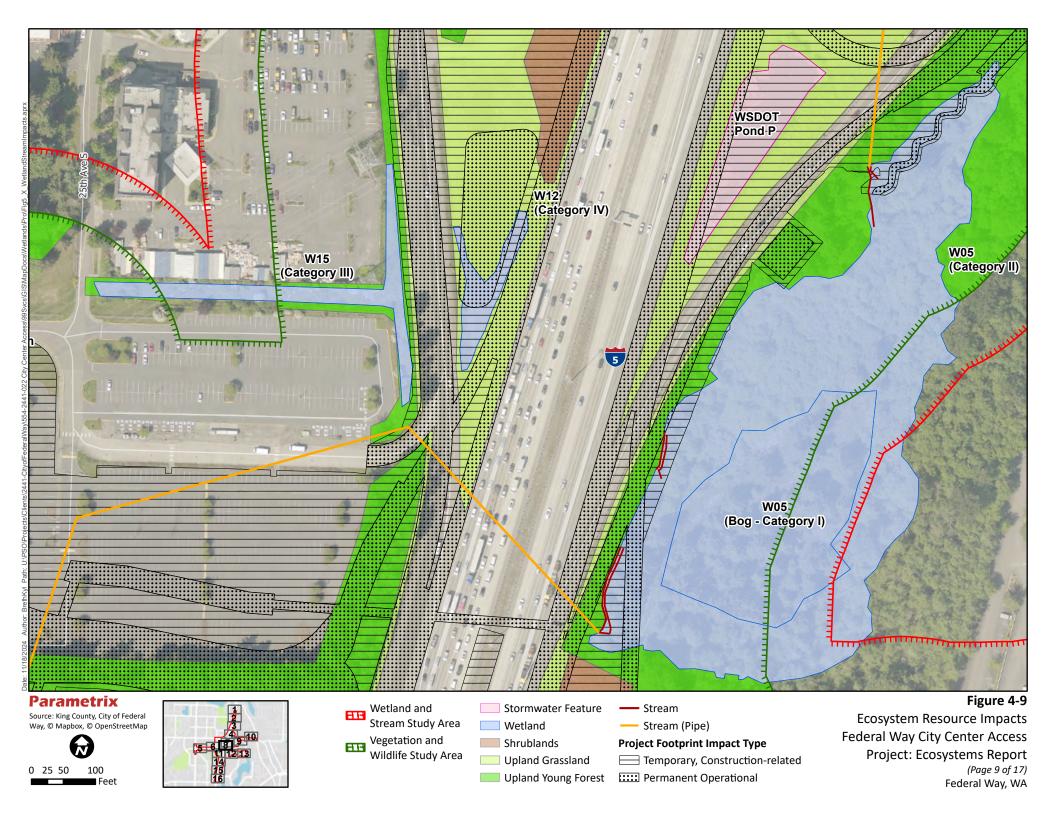
Temporary, Construction-related

Permanent Operational

Federal Way City Center Access Project: Ecosystems Report (Page 7 of 17)

Federal Way, WA









Vegetation and

Wildlife Study Area

Shrublands **Upland Grassland**

Upland Mature Forest

Upland Young Forest

Permanent Operational

Federal Way City Center Access Project: Ecosystems Report (Page 10 of 17) Federal Way, WA









Vegetation and Wildlife Study Area **Upland Grassland**

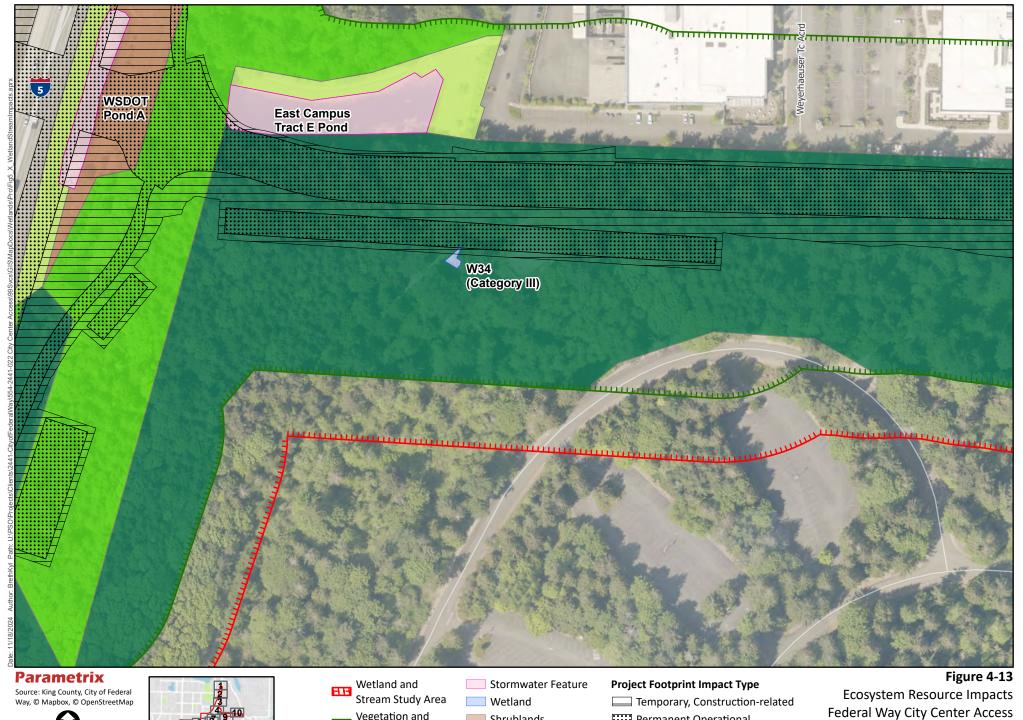
Upland Mature Forest

Upland Young Forest

Project Footprint Impact Type

Temporary, Construction-related Permanent Operational

Federal Way City Center Access Project: Ecosystems Report (Page 12 of 17) Federal Way, WA





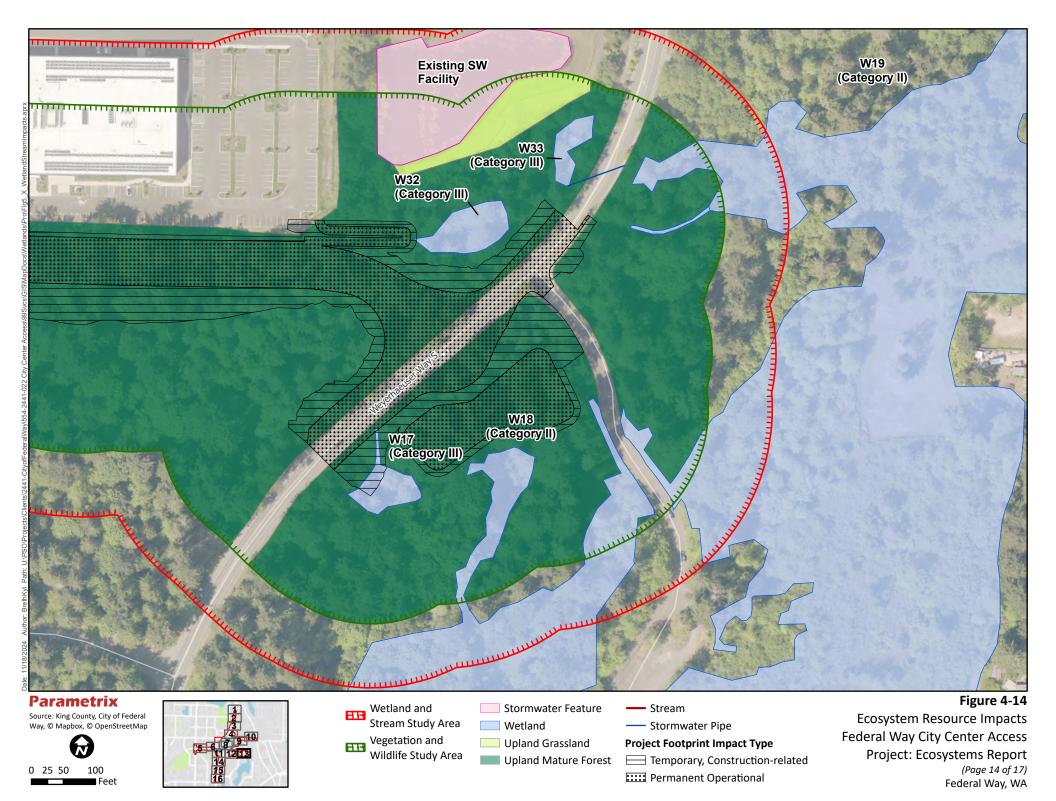
Vegetation and Wildlife Study Area Shrublands **Upland Grassland**

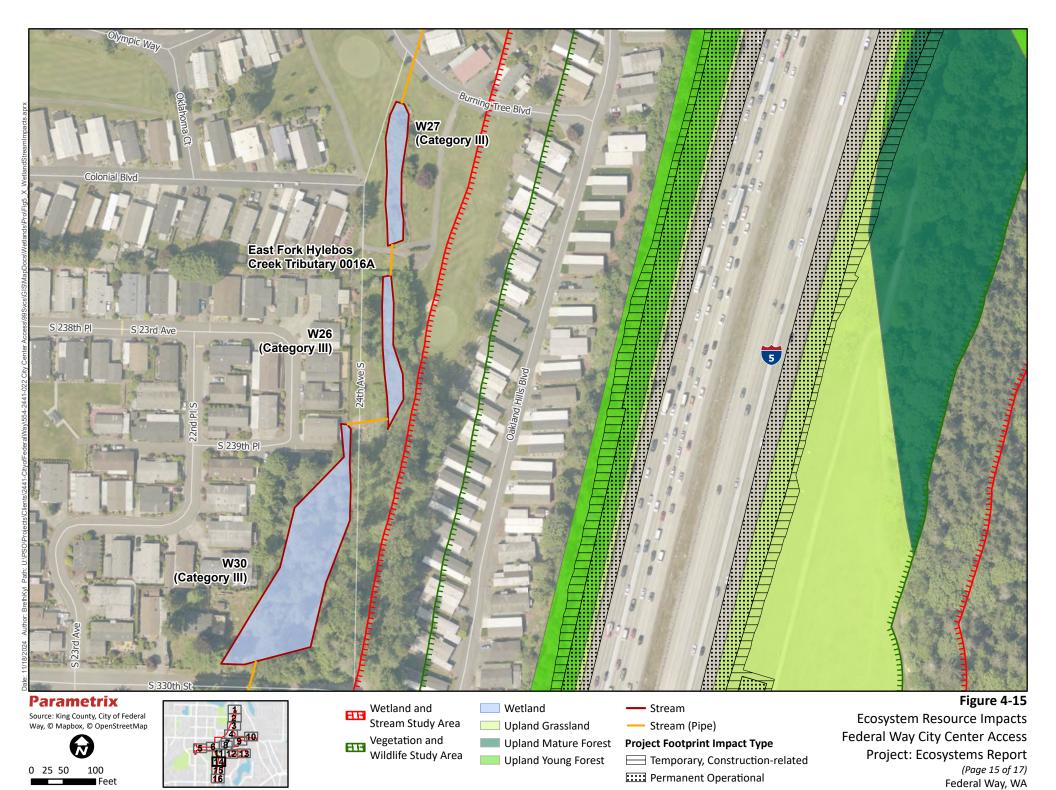
Upland Mature Forest

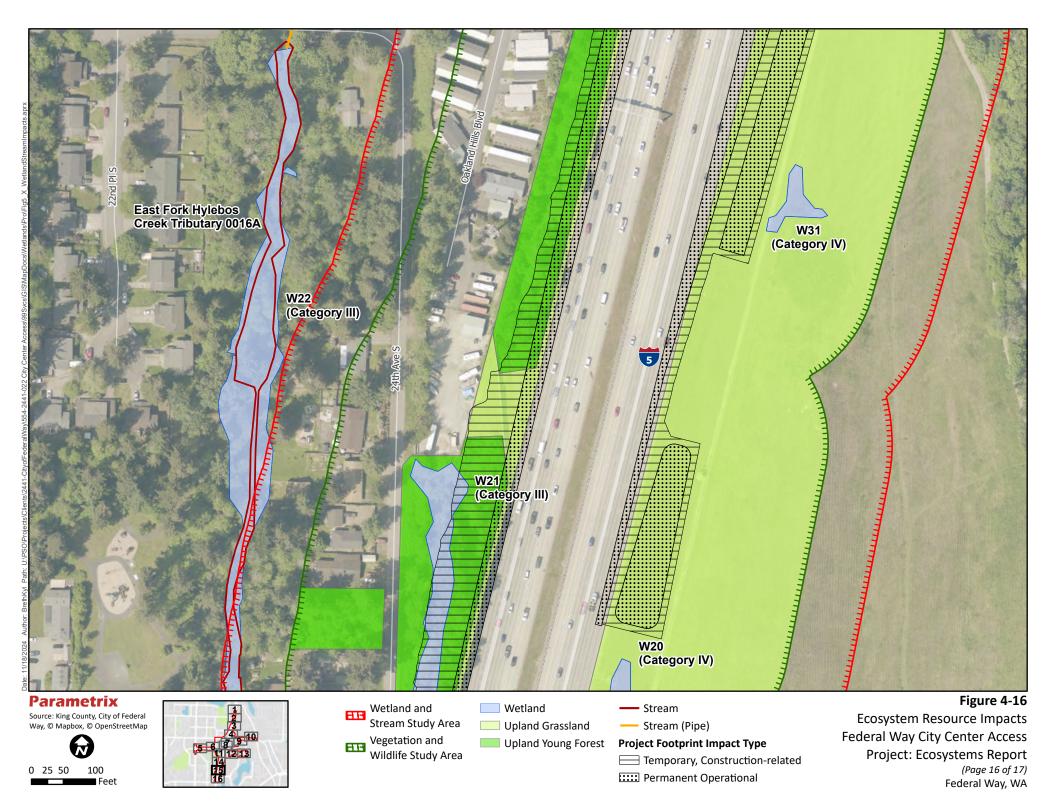
Upland Young Forest

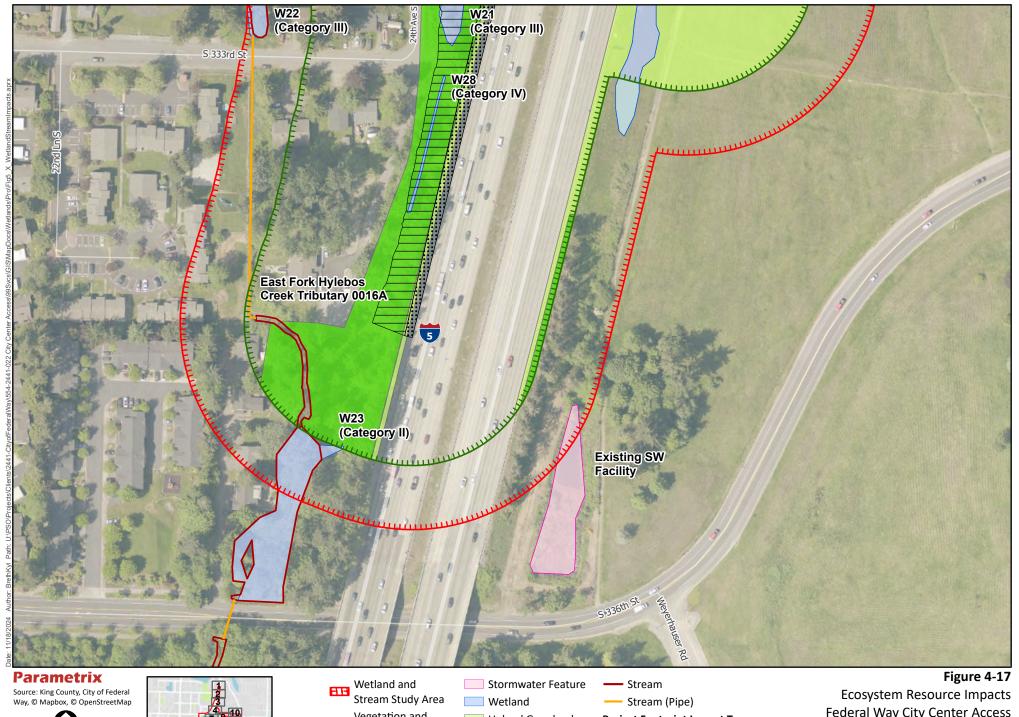
Permanent Operational

Project: Ecosystems Report (Page 13 of 17) Federal Way, WA











Vegetation and Wildlife Study Area

Upland Grassland Upland Young Forest

Project Footprint Impact Type

E Temporary, Construction-related Permanent Operational

Federal Way City Center Access Project: Ecosystems Report (Page 17 of 17) Federal Way, WA

4.3 Indirect Impacts on Wetlands and Streams

Indirect impacts include alteration to the wetlands or streams as a result of changes in stormwater management and/or hydrologic changes as a result of revised stream-crossing structures. The stormwater management plan has been developed carefully to maintain or improve the existing hydrologic and chemical connections between the aquatic areas and adjacent paved areas. The plan meets the current stormwater design manual criteria. Due to the presence of a wetland with bog conditions (W5), stormwater in this area was enhanced to meet King County special requirements for stormwater management near bogs. The revised stream-crossing structures were designed to retain the current topography within wetlands and the invert elevations of the new crossing inlets. Installation of groundwater wells and surface water gauges at stream crossings will help inform design as the project design progresses. These considerations should maintain current wetland conditions. Current conditions (some untreated stormwater and undersized culverts) result in short periods of flooding during large storm events due to backwater effects. Post-project conditions would reduce the height and duration of these events, stabilizing the hydroperiod, which would be beneficial for the existing plant communities and wildlife.

4.4 Vegetation and Wildlife Impacts

Habitats, particularly upland forests, would experience both permanent (or operational) impacts and temporary construction impacts. This section considered the following impacts on vegetation and wildlife resources:

- Clearing of vegetation due to paving and stormwater facilities.
- Clearing of vegetation due to construction activities and staging.
- Impacts to significant trees.

Removal of vegetation, especially young and mature forests, would disturb wildlife through the loss of habitat. Impacts to vegetation cover types are shown on Figures 4-1 to 4-17.

4.4.1 Permanent Impacts

The project would result in the permanent displacement of vegetation and wildlife, primarily through a conversion to paved surfaces and stormwater facilities. Over 12 acres of forest habitat would be permanently removed. Of the approximately 12 acres of impacted forest habitat, 6.53 acres are young forest, and 5.80 acres are mature forest. The largest area affected would be where the new segment of S 324th Street is proposed on the east side of I-5, which consists of young Douglas-fir forest near the east side of I-5 and mature Douglas-fir and Western redcedar forest east and west of Weyerhaeuser Way S. In particular, large Douglas-fir and Western redcedar trees within mature forest occur near Weyerhaeuser Way S, where the proposed roundabout is planned. Stormwater facilities located near the proposed roundabout at Weyerhaeuser Way S and north of S 320th Street would also permanently displace mature forest and wildlife. Widening I-5 and installing on- and offramps located east of I-5 between S 320th Street and the new S 324th Street segment would require removing a large patch of upland young forest that is dominated by red alder and black cottonwood, which also comprises the buffer of W5.

Other mature forest habitat displaced includes the forested wetland buffers of W5 and W11, north and south of S 320th Street, where the new stream channel and the fish-passable culvert would be installed. Impacts to other vegetation types are minor in contrast and mostly consist of areas that are dominated by non-native grasslands or shrubs adjacent to existing roads.

The project would result in operational impacts on wildlife that use upland forest habitats because there would be an increase in noise from higher traffic volumes and light on existing roads and the new S 324th Street, east of I-5. Wildlife would be adversely affected through vegetation and habitat loss, disruption of travel corridors, noise, and light impacts.

4.4.2 Temporary Construction-Related Impacts

Temporary construction-related impacts consist of ground disturbance, potential for noxious weed spread, and elevated noise from construction, which all may affect wildlife and wildlife habitat. Over 10 acres (6.41 acres of young forest and 4.23 acres of mature forest) would be cleared for construction activities. This includes large-diameter conifer trees (greater than 24 inches). Wildlife utilizing upland forests would be displaced long-term by vegetation and habitat loss, because reestablishment of forest habitat could take years to decades following disturbance.

Vegetation clearing could increase the risk for spread of noxious weeds and provide poor habitat or forage for wildlife. The risk for noxious weed spread would be reduced by preparing the site properly and replanting with native plant species. All temporarily cleared areas would be revegetated with native vegetation, and trees would be replanted following regulations and guidelines from Federal Way, King County, and WSDOT.

The project would result in a temporary increase in noise levels due to construction activities. Noise would travel approximately 4,865 feet from the project footprint before attenuating to ambient noise levels. Construction noise would be less pronounced near I-5, where noise levels are already high. Construction noise may adversely impact birds and other wildlife.

5. Mitigation

The project would comply with federal, state, and local requirements for mitigation of wetland, stream, and buffer impacts. To reduce impacts on streams and wetlands, the project design team worked through mitigation sequencing: avoidance, minimization, rectification, reduction, compensation, and monitoring of impacts (FWC 19.145.130). The project design team avoided impacts on most wetlands and streams in the project areas by adjusting project elements and adding retaining walls and other features to limit the project footprint. This includes avoiding direct impacts to the bog area of W5, which is irreplaceable. The project minimized impacts where they were unavoidable. Ongoing design is expected to further reduce those impacts. The impacts affect only small portions of the wetlands, and short sections of stream are affected, as needed, to improve stream-crossing structures. Temporary, construction-related impacts will be rectified during the project by restoring the original grades and replanting native vegetation in those areas.

Finally, for those unavoidable wetland impacts, the project will provide compensatory mitigation to offset the impacts. The small area of unavoidable impacts to the streams will be mitigated through the design and installation of a major new stream-crossing structure under I-5. The unavoidable impacts on wetlands will be mitigated by using guidance from Federal Way and King County as well as joint guidance from Ecology, USACE, and EPA (2021). Ongoing restoration projects in the Hylebos watershed, the King County in-lieu fee program, and the development of a project-specific mitigation site are possible opportunities for mitigation that comply with federal, state, and local requirements. Following construction and project completion, mitigation sites will be monitored and adaptive management applied to ensure success of the sites.

In general, this project reduces the overall linear feet of culverted stream and will also daylight approximately 1,165 feet of stream channel that would otherwise be culverted. Replacement of current fish-passage barriers with fish-passage culverts will not only support overall salmon recovery goals in WRIA 10 but also in the overall Puget Sound region.

The project would require removal of a large number of trees and will comply with all applicable tree regulation requirements and guidelines set by the City, King County, and WSDOT. In the City, tree replacement is mandated according to specific ratios based on tree size, with more stringent requirements in critical areas to ensure environmental protection. King County requires tree replacement as detailed in its Critical Areas Ordinance, which includes higher ratios for significant trees and sensitive areas, along with comprehensive vegetation management plans. WSDOT's tree replacement policies are project-specific and determined during the environmental review process, emphasizing compliance with state and local regulations to mitigate environmental impacts. Ongoing design will aim to reduce impacts to trees and mitigation measures will be implemented to account for tree loss. Impacts will be avoided to the extent possible using BMPs during construction. This will minimize disruption and ensure ecological integrity.

The project will apply mitigation sequencing, which includes avoiding directly impacting the bog portion of W5. Impacts to wetland and streams that are unavoidable will be fully compensated as required by the regulatory authorities, including local critical area regulations. Project impacts to vegetation and wildlife will be minimized through application of BMPs during construction as well as tree replacement requirements. Therefore, impacts to ecosystem resources are not expected to be significant.

6. Limitations

This ecosystem discipline report documents the investigation, best professional judgment, and conclusions of Parametrix based on the site conditions encountered at the time of this study. The wetland and stream delineation were performed in compliance with accepted standards for professional wetland biologists and applicable federal, state, and local laws and ordinances. The information contained in this report is correct and complete to the best of our knowledge. It should be considered a preliminary jurisdictional determination of wetlands and other waters until it has been reviewed and approved in writing by the appropriate jurisdictional authorities. The final determination of the wetland boundary, classification, and required setback and buffer will be made by local, state, and federal jurisdictions.

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Appendix A

Background Information

Date: July 2020

Weather station: <u>Seattle Tacoma</u>

<u>Airport</u>

Period of Record.: <u>1991-2020</u>

County: King County State:

State: WA

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

		Long-terr	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		Condition	value
6 - 9	then prior period has been	Dry	=1
	drier thannormal	Normal	=2
10 - 14	then prior period has been	Wet	=3
	normal		

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

15 - 18 then prior period has been wetter than normal

Date: August 2020

Weather station: <u>Seattle Tacoma</u>

<u>Airport</u>

Period of Record.: <u>1991-2020</u>

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		Condition	value
6 - 9	then prior period has been	Dry	=1
	drier thannormal	Normal	=2
10 - 14	then prior period has been	Wet	=3
	normal		

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

15 - 18 then prior period has been wetter than normal

Date: September 2020

Weather station: <u>Seattle Tacoma</u>

<u>Airport</u>

Period of Record.: 1991-2020

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

County: King County

State: WA

Long-term rainfall records

		Hong ton	n rannan .	LOCOLUB					
	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
nonth*	Aug	0.30	0.97	1.12	0.31	Normal	2	3	6
nonth*	July	0.26	0.59	0.69	0.17	Dry	1	2	2
onth*	June	0.93	1.44	1.73	2.28	Wet	3	1	3

1st prior mo 2nd prior mo 3rd prior mo

Sum **11**

Note: If sum is 6-9 then prior period has been

drier thannormal

10 - 14 then prior period has been

normal

15 - 18 then prior period has been

wetter than normal

Condition value:

Dry

Normal =2

Wet =3

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

Date: October 2020

Weather station: <u>Seattle Tacoma</u>

<u>Airport</u>

Period of Record.: <u>1991-2020</u>

County: King County

State: WA

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

		Long-tern	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		Condition	value:
6 - 9	then prior period has been	Dry	=1
	drier thannormal	Normal	=2
10 - 14	then prior period has been	Wet	=3
	normal		

15-18 then prior period has been wetter than normal

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

Date: November 2020

Weather station: <u>Seattle Tacoma</u>

Airport

Period of Record.: <u>1991-2020</u>

County: King County

State: WA

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

		Long-terr	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**

3 T	TO	
Note:	I†	sumis

then prior period has been drier thannormal

then prior period has been

10 - 14 normal

15 - 18 then prior period has been

wetter than normal

Condition value:

Dry

Normal =2

Wet =3

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

D	ain	fol'	תו	no.	 0 TO	+0	+:~	_

Date: December 2020

Weather station: <u>Seattle Tacoma</u>

Airport

Period of Record.: 1991-2020

County: King County

State: WA

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

		Long-terr	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		Condition	value
6 - 9	then prior period has been	Dry	=1
	drier thannormal	Normal	=2
10 - 14	then prior period has been	Wet	=3
	normal		

15 - 18 then prior period has been wetter than normal

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

Ra	info	11 T	1001	ma	nta	tion

Data:	January	2021
Date.	January	4041

Weather station: <u>Seattle Tacoma</u>

Airport

Period of Record.: $\underline{1991-2020}$

County: King County

State: WA

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

		Long-terr	n 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		Condition	value
6 - 9	then prior period has been	Dry	=1
	drier than normal	Normal	=2
10 - 14	then prior period has been	Wet	=3
	normal		

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

15 - 18 then prior period has been wetter than normal

Rai	C-	11 T			-4-	٠: ـ	
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Date: May 2021

Weather station: <u>Seattle Tacoma</u>

<u>Airport</u>

Period of Record.: <u>1991-2020</u>

County: King County

State: WA

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

		Long-terr	n 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		Condition	value
6 - 9	then prior period has been	Dry	=1
	drier thannormal	Normal	=2
10 - 14	then prior period has been	Wet	=3
	normal		

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

15 - 18 then prior period has been wetter 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	Т
Sum	0.27

a NRCS 2020a

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.

[&]quot;T" values indicate a trace value was recorded.

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	Т
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

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.

[&]quot;T" values indicate a trace value was recorded.

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	Т
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

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	Т
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 10 days preceding field work for November 11, 2020.

[&]quot;T" values indicate a trace value was recorded.

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

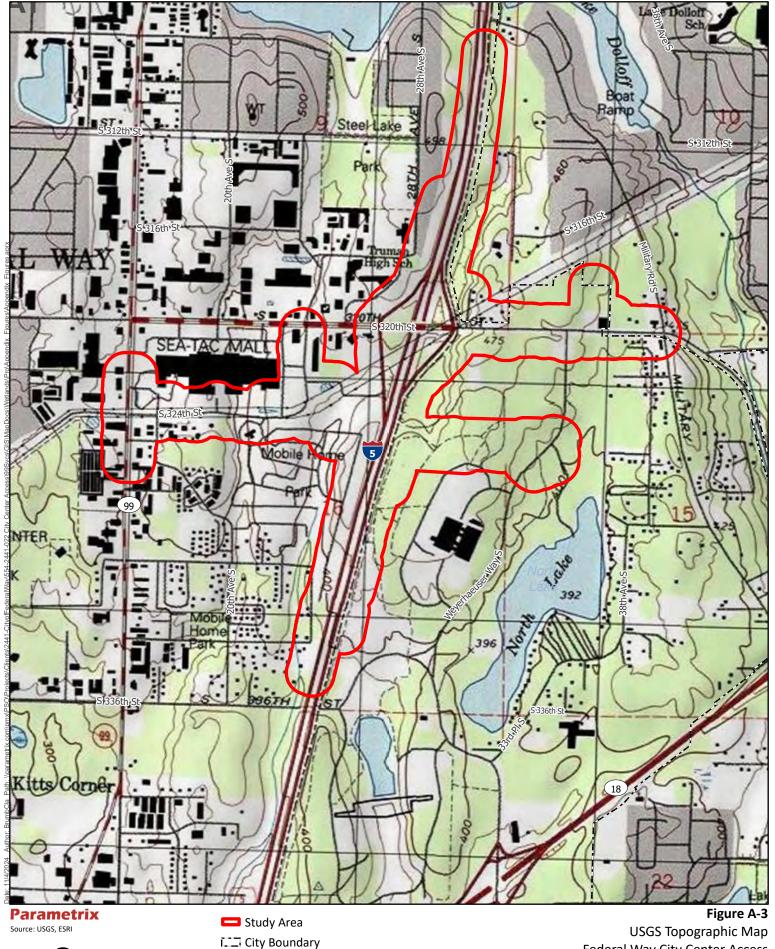
Conclusions: One-third of the monthly average precipitation for the month of January is 2.92 inches. One-third of the monthly average precipitation for the month of December is 2.22 inches. Therefore, heavy precipitation was recorded in the 10 days preceding field work for January 7 and 11 2021.

[&]quot;T" values indicate a trace value was recorded.

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

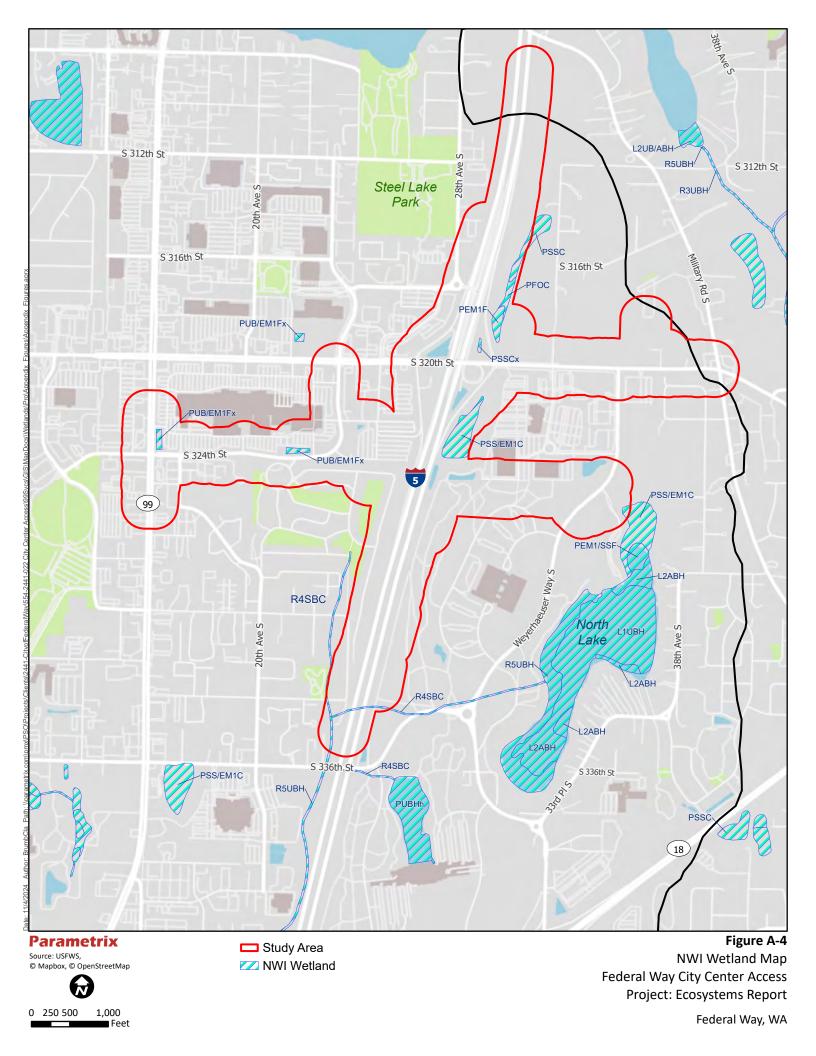
a NRCS 2020a

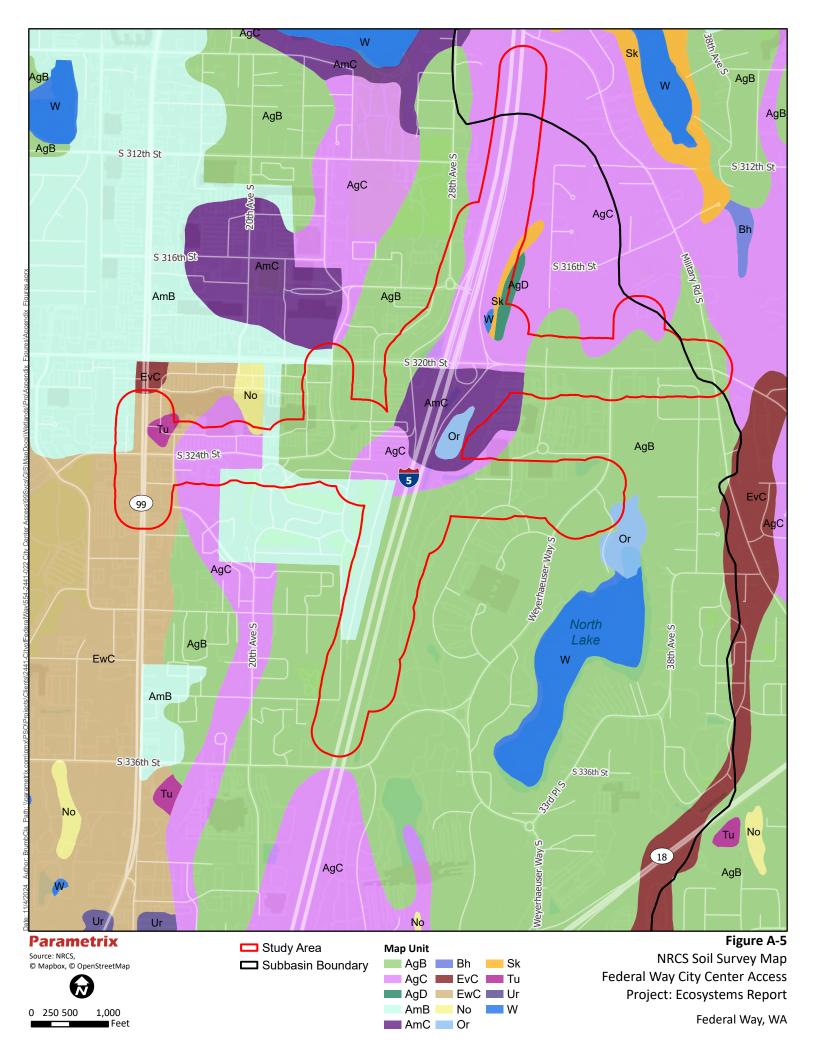
Conclusions: One-third of the monthly average precipitation for the month of May is 0.63 inches. One-third of the monthly average precipitation for the month of April is 1.06 inches. Therefore, normal precipitation was recorded in the 10 days preceding field work for May 3 and 5 2021.



0 250 500 1,000 Feet

USGS Topographic Map Federal Way City Center Access Project: Ecosystems Report





Appendix B

Wetland and Stream Descriptions

Table 1. Wetland W1 Summary

	W1 – INFORMATION SUMMARY		
Location:	West of Federal Way Fire Station Weyerhaeuser Way S	on 4, north of S 320th Street, n	ortheast of
		Local Jurisdiction	City of Federal Way
		Local/Ecology Rating	IV
		Buffer Width	50 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 (<i>Rubus armeniacus</i>) Herbs – reed canarygrass (<i>Phalaris arundinacea</i>), small-fruited bulrush (<i>Scirpus microcarpus</i>), St. John's-wort (<i>Hypericum perforatum</i>), bedstraw (<i>Galium aparine</i>), common foxglove (<i>Digitalis purpurea</i>)		
Soils	A soil matrix color of 10YR 3/2 was observed from 0 to 2 inches below soil surface. From 12 to 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 met		
		ng and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby and Yahnke 2023), with buffer widths based in part on		
Functions	Functions Water quality functions received a moderate a score of 5. Hydrologic functions received a moderate score of 4. Function rating details are in Appendix D.		=
	Wetlar	nd Buffers	
Buffer Condition	Buffer ranges from forested areas buffer provides screening and hab	•	to open grass. Forested

^{*}A portion of the wetland boundary was estimated.

Table 2. Wetland W2 Summary

W2 – INFORMATION SUMMARY			
Location:	West of South King Fire & Resc Weyerhaeuser Way S	ue Station 64, north of S 320th	n Street, northwest of
		Local Jurisdiction	City of Federal Way
		Local/Ecology Rating	III
全型型		Buffer Width	80 feet
		Wetland Size	0.03 acres
		Cowardin Class	PSS
		HGM Class	Depressional
		Wetland Data Sheet(s)	W2-SP4
		Upland Data Sheet(s)	W2-SP5
		Delineation	
	Trees – black cottonwood (Populu	•	
Dominant	Shrubs – red osier dogwood (Corr		douglasii), twinberry
Vegetation	(Lonicera involucrata), nootka rose		
	Herbs – bent grass (Agrostis capillaris) and Kentucky bluegrass (Poa pratensis)		
	Soil matrices of 10YR 3/2 (0-2) an	, ,	•
Soils	and depletions were observed thro	•	of the soil surface.
	Indicator Depleted Dark Surface (,	
Hydrology	Surface Soil Cracks (B6) and Alga	al Mat or Crust (B4) were ident	ified as primary
	indicators of hydrology for W2.		
Detionals for	Depressional wetland with hydric soils, supports hydrophytic vegetation, and has two primary indicators of hydrology during a drier part of the growing season. Hydric soils		
Rationale for			
Delineation	were helpful in determining the we		
	chroma 2. Upland areas directly a	ng and Functions	iioiiia 3.
	FWRC 19.145.420 classifies wetla		Department of Ecology
Rationale for	Wetland Rating System (Hruby an		
Local Rating	the habitat score. W2 rates as a C		-
	Water quality functions received a		
Functions		· · · · · · · · · · · · · · · · · · ·	_
I dilotions	nctions moderate score of 7. Habitat functions received a moderate score of 4. Function rating details are in Appendix D.		
		nd Buffers	
	Buffer conditions range from fores		ture of native conifers to
Buffer	shrubs to the north. Forested buffe	•	
Condition	Street is located to the south, with		
30	wetland unit from the east and we	•	- 5.500mg amough and
	woulding drift from the east and we	or, paranor to o ozorii oricet.	

Table 3. Wetland W3 Summary

	W3 – INFORMATION SUMMARY		
Location:	North of S 320th Street, west of	32nd Avenue S.	
	蓮 二	Local Jurisdiction	City of Federal Way
1/24		Local/Ecology Rating	III
		Buffer Width	80 feet
		Wetland Size*	0.02 acres
1987年	Mar Milan	Cowardin Class	PEM
	MAKET FOR I	HGM Class	Depressional
		Wetland Data Sheet(s)	W3-SP6
		Upland Data Sheet(s)	W3-SP7
		Delineation	
Dominant Vegetation	Herbs – reed canarygrass, common rush (<i>Juncus effusus</i>), bent grass, and bird's-foot trefoil (<i>Lotus corniculatus</i>)		
Soils	Soils were not observed. Assumed hydric.		
Hydrology	W3 was checked with the "other" primary indicator and is assumed to be saturated for a minimum of 5% of the growing season given there are no stormwater controls on S 320th Street, allowing overland flow from uplands into the wetland with no observed outlet present. W3 also met secondary indicators, Geomorphic Position (D2) and FAC-Neutral Test (D5).		
Rationale for	Depressional wetland with hydric soils, supports hydrophytic vegetation, and is assumed to be saturated for at least 5% of the growing season.		
Delineation			
Rationale for Local Rating	I Watiang Rating System (Hrillov and Yannka 2023) With hillter wigths hased in hart on		
Functions	Water quality functions received a high score of 7. Hydrologic functions received a moderate score of 7. Habitat functions received a low score of 3. Function rating details are in Appendix D.		
	2 1 2	nd Buffers	
Buffer Condition	Buffer is a large hillslope of fill material, located on the north side of S 320 Street. The buffer consists mainly of invasive Himalayan blackberry and native trailing blackberry (<i>Rubus ursinus</i>). This buffer is poor in condition and provides little screening or protection.		

^{*}A portion of the wetland boundary was estimated.

Table 4. Wetland W5 Summary

W5 – INFORMATION SUMMARY			
	East of I-5 exit 142 toward Feder		est of Rockwell Collins
Location:	Seattle Service Center parking	•	Cot of Proorwell Collins,
AVEN		Local Jurisdiction	City of Federal Way
		Local/Ecology Rating	1/11
		Buffer Width	250 feet/150 feet
		Wetland Size	6.25 acres (bog is 1.76 acres)
		Cowardin Class	PEM, PSS, PFO
		HGM Class	Depressional
		Wetland Data Sheet(s)	W5-SP8
		Upland Data Sheet(s)	W5-SP9
	Wetland Species within the mineral wetlan	Delineation	
Dominant Vegetation Soils	(Sorbus aucuparia), willow (Salix sp.) Shrubs – Salmonberry (Rubus spectabilis) Herbs – reed canarygrass, fowl mannagrass (Glyceria elata), skunk cabbage (Lysichiton americanus) Species with the bog component: Trees – Red alder, Western hemlock (Tsuga heterophylla) Shrubs – bog laurel (Kalmia microphylla), bog labrador tea (Rhododendron groenlandicum) Herbs – sphagnum moss 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		
Hydrology	Matrix (F2) and Depleted Matrix (F3). A locally shallow water table and stream flow hydrologically support the wetlands. Inundation at 2 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	Depressional wetland with hydric		getation, and has soils
Delineation	saturation in late July during a dri		
	FWRC 19.145.420 classifies wetl	ng and Functions	n Department of Ecology
Rationale for Local Rating	Wetland Rating System (Hruby ar the habitat score. W5 rates as a continuous section with the section with th	nd Yahnke 2023), with buffer w lual rating as Category I/II, with	vidths based in part on ha habitat score of 8.
Functions	Water quality functions received a high score of 8. Hydrologic functions received a high score of 8. Habitat functions received a high score of 6. Function rating details are in Appendix D.		
	• •	nd Buffers	
Buffer Condition	Buffer consists of a forested area functions, protecting the Category	. Forested buffer provides scre	<u> </u>
	i .		

^{*}A portion of the wetland boundary was estimated.

Table 5. Wetland W6 Summary

WETLAND W6 - INFORMATION SUMMARY			
Location:	West of Oakland Hills Boulevard Home Park	, east of Burning Tree Boulev	ard in Belmor Mobile
300		Local Jurisdiction	City of Federal Way
		Local/Ecology Rating*	Ш
		City of Federal Way Buffer Width	80 feet
		Wetland Size*	0.19 acres
	医	Cowardin Class	PEM, PSS
	A PARTY NATION	HGM Class	Riverine
		Wetland Data Sheet(s)	W6-SP10
		Upland Data Sheet(s)	W6-SP11
		Delineation	
Vegetation	Shrubs – Himalayan blackberry, sa Herbs – reed canarygrass, giant h (<i>Solanum dulcamara</i>)	•	•
Soils t	Soil matrices of 10YR 2/1 (0-5) and 10YR 2/2 (5-16) with 10GY 4/1 gleyed depletions in the 5 to 6 inch layer were observed. These characteristics met indicator Redox Dark Surface (F6).		
Hydrology h	Supported by stream (East Fork Hylebos Creek Tributary 0016A) flows. Wetland hydrology indicators: High Water Table (A2), Saturation (A3), Dry-Season Water Table (C2), Geomorphic Position (D2), and FAC-Neutral Test (D5).		
Rationale for S 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		
		g and Functions	
Local Rating*	Rationale for Wetland Rating System (Hruby and Yahrke 2023) with buffer widths based in part on		
Functions*	Functions* Water quality functions received a moderate score of 6. Hydrologic functions received a moderate with a score of 7. Habitat functions received a moderate score of 4. Function rating details are in Appendix D.		
	Wetlan	d Buffers	
	Buffer is limited in size by develop he east within Belmor Mobile Hon		•

^{*} The northern side of the wetland was delineated by the City Center Access project. For the entire wetland area, wetland boundaries and the wetland rating were adopted from Operations and Management Facility South project through a data-sharing agreement with Sound Transit.

Table 6. Wetland W7 Summary

W7 – INFORMATION SUMMARY			
Location:	Along east shoulder of southbou	ınd I-5, adjacent to Exit 143 si	gnage
		Local Jurisdiction	City of Federal Way
		Local/Ecology Rating	III
		Buffer Width	80 feet
	Y	Wetland Size*	0.18 acres
		Cowardin Class	PEM
		HGM Class	Depressional
		Wetland Data Sheet(s)	None
		Upland Data Sheet(s)	None
	Wetland	Delineation	
Dominant Vegetation	Herbs – cattail (<i>Typha latifolia</i>)		
Soils	Soils were not observed due to bu	ried power line and occurrenc	e of wetland within I-5 fill
	prism. Soils presumed hydric. Hydrology provided by stormwater	runoff from LE and averland	flow from adjacent
Hydrology	uplands. Outlet is a stormwater ca		-
	wetland surface.		
Rationale for	Presence of obligate vegetation ar	nd saturated soils in geomorpl	nic position with
Delineation	presumed hydric soils.		
		ng and Functions	Department of Foolegy
Rationale for	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby and Yahnke 2023), with buffer widths based in part on		
Local Rating		•	-
	the habitat score. W7 rates as a Category III, with a habitat score of 3. Water quality functions received a moderate score of 7. Hydrologic functions received a		
Functions	moderate score of 8. Habitat functions received a low score of 3. Function rating details		
are in Appendix D.			
	Wetlar	nd Buffers	
Buffer Condition	Buffer is highly disturbed, with I-5 slope between I-5 and a multifami		y adjacent and forested
*\^/	<u> </u>	•	

^{*}Wetland boundary estimated.

Table 7. Wetland W9 Summary

	W9 - INFORMATION SUMMARY		
Location:	South of S 320th Street, located in the inner portion of the I-5 north on-ramp		
		Local Jurisdiction	City of Federal Way
		Local/Ecology Rating	III
	A STATE OF THE STA	Buffer Width	80 feet
"本来这是 "		Wetland Size	0.01 acres
		Cowardin Class	PEM
	ALMANA S	HGM Class	Slope
Was in the		Wetland Data Sheet(s)	W9-SP13
		Upland Data Sheet(s)	W9-SP14
	Wetland	Delineation	
Dominant Vegetation	Herbs – reed canarygrass		
Soils	Soil matrices of 10YR 4/1 (0 to 4.5 inches) and 10Y 5/1 (4.5 to 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	Position (D2) were 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 Ratin	ng and Functions	
Rationale for Local Rating	Rationale for Wetland Rating System (Hruby and Vahoka 2023) with buffer widths based in part on		
Functions	Functions Water quality functions received a moderate score of 6. Hydrologic functions received a moderate score of 7, and habitat functions received a low score of 3. Function rating details are in Appendix D.		
	Wetlar	nd Buffers	
Buffer Condition			

Table 8. Wetland W10 Summary

W10 – INFORMATION SUMMARY			
Location:	Located north of S 320th Street,	east of the I-5 north on-ramp	
		Local Jurisdiction	City of Federal Way
		Local/Ecology Rating	III
		Buffer Width	80 feet
		Wetland Size	0.23 acres
		Cowardin Class	PAB, PEM, PSS, PFO
		HGM Class	Depressional
		Wetland Data Sheet(s)	W10-SP15
		Upland Data Sheet(s)	W10-SP16
		Delineation	
Dominant Vegetation	Trees – red alder Shrubs – red osier dogwood, pacific willow (<i>Salix lasiandra</i>), Himalayan blackberry Herbs – slough sedge (<i>Carex obnupta</i>), reed canarygrass, creeping buttercup (<i>Ranunculus repens</i>)		
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) was met.		
Hydrology	High Water Table (A2) and Saturation (A3) were identified as primary indicators of hydrology for W10.		
Rationale for Delineation	Depressional wetland with hydric saturation in July during a drier pa	rt of the growing season.	getation, and has soils
		ng and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby and Yahnke 2023), 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 received a moderate score of 6. Hydrologic functions received a high score of 7. Habitat functions received a moderate score of 5. Function rating details are in Appendix D.		
	Wetlar	nd Buffers	
Buffer Condition	Buffer consists of a large forest wi provides screening and habitat fur		

^{*}Wetland boundary approximated; area calculation is approximate.

Table 9. Wetland W11 Summary

W11 – INFORMATION SUMMARY			
Location:	North of S 320th Street, east of I-5 north on-ramp, and west of 32nd Avenue S		
		Local Jurisdiction	City of Federal Way
		Local/Ecology Rating	II
多数较		Buffer Width	150 feet
		Wetland Size*	5.09 acres
		Cowardin Class	PAB, PEM, PSS, PFO
A WALL		HGM Class	Depressional
		Wetland Data Sheet(s)	W11-SP17
		Upland Data Sheet(s)	W11-SP18
		Delineation	
Dominant Vegetation	Trees – Oregon ash, red alder, black cottonwood Shrubs – hardhack, salmonberry, Oregon Ash saplings, black cottonwood saplings Herbs – slough sedge, large leaved avens (<i>Geum macrophyllum</i>)		
Soils	A soil matrix of 10YR 2/2 with redo soil surface were observed throug Redox Dark Surface (F6) and Dep	hout the upper 18 inches of th	ne soil surface. Indicators
Hydrology	Secondary indicators Geomorphic observed. The wetland has perma		al Test (D5) were
Rationale for Delineation	Depressional wetland with hydric	soils and supports hydrophytic	vegetation.
	Wetland Ratir	ng and Functions	
Rationale for Local Rating	Rationale for Wetland Rating System (Hruby and Vahrke 2023), with buffer widths based in part on		
Functions	Water quality functions received a moderate score of 8. Hydrologic functions received a high score of 8. Habitat functions received a moderate score of 6. Function rating details are in Appendix D.		
	Wetlar	nd Buffers	
Buffer Condition	Buffer is primarily a large forest dominated by a mixture of native conifers and shrubs. Forested buffer provides screening and habitat functions.		

^{*}A portion of the wetland boundary was estimated.

Table 10. Wetland W12 Summary

W12 – INFORMATION SUMMARY			
Location:	Location: Between southbound I-5 and S 320th Street on-ramp to southbound I-5		
		Local Jurisdiction	City of Federal Way
		Local/Ecology Rating	IV
	The Carlot of the Control of the Con	Buffer Width	50 feet
		Wetland Size	0.20 acres
		Cowardin Class	PEM
		HGM Class	Slope
· 不是		Wetland Data Sheet(s)	W12-SP19
为		Upland Data Sheet(s)	W12-SP20
	Wetland	d Delineation	
Dominant Vegetation	Herbs – reed canarygrass, 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) was met.		
Hydrology	Oxidized Rhizospheres along Living Roots (C3) 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		
		ing and Functions	
Rationale for Local Rating	Watland Rating System (Hruby and Vahnka 2023) with huffer widths based in part on the		
Functions	Water quality functions received a high a score of 6. Hydrologic functions received a moderate score of 6. Habitat functions received a low score of 3. Function rating details are in Appendix D.		
ı	Wetla	and Buffers	
Buffer Condition			

Table 11. Wetland W13 Summary

	W13 – INFORMATION SUMMARY			
Location:	Location: South of S 320th Street and west of Weyerhaeuser Way S			
		Local Jurisdiction	City of Federal Way	
		Local/Ecology Rating	II	
	The state of	Buffer Width	100 feet	
		Wetland Size*	0.45 acres	
为 经本区外	DEMAN AFE	Cowardin Class	PEM, PSS, PFO	
	P山南 从音奏	HGM Class	Depressional	
		Wetland Data Sheet(s)	W13-SP21	
	人的教育	Upland Data Sheet(s)	W13-SP22	
	Wetland	Delineation		
Dominant Vegetation	Trees – Bitter cherry (<i>Prunus emarginata</i>) Shrubs – hardhack, pacific willow (<i>Salix scouleriana</i>), red osier dogwood, black cottonwood			
	Herbs – piggyback plant (Tolmiea			
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) were met.			
Rationale for Delineation	Depressional wetland with hydric soils, supports hydrophytic vegetation, and has strong primary indicators for hydrology in July 2020 during a drier part of the growing season.		of the growing season. Vetland soils had	
	Wetland Ratir	ng and Functions		
Rationale for Local Rating	Rationale for Wetland Rating System (Hruby and Yahnke 2023), with buffer widths based in part on		vidths based in part on re of 5.	
Functions	Water quality functions received a moderate score of 8. Habitat funct details are in Appendix D.	tions received a moderate sco	_	
		nd Buffers		
Buffer Condition	Buffer is primarily a large forest do The forest provides screening and close proximity to development.			

^{*}A portion of the wetland boundary was estimated.

Table 12. Wetland W14 Summary

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.					
-46.4		Local Jurisdiction	King County		
		Loca/Ecology Rating	III		
		Buffer Width	80 feet		
130		Wetland Size*	0.26 acres		
		Cowardin Class	PSS, PFO		
		HGM Class	Depressional		
		Wetland Data Sheet(s)	None		
		Upland Data Sheet(s)	None		
	Wetland Delineation				
Dominant Vegetation	Trees – red alder Shrubs – hardhack				
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 and Yahnke 2023) 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 5.				
Functions*	Water quality functions received a moderate score of 6. Hydrologic functions received a moderate score of 7. Habitat functions received a moderate score of 5. Function rating details are in Appendix D.				
Wetland Buffers					
Buffer Condition					

^{*}Wetland boundary and wetland rating estimated. No rights-of-entry obtained.

Table 13. Wetland W15 Summary

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	
		Local/Ecology Rating*	III	
311		Buffer Width	80 feet	
		Wetland Size	0.40 acres	
		Cowardin Class	PEM, PSS	
		HGM Class	Depressional	
		Wetland Data Sheet(s)*	None	
		Upland Data Sheet(s)*	None	
Wetland Delineation				
Dominant Vegetation	Shrubs: hardhack, Himalayan blackberry Herbs: soft rush, cattail, reed canarygrass			
Soils*	Silt and clay loam soils meet hydric soil indicators Depleted Below Dark Surface (A11) and Depleted Matrix (F3).			
Hydrology*	Wetland hydrology indicators include High Water Table (A2), Saturation (A3), Drainage Patterns (B10), and FAC-Neutral Test (D5).			
Rationale for Delineation	Presence of hydrophytic vegetation and topographic changes.			
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 and Yahnke 2023), with buffer widths based in part on the habitat score. W15 rates as a Category III, with a habitat score of 3.			
Functions*	Water quality functions received a moderate score of 7. Hydrologic functions received a moderate score of 8. Habitat functions received a low 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 boundaries, wetland determination indicators, and wetland rating adopted from Operations and Management Facility South project through a data-sharing agreement with Sound Transit.

Table 14. Wetland W17 Summary

W17 – INFORMATION SUMMARY					
Location: South of Weyerhaeuser Way S and west of Fishing Access Road					
		Local Jurisdiction	City of Federal Way		
		Local/Ecology Rating	III		
		Buffer Width	80 feet		
		Wetland Size	0.13 acres		
		Cowardin Class	PFO		
No The Party of th		HGM Class	Depressional		
	小 多数	Wetland Data Sheet(s)	W17-SP3		
	一种。	Upland Data Sheet(s)	W17-SP1, W17-SP2		
_	Wetland Delineation				
Dominant	Trees – western red cedar (<i>Thuja plicata</i>), red alder				
Vegetation	Shrubs – salmonberry, vine maple		6 inches) with		
Soils	Soil matrices are 10YR 3/2 (0 to 7 inches) and 2.5YR 4/2 (7 to 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), and 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.				
		ng and Functions			
Rationale for Local Rating	FWRC 19.145.420 classifies wetlands based on the Washington Department of Ecology Wetland Rating System (Hruby and Yahnke 2023), with buffer widths based in part on the habitat score. W17 rates as a Category III, with a habitat score of 4.				
Functions	Water quality functions received a moderate score of 6. Hydrologic functions received a high score of 7. Habitat functions received a moderate score of 4. Function rating details are in Appendix D.				
Wetland Buffers					
Buffer Condition	Buffer is a mature forest dominated by Douglas-fir (<i>Pseudotsuga menziesii</i>), western red cedar, big leaf maple (<i>Acer macrophyllum</i>), vine maple, salal (<i>Gaultheria shallon</i>), and swordfern (<i>Polystichum munitum</i>). Southern buffer area includes W18. The buffer provides functions such as habitat and screening.				

Table 15. Wetland 18 Summary

W18 – INFORMATION SUMMARY					
Location:	Location: South and east of Weyerhaeuser Way S				
	NEW X NAV AH	Local Jurisdiction	City of Federal Way		
		Local/Ecology Rating	II		
		Buffer Width	150 feet		
		Wetland Size*	13.10 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		
		Delineation			
Dominant Vegetation	Trees – western red cedar, red alder Shrubs – vine maple, salmonberry, hardhack Herbs – soft rush, creeping buttercup				
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 and Yahnke 2023), with buffer widths based in part on the habitat score. W18 rates as a Category II, with a habitat score of 7.				
Functions	Water quality functions received a moderate score of 7. Hydrologic functions received a high a score of 8. Habitat functions received a high score of 7. 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.				

^{*}A portion of the wetland boundary was estimated.

Table 16. Wetland 19 Summary

	W19 – INFORM	ATION SUMMARY	
Location:	South and west of Weyerhaeuse	er Way S.	
		Local Jurisdiction	City of Federal Way
		Local/Ecology Rating	II
KI LIK	《李斯斯》	Buffer Width	150 feet
		Wetland Size*	15.25 acres
		Cowardin Class	PAB, PEM, PSS, PFO
		HGM Class	Depressional
		Wetland Data Sheet(s)	W19-SP1, W16-SP2
		Upland Data Sheet(s)	W19-SP2, W16-SP1
		Delineation	
Dominant	Trees – western red cedar, red ald Shrubs – vine maple, salmonberry		
Vegetation	Herbs – soft rush, creeping butter		
Soils	Organic soils were observed from dark (10YR 2/2 and 10YR 3/1) and hydric soil indicators Histic Epiped	d contained redoximorphic cor	ncentrations Soils met
Hydrology	Indicators met include High Water Presence of Reduced Iron (C4).	Table (A2), Saturation (A3), V	Vater Marks (B1), and
Rationale for Delineation	Depressional wetland with hydric sprimary indicators for hydrology. Hetermine wetland boundary.	lydrology indicators and hydrid	
		ng and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetla Wetland Rating System (Hruby an the habitat score. W19 rates as a	nd Yahnke 2023), with buffer w	vidths based in part on
	Water quality functions received a	•	_
Functions	high score of 8. Habitat functions in Appendix D.	received a high score of 7. Fu	nction rating details are
		nd Buffers	
Buffer	Buffer is a large, forested area do		_
Condition	maple, vine maple, salal, and swo		ncludes North Lake.
	Eastern buffer boundary is lined w	vith single-tamily residential.	

^{*}A portion of the wetland boundary was estimated.

Table 17. Wetland 20 Summary

	W20 – INFORM	ATION SUMMARY	
Location:	East of I-5 northbound, within W	SDOT right-of-way	
		Local Jurisdiction	City of Federal Way
	Cry Centif by Commission	Local/Ecology Rating	IV
	en sed	Buffer Width	50 feet
		Wetland Size	0.17 acres
		Cowardin Class	PEM
		HGM Class	Slope
		Wetland Data Sheet(s)	W20-SP1
美国人		Upland Data Sheet(s)	W20-SP2, W20-SP3
	Wetland	Delineation	
Dominant Vegetation	Herbs – reed canarygrass, Kentuc	cky bluegrass, velvetgrass (Ho	olcus lanatus)
Soils	Soils were examined to have three 4/1 (0 to 6 inches), 2.5Y 5/2 (6 to Redoximorphic features are presement hydric soil indicator F3, Deplete 1.5 (2.5 features are presement).	10 inches), and 5Y 5/1 (10 to rent at 6 inches and below. The	16 inches).
Hydrology	Indicators met include High Water and Oxidized Rhizospheres along	. , , , , , , , , , , , , , , , , , , ,	Algal Mat or Crust (B4),
Rationale for Delineation	Slope wetland with hydric soils, su hydrology. Hydrology indicators he		
	Wetland Ratir	ng and Functions	
Rationale for Local Rating	FWRC 19.145.420 classifies wetland Wetland Rating System (Hruby and the habitat score. W20 rates as a	nd Yahnke 2023), with buffer w Category IV, with a habitat sco	vidths based in part on ore of 3.
Functions	Water quality functions received a low score of 6. Habitat functions re Appendix D.	eceived a low score of 3. Fund	•
	Wetlar	nd Buffers	
Buffer Condition	Buffer is a maintained mown ease includes some shrubs.	ment adjacent to I-5 northbou	nd. Southern buffer area

Table 18. Wetland 21 Summary

	W21 – INFORM	ATION SUMMARY			
Location:	West of I-5 southbound and eas	t of 24th Avenue S			
		Local Jurisdiction	City of Federal Way		
门类学		Local/Ecology Rating*	III		
		Buffer Width	80 feet		
		Wetland Size	0.34 acres		
		Cowardin Class	PEM, PFO		
	公子、随意大	HGM Class	Depressional		
		Wetland Data Sheet(s)*	None		
		Upland Data Sheet(s)*	None		
		Delineation			
Dominant Vegetation*	Trees – back cottonwood, red alder, and Oregon ash Shrubs – Sitka willow, hardhack, and Himalayan blackberry Herbs – reed canarygrass				
Soils*	Dark and depleted loam soils met (A11) and Depleted Matrix (F3).	hydric soil indicators Depleted	Below Dark Surface		
Hydrology*	Wetland hydrology indicators obse Geomorphic Position (D2) and FA		e (A2), Saturation (A3),		
Rationale for Delineation*	Depressional wetland with observe	ed hydrophytic vegetation and	wetland hydrology.		
	Wetland Ratir	ng and Functions			
Rationale for Local Rating*	FWRC 19.145.420 classifies wetla Wetland Rating System (Hruby an the habitat score. W21 rates as a	nd Yahnke 2023), with buffer w	vidths based in part on		
Functions*	Water quality functions received a moderate score of 7. Habitat funct	•	•		
	Wetlar	nd Buffers			
Buffer Condition	The vegetated buffer is confined by Vegetation within the buffer includ (Corylus cornuta), trailing blackber Oregon grape (Mahonia nervosa) large and small woody debris.	es Douglas-fir with salal, vine rry, snowberry (<i>Symphoricarp</i> o	maple, beaked hazelnut os albus), and dull		

^{*} Wetland boundaries, wetland determination indicators, and wetland rating adopted from Operations and Management Facility South project through a data-sharing agreement with Sound Transit.

Table 19. Wetland 22 Summary

	W22 – INFORM	ATION SUMMARY	
Location:	North of S 333rd Street and wes	st of Cedar Grove Park	
		Local Jurisdiction	City of Federal Way
		Local/Ecology Rating*	III
		Buffer Width	80 feet
		Wetland Size*	0.95 acres
		Cowardin Class	PFO
		HGM Class	Riverine
		Wetland Data Sheet(s)*	None
		Upland Data Sheet(s) *	None
		Delineation	
Dominant Vegetation	Trees – black cottonwood, red ald Shrubs – salmonberry, Sitka willov Herbs – lady fern (<i>Athryium felix-fe</i> bluegrass	w, Himalayan blackberry emina), slough sedge, reed ca	anarygrass, and Kentucky
Soils*	Upper layers of soils are dark and include Hydrogen Sulfide (A4), Th Depleted Below Dark Surface (A1	ick Dark Surface (A12), Redox	
Hydrology*	Wetland receives flooding from Ea hydrology indicators include Surfa Geomorphic Position (D2), and FA	ce Water (A1), High Water Ta	-
Rationale for Delineation*	Break in topography and transition	n to lack of wetland hydrology	and hydric soils.
		ng and Functions	
Rationale for Local Rating*	FWRC 19.145.420 classifies wetla Wetland Rating System (Hruby an the habitat score. Wetland W22 ra	nd Yahnke 2023), with buffer wates as a Category III, with a h	vidths based in part on abitat score of 5.
Functions*	Water quality functions received a moderate score of 8. Habitat funct supports filtration of pollutants from The wetland has low habitat function structure, and connectivity.	tions received a low score of 5 m surrounding land uses as we ions due to lack of diverse veg	i. A high density of trees ell as flood attenuation.
		nd Buffers	
Buffer Condition*	The buffer abuts residential develor abundance of large and small woo dominated by red alder.		

^{*} Wetland boundaries, wetland determination indicators, and wetland rating adopted from Operations and Management Facility South project through a data-sharing agreement with Sound Transit.

Table 20. Wetland 23 Summary

	W23 – INFORM	IATION SUMMARY		
Location:	West of I-5 southbound and nor	th of S 336th Street		
		Local Jurisdiction	City of Federal Way	
		Local/Ecology Rating*	II	
		Buffer Width	150 feet	
		Wetland Size*	0.38 acres	
		Cowardin Class	PSS, PFO	
		HGM Class	Riverine	
		Wetland Data Sheet(s)*	None	
		Upland Data Sheet(s)*	None	
		Delineation		
Dominant Vegetation*	Trees – black cottonwood, red alder Shrubs – Sitka willow, Douglas spirea, salmonberry, and Himalayan blackberry Herbs – reed canarygrass			
Soils*	Hydric soils in Wetland W23 are d meeting hydric soil indicators Dep Surface (F6).			
Hydrology*	Wetland hydrology is supported by Saturation (A3), High Water Table			
Rationale for Delineation*	Break in topography, transition to	dry and upland soils.		
	Wetland Ratir	ng and Functions		
Rationale for Local Rating*	FWRC 19.145.420 classifies wetla Wetland Rating System (Hruby ar the habitat score. Wetland W23 ra	nd Yahnke 2023), with buffer wates as a Category III, with a h	vidths based in part on abitat score of 6.	
Functions*	Water quality functions received a moderate score of 7. Habitat functions water quality functions, including provides functional complex habitats.	tions received a moderate sco collutant filtration and flood wa	re of 6. W23 provides ter attenuation. It	
		nd Buffers		
Buffer Condition	The buffer is vegetated with a fore dominated by red elderberry (San blackberry. The functional buffer is to the west.	nbucus racemosa), salmonber	ry and Himalayan	

^{*} Wetland boundaries, wetland determination indicators, and wetland rating adopted from Operations and Management Facility South project through a data-sharing agreement with Sound Transit.

Table 21. Wetland 28 Summary

	W28 – INFORM	IATION SUMMARY	
Location:	East of S 333rd Street and west	of I-5	
		Local Jurisdiction	City of Federal Way
		Local/Ecology Rating	IV
		Buffer Width	50 feet
THE S		Wetland Size*	0.02 acres
		Cowardin Class	PSS
		HGM Class	Slope
		Wetland Data Sheet(s)*	None
		Upland Data Sheet(s)*	None
	Wetland	Delineation	
Dominant Vegetation*	Shrubs – Himalayan blackberry a	nd reed canarygrass	
Soils*	Sandy loam and clay hydric soils surface (A11) and Depleted Matri		epleted Below Dark
Hydrology*	Wetland hydrology indicators are (B8), and Geomorphic Position (D	` , .	etated Concave Surface
Rationale for Delineation*	Break in topography and transition	n to dry soils.	
		ng and Functions	
Rationale for Local Rating*	FWRC 19.145.420 classifies wetla Wetland Rating System (Hruby ar the habitat score. W28 rates as a	nd Yahnke 2023), with buffer w Category IV, with a habitat sco	vidths based in part on ore of 3.
Functions*	Water quality functions received a moderate score of 6. Habitat function which limits its ability to filter and spartially capture floodwaters and rhabitat function due to lack of hab	tions received a low score of 3 store pollutants. Its position in reduce flooding downgradient. itat complexity and connection	. W28 is a slope wetland, the landscape allows it to It provides limited
		nd Buffers	
Buffer Condition	The vegetated upland buffer is co development to the west. Existing Western red-cedar with an unders	vegetation includes a native of	anopy of Douglas-fir and

^{*} Wetland boundaries, wetland determination indicators, and wetland rating adopted from Operations and Management Facility South project through a data-sharing agreement with Sound Transit.

Table 22. Wetland 29 Summary

	W29 – INFORM	ATION SUMMARY	
Location:	East of 23rd Avenue S and sout	h of S 322nd Street.	
The second second		Local Jurisdiction	City of Federal Way
		Local/Ecology Rating	III
		Buffer Width	80 feet
		Wetland Size*	0.03 acres
		Cowardin Class	PEM, PSS
		HGM Class	Depressional
		Wetland Data Sheet(s)*	none
		Upland Data Sheet(s)*	none
		Delineation	
Dominant	Shrubs – Himalayan blackberry, h		()
Vegetation*	Herbs – creeping buttercup, ribwo	• •	•
Soils*	Loam hydric soils meet hydric soil Dark Surface (A11).	·	,
Hydrology [*]	Stormwater and a high groundwat indicators include High Water Tab (D2).		
Rationale for Delineation*	Geomorphic position and transition	on to dry soils	
		ng and Functions	
Rationale for Local Rating*	FWRC 19.145.420 classifies wetla Wetland Rating System (Hruby an the habitat score. W29 rates as a	nd Yahnke 2023), with buffer w	vidths based in part on
Functions*	Water quality functions received a moderate of 7. Habitat functions reattenuate stormwater flows and fill due to lacking plant diversity and of	eceived a low score of 3. W29 ter pollutants. However, it has connections to other habitats.	has some ability to
	2.7.25	nd Buffers	
Buffer Condition	The vegetated buffer is mostly slo species, and common lawn grass wetland is dominated by cattail.		•

^{*} Wetland boundaries and wetland rating adopted from Operations and Management Facility South project through a data-sharing agreement with Sound Transit.

Table 29. East Fork Hylebos Creek Tributary 0016A Summary

East Fo	rk Hylebos Creek Tribut	ary 0016A – Information Sur	nmary
		Stream Name	East Fork Hylebos Creek Tributary 0016A
		WRIA Name/Stream #	10.0016A
		WDFW Site ID	995300, 995299, and 992364
		Local Jurisdiction	Federal Way
		DNR Water Type	F
		Local Stream Rating	F
		Buffer Width	100 feet
		Documented Fish Use ^a	None
Location of Stream Relative to Study Area	northeast to southwest, flow intermittently flowing strear study area. W11, located n East Fork Hylebos Creek T channel begin at the outlet The stream flows through a partially into the delineated through approximately 1,64 park and ride. East Fork Hy converges with West Fork this point, the stream contin	ributary 0016A flows through the wing through three partial fish pass in generally flows northeast to so orth of S 320th Street and east of ributary (0016A). The upper limit of the S 320th Street crossing, was palustrine scrub-shrub vegetatic bog interior within W5. It exits the linear feet of pipe below I-5 and ylebos Creek continues to flow or Hylebos Creek near the Porter Walles as Hylebos Creek, crossing Hylebos Waterway in Tacoma.	ssage barriers. The athwest through the f I-5 is the headwaters of s of the defined stream here flow enters W5. In community and e wetland and travels d the King County Metro in the east side of I-5 and tay crossing of I-5. From
Connectivity	Fork Hylebos Creek Tributa (NWIFC 2024). However, ti study area. Downstream hu	and winter steelhead may potent ary 0016A, based upon accessibl here is no documented or presum uman-created barriers to fish pas m entering stream reaches in the	e stream gradient ned fish use within the sage prevent
Fish Habitat	relatively undisturbed cond Creek Tributary 0016A flow scrub-shrub, emergent, and shade, wood material, and	n in the study area ranges from hitions. East of I-5, the upper limits through large wetland complexed aquatic bed vegetation communorganic matter accumulations. Wheel channel with a narrow fringe and recreational land uses.	s of East Fork Hylebos es with forested, nities with abundant lest of I-5, the stream

^a Documented fish species known to occur in the stream from available data sources (WDFW 2024a,c; NWIFC 2024)

Appendix C

Wetland Determination
Data Forms

Project/Site: F	Federal Way City Center Access		City/County:	Federal Way/Kir	ng	Sampling Date: 7/24/2020
-					State: Washington	Sampling Point: W1-SP-1
Investigator(s):	Matt Murphy, Aaron Thom			Se		T21N R04E S10
Landform (hillslope	e, terrace, etc.):	Hillslope		Local relie	ef (concave, convex, none):c	oncave Slope (%): <3%
Subregion (LRR):	Northwest Forests and Coast (I	LRR A) L:	at: 47.315586	Long	:122.287857	Datum: NAD 1983 (HARN)
•	• •			- <u>AgB</u> -		
•	,,	•				(If no, explain in Remarks)
_					•	
ŭ				•		
				The locations, t	Idlisects, important rea	tures, etc.
				Is the Sampled	d Area	
•				within a Wetla	nd? Yes X	No
•	9)					
•	Seattle Tacoma Airport NOAA wea	ther station, precipita	tion was above the	e normal range for	the three months prior to the site	e visit.
-	· 	<u> </u>			· 	
	ad in the middle of a reed canaryar	roce (Dhalaris arundir	acces) natch within	in a challow denres	cion annrovimately 120 feet nor	th of C 220th St and west of S King
	, ,	,	, ,	•	,	•
i I				•	· -	
VECETATION						
VEGETATION	<u> </u>	Absolute	Dominant	Indicator	Daminanaa Taet warksheet:	
Troe Stratum	(Plot size: r=3m)					
1	(FIUL 3126. 1—5111)	70 COVEL	оресієз :	Status		· 1 (A)
none					Iffat Are Obc, FACTV, or 1 AC	(^)
3.					Total Number of Dominant	
4.		_				1 (B)
	_	0% = T	otal Cover			
Sapling/Shrub S	Stratum (Plot size: <u>r=2m)</u>				Percent of Dominant Species	
none		_			That Are OBL, FACW, or FAC	: <u>100%</u> (A/B)
3.					Total % Cover of:	Multiply by:
4					OBL species	x 1 =
5						x 2 =
	(=:	= T	otal Cover		· -	<u> </u>
	•	/		,	· -	<u> </u>
2			Yes No.		· · · · · · · · · · · · · · · · · · ·	<u> </u>
-						· ` ′
, peneum p						
Janam apan		_				
2 igitalie parp	iui ea	170	140	TAGO		•
7.		_				
		_				
9.		Scales: Washington Sampling Point: WH-SP-1 Section, Township, Range: T21N ROHE \$10 It (LRR A) Lat: 47.315596 Long: -122.287857 Detum: NAD 1983 (HARN) Moderwood gravelly sandy loam AgB Not Hydric Jord for this time of year? Yes X No (If no, explain in Remarks) Jor Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No (If no, explain in Remarks) Jor Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No (If no, explain in Remarks) Jor Hydrology sampling point locations, transects, important features, etc. Yes X No Is the Sampled Area within a Wetland? Yes X No West X No Ves X No Section of Sacration of S				
10.					5 - Wetland Non-Vascula	r Plants ¹
11.					Problematic Hydrophytic	Vegetation (Explain) ¹
Applicant/Owner	etland hydrology must					
					H. Jambadia	
2.			Total Cover		1	Y No
% Bare Ground	in Herb Stratum 0%		Olai Covei		=	
		<u> </u>				
Remarks:						

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Profile Description (Describe to the dep Depth Matrix (inches) Color (moist)				Sampling Point:	W1-SP-1
	th needed to document the inc	dicator or confirm the al	osence of indicators):		
(inches) Color (moist)		Redox Features			
	% Color (moist)	% Туре	e 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	
					
			_		
					
					
					
			2 5. 5		
Type: C=Concentration, D=Depletion, RM=			² Location: PL=Pore Lining,		
Texture: Sa = sand; Si = silt; C = clay; L = Hydric Soil Indicators (Applicable to all I				blematic Hydric Soils ³ :	
` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	•	•		-	
Histosol (A1)	Sandy Redox (S5)	•	2 cm Muck (A	•	
Histic Epipedon (A2)	Stripped Matrix (S		Red Parent M		
Black Histic (A3)		neral (F1) (except MLRA 1		Dark Surface (TF12)	
Hydrogen Sulfide (A4)	Loamy Gleyed Ma		Other (Explain	n in Remarks)	
X Depleted Below Dark Surface (A11)	Depleted Matrix (F	- 3)			
Thick Dark Surface (A12)	Redox Dark Surfa	ce (F6)	³ Indicators of hydro	ophytic vegetation and wetland	
Sandy Mucky Mineral (S1)	Depleted Dark Su	rface (F7)		present, unless disturbed or	
Sandy Gleyed Matrix (S4)	Redox Depression	Redox Depressions (F8) problematic.			
Restrictive Layer (if present):					
Type: compacted cobbles			Hydric Soil		
Depth (inches): 14			Present?	Yes X	No
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of one require	d; check all that apply)		Secondary Indicato	ors (2 or more required)	
Primary Indicators (minimum of one requireSurface Water (A1)	* * * * * * * * * * * * * * * * * * * *	aves (B9) (except MLRA	-	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	
•	* * * * * * * * * * * * * * * * * * * *	, , , .	-	d Leaves (B9) (MLRA 1, 2,	
Surface Water (A1)	Water-Stained Lea	, , , .	Water-Stained	d Leaves (B9) (MLRA 1, 2,	
Surface Water (A1) High Water Table (A2)	Water-Stained Lea	В)	Water-Stained 4A, and 4B Drainage Patt	d Leaves (B9) (MLRA 1, 2,	
Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Lea 1, 2, 4A, and 48 Salt Crust (B11)	B) ates (B13)	Water-Stained 4A, and 4B Drainage Patt Dry-Season W	d Leaves (B9) (MLRA 1, 2,) erns (B10)	
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide	B) ates (B13)	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis	d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9)	
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide	B) ates (B13) Odor (C1) heres along Living Roots	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis	d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2)	
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu	B) ates (B13) Odor (C1) heres along Living Roots	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis (C3) X Geomorphic F Shallow Aquita	d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3)	
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)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu	ates (B13) Odor (C1) heres along Living Roots aced Iron (C4) ction in Tilled Soils (C6)	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis (C3) X Geomorphic F Shallow Aquita X FAC-Neutral 7	d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5)	
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)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospl Presence of Redu Recent Iron Redu Stunted or Stresse	B) ates (B13) Odor (C1) heres along Living Roots aced Iron (C4) ction in Tilled Soils (C6) ed Plants (D1) (LRR A)	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis (C3) X Geomorphic F Shallow Aquita X FAC-Neutral T Raised Ant Mo	d Leaves (B9) (MLRA 1, 2, 1) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A)	
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 (B	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresso Other (Explain in Red	B) ates (B13) Odor (C1) heres along Living Roots aced Iron (C4) ction in Tilled Soils (C6) ed Plants (D1) (LRR A)	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis (C3) X Geomorphic F Shallow Aquita X FAC-Neutral T Raised Ant Mo	d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5)	
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 (B Sparsely Vegetated Concave Surface (Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresso Other (Explain in Red	B) ates (B13) Odor (C1) heres along Living Roots aced Iron (C4) ction in Tilled Soils (C6) ed Plants (D1) (LRR A)	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis (C3) X Geomorphic F Shallow Aquita X FAC-Neutral T Raised Ant Mo	d Leaves (B9) (MLRA 1, 2, 1) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A)	
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 (B Sparsely Vegetated Concave Surface (Sield Observations:	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresso Other (Explain in Red) (B8)	ates (B13) Odor (C1) heres along Living Roots uced Iron (C4) ction in Tilled Soils (C6) ed Plants (D1) (LRR A) Remarks)	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis (C3) X Geomorphic F Shallow Aquita X FAC-Neutral T Raised Ant Mo Frost-Heave F	d Leaves (B9) (MLRA 1, 2, 1) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A)	
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 (B Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present?	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresso Other (Explain in B) (B8)	ates (B13) Odor (C1) heres along Living Roots uced Iron (C4) ction in Tilled Soils (C6) ed Plants (D1) (LRR A) Remarks) Depth (inches):	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis (C3) X Geomorphic F Shallow Aquita X FAC-Neutral T Raised Ant Mo Frost-Heave F	d Leaves (B9) (MLRA 1, 2, 1) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	No
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 (B Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? Yes Water Table Present?	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospl Presence of Redu Recent Iron Redu Stunted or Stresse Other (Explain in B) (B8)	ates (B13) Odor (C1) heres along Living Roots uced Iron (C4) ction in Tilled Soils (C6) ed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis (C3) X Geomorphic F Shallow Aquita X FAC-Neutral T Raised Ant Mo Frost-Heave H Wetland Hydrology	d Leaves (B9) (MLRA 1, 2, 1) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A)	No
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 (B Sparsely Vegetated Concave Surface (Seld Observations: Surface Water Present? Water Table Present? Yes Saturation Present?	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresso Other (Explain in B) (B8)	ates (B13) Odor (C1) heres along Living Roots uced Iron (C4) ction in Tilled Soils (C6) ed Plants (D1) (LRR A) Remarks) Depth (inches):	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis (C3) X Geomorphic F Shallow Aquita X FAC-Neutral T Raised Ant Mo Frost-Heave F	d Leaves (B9) (MLRA 1, 2, 1) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	No
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 (B Sparsely Vegetated Concave Surface (Seld Observations: Surface Water Present? Water Table Present? Yes Saturation Present?	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospl Presence of Redu Recent Iron Redu Stunted or Stresse Other (Explain in B) (B8)	ates (B13) Odor (C1) heres along Living Roots uced Iron (C4) ction in Tilled Soils (C6) ed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis (C3) X Geomorphic F Shallow Aquita X FAC-Neutral T Raised Ant Mo Frost-Heave H Wetland Hydrology	d Leaves (B9) (MLRA 1, 2, 1) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	No
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 (B Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? Yes Water Table Present?	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresso Other (Explain in Reduction of Stresson) (B8) No X No X No X No X	ates (B13) Odor (C1) heres along Living Roots uced Iron (C4) ction in Tilled Soils (C6) ed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis (C3) X Geomorphic F Shallow Aquita X FAC-Neutral T Raised Ant Mo Frost-Heave F Wetland Hydrology Present?	d Leaves (B9) (MLRA 1, 2, 1) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	No
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 (B Sparsely Vegetated Concave Surface (Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? (includes capillary fringe)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresso Other (Explain in Reduction of Stresson) (B8) No X No X No X No X	ates (B13) Odor (C1) heres along Living Roots uced Iron (C4) ction in Tilled Soils (C6) ed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis (C3) X Geomorphic F Shallow Aquita X FAC-Neutral T Raised Ant Mo Frost-Heave F Wetland Hydrology Present?	d Leaves (B9) (MLRA 1, 2, 1) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	No

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Project/Site:	Federal Way City Center Access		City/County:	Federal Way/h	King	Sampling Date:	7/24/2020
Applicant/Owner:	: City of Federal Way				State: Washingto	n Sampling I	Point: W1-SP-2
Investigator(s):	Matt Murphy, Aaron Thom			;	Section, Township, Range:	T21N R0)4E S10
Landform (hillslop	pe, terrace, etc.):	Hillslope	e	Local re	elief (concave, convex, none):	none	Slope (%): <3%
Subregion (LRR)): Northwest Forests and Coast (LF	R A)	Lat: 47.315468	_ Loi	ng: -122.287727	Datum:	NAD 1983 (HARN)
`		rwood gravelly s		AgB			None
•	drologic conditions on the site typical f	•					
Are Vegetation		, or Hydrology	significantly dist		·		Yes <u>X</u> No
Are Vegetation	, Soil	·-			• •	,	
			•	nt locations	, transects, important te	eatures, etc.	
	•	Yes X	No	le the Samul	lad Araa		
Hydric Soil Pres		Yes X	No		land?	No. 1	••
Wetland Hydrolo	ogy Present?	Yes	No <u>X</u>		Yes	NO	<u> </u>
Precipitation:	Cootto Tacomo Airport NOAA wooth	station proci	=itation was above the		the three months prior to the	-ita viait	
According to the	Seattle Tacoma Airport NOAA weath	er station, precip	oltation was above the	normal range id	or the three months prior to the s	SITE VISIT.	
Remarks:							
Upland sample p	olot paired with W1-SP-2 and W1-SP-	3. Sample plot is	s located SE and dowr	nslope of W1-SF	² -1.		
I							
I							
VEGETATIO	N		•		-	-	•
		Absolute	Dominant	Indicator	Dominance Test workshe	et:	
Tree Stratum	(Plot size: <u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Dominant Specie	es	
1. none					That Are OBL, FACW, or F	AC:	2 (A)
2.							,·
3.					Total Number of Dominant		
4.					Species Across All Strata:		2 (B)
		0%	= Total Cover				
Sapling/Shrub S	Stratum (Plot size: r=2m)				Percent of Dominant Specie	es	
1. Rubus arme	eniacus	40%	Yes	FAC	That Are OBL, FACW, or Fa	AC:	<u>100%</u> (A/B)
2.		<u> </u>			Prevalence Index workshe	eet:	
3.					Total % Cover of:	Multiply by:	
4.					OBL species	x 1 =	
5.					FACW species	x 2 =	
_		40%	= Total Cover		FAC species	x 3 =	
<u>Herb Stratum</u>	(Plot size: r=1m)	_			FACU species	x 4 =	
1. Agrostis stol	lonifera	100%	Yes	FAC	UPL species	x 5 =	
2. Jacobaea vu	ulgaris	20%	No	FACU	Column Totals:	(A)	(B)
3. Hypericum p	perforatum	2%	No	FACU			
4. Juncus effus	sus	1%	No	FACW	Hydrophytic Vegetation In	idicators:	
5. Holcus lana	itus	1%	No	FAC	1 - Rapid Test for Hydr	ophytic Vegetation	
6.					X 2 - Dominance Test is	>50%	
7.					3 - Prevalence Index is	s ≤3.0 ¹	
8.					4 - Morphological Adar	otations ¹ (Provide su	upporting
9.					State: Washington Sampling Point: W1-SP-2		
10							
11					Problematic Hydrophyt	ic Vegetation (Expla	ain) ¹
	-:	124%	= Total Cover		•	I wetland hydrology	must
Woody Vine Str	ratum (Plot size: r=2m)				be present.		
1. <u>none</u> 2.					Hydrophytic		
		0%	= Total Cover		1	es X No	
% Bare Ground	in Herb Stratum 0%		- 10tal C3.3.		_		
Remarks:							

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SOIL						Sampling Point:	١	W1-SP-2
Profile Description (Describe to the d	epth needed to	document the in	ndicator or conf	firm the absence	of indicators):			
Depth Matrix			Redox	Features				
(inches) Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ³	F	Remarks
0-11 10YR 3/2	100					CbL		
11-13 2.5Y 4/2	85	10YR	15	С		GrSiL		
						 -		
				2.				
Type: C=Concentration, D=Depletion, R Texture: Sa = sand; Si = silt; C = clay; L					ation: PL=Pore Lining, M			
ydric Soil Indicators (Applicable to a				= 11110, VI = VOIY I		ematic Hydric Soils ³ :		
Histosol (A1)		Sandy Redox (S	35)		2 cm Muck (A10))		
Histic Epipedon (A2)		Stripped Matrix (,		Red Parent Mat	,		
		_		ant MI PA 1)		eriai (172) ark Surface (TF12)		
Black Histic (A3)			Mineral (F1) (exce	:μι IVILIKA I)		, ,		
Hydrogen Sulfide (A4)	_	_Loamy Gleyed N			Other (Explain in	ı nemarks)		
Depleted Below Dark Surface (A11)		_Depleted Matrix	` '					
Thick Dark Surface (A12)		_Redox Dark Sur	` '		³ Indicators of hydropl	hytic vegetation and wetlar	nd	
Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)			, ,, ,	esent, unless disturbed or		
Sandy Gleyed Matrix (S4)		_Redox Depressi	ons (F8)		problematic.			
estrictive Layer (if present):								
Type: compacted cobbles					Hydric Soil			
Depth (inches): 13					Present?	Yes X	No	
HYDROLOGY								
Vetland Hydrology Indicators:								
rimary Indicators (minimum of one requ	ired; check all th	nat apply)	_		Secondary Indicators	(2 or more required)		
Surface Water (A1)	_	_Water-Stained L	_eaves (B9) (exc	ept MLRA	Water-Stained L	Leaves (B9) (MLRA 1, 2,		
High Water Table (A2)		1, 2, 4A, and	4B)		4A, and 4B)			
Saturation (A3)		Salt Crust (B11))		Drainage Patterns (B10)			
Water Marks (B1)		_Aquatic Inverteb	orates (B13)		Dry-Season Wa	ter Table (C2)		
Sediment Deposits (B2)		Hydrogen Sulfide	e Odor (C1)		Saturation Visib	le on Aerial Imagery (C9)		
Drift Deposits (B3)		Oxidized Rhizos	spheres along Liv	ring Roots (C3)	Geomorphic Po	sition (D2)		
Algal Mat or Crust (B4)		Presence of Red	duced Iron (C4)		Shallow Aquitare	d (D3)		
Iron Deposits (B5)		_	duction in Tilled S	Soils (C6)	FAC-Neutral Te			
Surface Soil Cracks (B6)		_	ssed Plants (D1)			nds (D6) (LRR A)		
Inundation Visible on Aerial Imagery	(B7)	Other (Explain in		,	Frost-Heave Hu			
Sparsely Vegetated Concave Surface		_ (,			\ /		
	- ()							
ield Observations:		.,		,	,			
	No		Depth (inches		Wetland			
-	No.		Depth (inches		Hydrology	Yes	No_	<u> </u>
	No	<u> </u>	Depth (inches	s):	Present?			
(includes capillary fringe)								
Describe Recorded Data (stream gau	ge, monitoring	well, aerial phot			-11-1-1-			
		, aa. p	os, previous in	spections), if ava	aliable:			
			os, previous in:	spections), if ava	анаріе:			
Remarks: rtificially drained by french drain extendi						past excavator tracks we	re obse	rved nea

Project No.: 554-2441-022

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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 W	/eiss			Section, Township, Range:	T21N R0)4E S10
Landform (hillslope, terrace, etc.):	Terrace		Local re	elief (concave, convex, none):	concave	Slope (%): None
Subregion (LRR): Northwest Forests and Co	ast (LRR A)) L	at: 47.315678	Loi	ng: -122.288620	Datum:	NAD 1983 (HARN)
Soil Unit (Name-ID-Hydric Rating):			9=		classification:	
Are climatic / hydrologic conditions on the site t	• •				(If no, explain in	
Are Vegetation, Soil Are Vegetation , Soil	, or Hydrology	significantly dis	sturbed? A	re "Normal Circumstances" pre		Yes <u>X</u> No
<u></u>				f needed, explain any answers		
SUMMARY OF FINDINGS – Attach			nt locations,	, transects, important fe	etc.	
Hydrophytic Vegetation Present?	Yes X	No X	Is the Sampl	ed Δrea		
Hydric Soil Present?			within a Wet		No. '	v
Wetland Hydrology Present?	Yes	No X	1	land? Yes	No	<u> </u>
Precipitation: According to the Tacoma NOAA weather static	un procinitation was halo	w the normal rang	a for the three m	antho prior to the cita vicit		
According to the Tacoma NOAA weather static	iri, precipitation was beic	w the normal rang	e ioi the thiee h	ionins phor to the site visit.		
Remarks:						-
This sample point is located upslope of Wetlan	d 1. It is in proximity to S	couler's willow and	l salmonberry.			
VEGETATION						
	Absolute	Dominant	Indicator	Dominance Test workshe	et:	
<u>Tree Stratum</u> (Plot size: <u>r=3m</u>)	% Cover	Species?	<u>Status</u>	Number of Dominant Spec	ies	
1. Salix scouleriana	20%	Yes	FAC	That Are OBL, FACW, or F	AC:	3 (A)
2.						
3.				Total Number of Dominant		
4				Species Across All Strata:		4 (B)
	20% =	Total Cover				
Sapling/Shrub Stratum (Plot size: r=2m)				Percent of Dominant Speci		
1. Rubus armeniacus	20%	Yes	FAC	That Are OBL, FACW, or F		<u>75%</u> (A/B)
2. Rubus spectabilis3.	10%	Yes	FAC	Prevalence Index worksh Total % Cover of:		
-					Multiply by:	
4. 5.			-	OBL species FACW species	x1= x2=	
5.	200/	Tatal Carra		FAC species	x 2 =	
Herb Stratum (Plot size: r=1m)	30% =	Total Cover		FACU species	x	
Dicentra formosa	40%	Yes	FACU	UPL species	x =	
Polystichum munitum	10%	No	FACU	Column Totals:	(A)	(B)
Carex bolanderi	3%	No	FAC	Prevalence Inde	`´	(=)
Hypericum perforatum	<u> </u>	No	FACU	Hydrophytic Vegetation I	•	
5.			17.00	1 - Rapid Test for Hyd		ı
6.				X 2 - Dominance Test is	>50%	
7.				3 - Prevalence Index is	s ≤3.0 ¹	
8.				4 - Morphological Ada		supporting
9.					r on a separate she	
10.				5 - Wetland Non-Vasc	cular Plants ¹	
11.				Problematic Hydrophy	rtic Vegetation (Exp	lain) ¹
	54% =	Total Cover		¹ Indicators of hydric soil and	d wetland hydrology	y must
Woody Vine Stratum (Plot size: r=2m)				be present.		
1.			-			
2		Tatal Carra		Hydrophytic Vegetation Ye	es X No	
% Bare Ground in Herb Stratum 0%		Total Cover		Present?	NO .	
	<u> </u>			1 Toolit :		
Remarks:						

Parametrix

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SOIL							
Profile Description (Descr	ibe to the de	pth needed	to document the	e indicator or confirm the abser	ice of indicators):		
Depth	Matrix			Redox Features			
(inches) Color (moist)	%	Color (moist)	% Type ¹	Loc ²	Texture ³	Remark
0-9 10YF	3/2	100		<u> </u>		GrL	
9-10 10YF	6/1					GrSL	
10-16 10YF	4/4					CoL	
							
							
				- — —			
• •	•				ocation: PL=Pore Linin		
				lifier: co = coarse; f = fine; vf = ver			
lydric Soil Indicators (App	licable to al	I LKKS, unie	ss otherwise no	ited):	Indicators for Pro	blematic Hydric Soils ³ :	
Histosol (A1)		_	Sandy Redox	(S5)	2 cm Muck (A	10)	
Histic Epipedon (A2)		_	Stripped Matrix	x (S6)	Red Parent Ma	aterial (TF2)	
Black Histic (A3)		_	Loamy Mucky	Mineral (F1) (except MLRA 1)	Very Shallow Γ	Dark Surface (TF12)	
Hydrogen Sulfide (A4)		_	Loamy Gleyed	l Matrix (F2)	Other (Explain	ı in Remarks)	
Depleted Below Dark S	urface (A11)		Depleted Matri	ix (F3)			
Thick Dark Surface (A1:	2)		Redox Dark Si	urface (F6)	31 - 12 - 1 1 1 1 1	anto de como telem e e docente.	1
Sandy Mucky Mineral (S	§1)		 Depleted Dark	Surface (F7)		ophytic vegetation and wetlar present, unless disturbed or	
Sandy Gleyed Matrix (S			Redox Depres		problematic.	present, unless disturbed of	
Restrictive Layer (if preser	•		-		<u> </u>		
restrictive Layer (ii preser	n.y.						
Typo:					Uvdrio Coil		
Type:					Hydric Soil	Voc	No V
Type: Depth (inches): Remarks:					Hydric Soil Present?	Yes	No X
Depth (inches):					-	Yes	No X
Depth (inches):					-	Yes	No X
Depth (inches): Remarks: HYDROLOGY	ors:				-	Yes	No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators		red; check al	I that apply)		Present?	Yes	No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators (minimum		red; check al		Leaves (B9) (except MLRA	Present? Secondary Indicato	ors (2 or more required)	No X
Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators (minimum of the content of th		red; check al	Water-Stained	I Leaves (B9) (except MLRA	Present? Secondary Indicato Water-Stained	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	No X
Primary Indicators (minimum Surface Water (A1) High Water Table (A2)		red; check al	Water-Stained	d 4B)	Secondary Indicato Water-Stained 4A, and 4B)	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	No X
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)		red; check al	Water-Stained 1, 2, 4A, and Salt Crust (B1	d 4B) 1)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10)	No X
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	of one requi	red; check al	Water-Stained 1, 2, 4A, and Salt Crust (B1 Aquatic Inverte	d 4B) 1) ebrates (B13)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2)	No X
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	of one requi	ired; check al	Water-Stained 1, 2, 4A, and Salt Crust (B1 Aquatic Inverte Hydrogen Sulf	d 4B) 1) ebrates (B13) iide Odor (C1)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9)	No X
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	of one requi	ired; check al	Water-Stained 1, 2, 4A, and Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhizo	d 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Living Roots (C3)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2)	No X
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	of one requi	ired; check al	Water-Stained 1, 2, 4A, and Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhizo Presence of R	d 4B) 1) ebrates (B13) fide Odor (C1) espheres along Living Roots (C3) deduced Iron (C4)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3)	No X
Primary Indicators (minimum 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)	n of one requi	ired; check al	Water-Stained 1, 2, 4A, and Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhizo Presence of R Recent Iron Re	d 4B) 1) ebrates (B13) fide Odor (C1) espheres along Living Roots (C3) teduced Iron (C4) eduction in Tilled Soils (C6)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5)	No X
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	n of one requi	ired; check al	Water-Stained 1, 2, 4A, and Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhizo Presence of R Recent Iron Re	d 4B) 1) ebrates (B13) fide Odor (C1) espheres along Living Roots (C3) deduced Iron (C4)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3)	No X
Primary Indicators (minimum 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)	n of one requi	 	Water-Stained 1, 2, 4A, and Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhizo Presence of R Recent Iron Re	d 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Living Roots (C3) reduced Iron (C4) eduction in Tilled Soils (C6) essed Plants (D1) (LRR A)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5)	No X
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Primary Indicators (minimum 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 A6 Sparsely Vegetated Confield Observations:	of one requi	——————————————————————————————————————	Water-Stained 1, 2, 4A, and Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhizo Presence of R Recent Iron Re Stunted or Stre	d 4B) 1) ebrates (B13) fide Odor (C1) ospheres along Living Roots (C3) reduced Iron (C4) eduction in Tilled Soils (C6) essed Plants (D1) (LRR A) in Remarks)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A)	No X
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Primary Indicators (minimum 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 A6 Sparsely Vegetated Confield Observations: Surface Water Present? Water Table Present?	of one requirements of one	(B7) N	Water-Stained 1, 2, 4A, and Salt Crust (B1 Aquatic Inverte Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Stunted or Stre Other (Explain	d 4B) 1) ebrates (B13) iide Odor (C1) ospheres along Living Roots (C3) educed Iron (C4) eduction in Tilled Soils (C6) essed Plants (D1) (LRR A) i in Remarks) Depth (inches): Depth (inches):	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave H Wetland Hydrology	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) bunds (D6) (LRR A)	No X
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Project/Site:	Federal Way City Cente	er Access		City/County:	Federal Way/	/King	Sampling Date:	7/24/2020
Applicant/Owner:						State: Washingto		
Investigator(s):	Per Johnson, Matt N	Murphy, Aaron T	hom			Section, Township, Range:	T21N R04	E S10
Landform (hillslope	e, terrace, etc.):		Hillslop	e	Local r	relief (concave, convex, none):	concave S	Slope (%): <u>3-5%</u>
Subregion (LRR)	: Northwest Forests a	and Coast (LRR	A)	Lat: 47.315296	Lc	ong: -122.290276	Datum:	NAD 1983 (HARN)
		Alderwoo			AgB		l classification:	None
•	drologic conditions on the	• • •				Yes X No	(If no, explain in R	
Are Vegetation	, Soil _					Are "Normal Circumstances" pre (If needed, explain any answers		es <u>X</u> No
Are Vegetation	, Soil					,	•	
					1t locations	s, transects, important f	eatures, etc.	
	getation Present?		S X		Is the Samp	nled Δrea		
Hydric Soil Prese			S		within a We	4110	No. Y	
Wetland Hydrolo	gy Present?	Yes	<u> </u>	No		etiand? Yes	No <u>X</u>	
Precipitation:	Scottle Tacoma Airport	NOAA weather	atation preci	nitation was above the	normal range	for the three months prior to the	s cita vicit	
According to the	Seattle Tacoma Airport	NOAA weather	Station, preor	pilation was above the	Homai range i	101 the tillee months phor to the	Sile visit.	
Remarks:								
W1-SP-3 is locate	ted north of S. 320th St.	., north of upland	berm with e	vidence of ponding up	to 6-inches abo	ove surface.		
VEGETATIO	N							
_	_	3m semi-	Absolute	Dominant	Indicator	Dominance Test workshe		_
Tree Stratum	(Plot size:	circle	% Cover	Species?	<u>Status</u>	Number of Dominant Speci	ies	
1. Malus fusca			100%	Yes	FACW	That Are OBL, FACW, or F	FAC:	2 (A)
2.								
3.						Total Number of Dominant		
4						Species Across All Strata:		3 (B)
		2m semi-	100%	= Total Cover				
Sapling/Shrub S	Stratum (Plot size:	circle				Percent of Dominant Speci		
1. Rubus leuco			20%	Yes	FACU	That Are OBL, FACW, or F	7.0.	67% (A/B)
2. Spiraea doug			15%	Yes	FACW	Prevalence Index worksh		
3. Rubus arme	niacus		5%	No	FAC	Total % Cover of:	Multiply by:	
4. Rubus lacini	atus		5%	No	FACU	OBL species	x1=	
5.						FACW species	x 2 =	
	(- 1	. \	45%	= Total Cover		FAC species	x3=	
Herb Stratum	(Plot size: !	<u>r=1m)</u>				FACU species	x 4 =	
1. <u>none</u>						UPL species	x 5 =	(P)
2.						Column Totals:	(A)	(B)
3.						Prevalence Inde		
4.						Hydrophytic Vegetation I		
5.						1 - Rapid Test for Hyd	· · ·	
6.						X 2 - Dominance Test is		
7. •						3 - Prevalence Index i		
8. 9.							aptations ¹ (Provide sup or on a separate sheet)	-
9. 10.						5 - Wetland Non-Vasc		
11.							cular Plants _/ tic Vegetation (Explair	n) ¹
		3	00/	Total Cover		¹ Indicators of hydric soil an	-	
Woody Vine Stra	atum (Plot size:	2m semi- circle	0%	= Total Cover		be present.	d welland nydrology in	iusi
1. none	(DO PIOCOIN.		
2.						Hydrophytic		
	-	- 6.4	0%	= Total Cover			res X No	
% Bare Ground	in Herb Stratum	0%	-			Present?		
Remarks:								

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SOIL						Sampling Point:	W2-SP-3
Profile Description (Describe to th	e depth needed	to document the inc	dicator or conf	firm the absence	of indicators):		
Depth Mat	rix		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	
				·			
Type: C=Concentration, D=Depletion	n, RM=Reduced	Matrix, CS=Covered of	or Coated Sand	I Grains. ² Loca	ation: PL=Pore Lining	, M=Matrix.	
Texture: Sa = sand; Si = silt; C = cla	/; L = loam or loa	my. Texture Modifier:	co = coarse; f	= fine; vf = very f	ine; + = heavy (more	clay); - = light (less clay)	
lydric Soil Indicators (Applicable t	o all LRRs, unle	ess otherwise noted)):		Indicators for Pro	oblematic Hydric Soils ³ :	
Histosol (A1)	_	Sandy Redox (S5))		2 cm Muck (A	A10)	
Histic Epipedon (A2)	_	Stripped Matrix (S	66)		Red Parent M	Material (TF2)	
Black Histic (A3)	_	Loamy Mucky Min	eral (F1) (exce	pt MLRA 1)	Very Shallow	Dark Surface (TF12)	
Hydrogen Sulfide (A4)	_	Loamy Gleyed Ma	atrix (F2)		Other (Explai	n in Remarks)	
Depleted Below Dark Surface (A	- 11)	Depleted Matrix (F					
Thick Dark Surface (A12)	_	Redox Dark Surfa			31	androde or not de-	
Sandy Mucky Mineral (S1)	_	Depleted Dark Su	rface (F7)			ophytic vegetation and wetland present, unless disturbed or	d
Sandy Gleyed Matrix (S4)	_	Redox Depression	ns (F8)		problematic.	prosont, unicos distarbod of	
Restrictive Layer (if present):					Hydric Soil		
Туре:					Hydric Soil Present?	Yes	No X
					Hydric Soil Present?	Yes	No X
Type:		-			-	Yes	No X
Type:					-	Yes	No X
Type:					-	Yes	No X
Type: Depth (inches): Remarks: HYDROLOGY	equired; check al	I that apply)			Present?	Yes	No X
Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators:	equired; check al	I that apply) Water-Stained Le	aves (B9) (exc	ept MLRA	Present? Secondary Indicate		No X
Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one re	equired; check al		, , ,	ept MLRA	Present? Secondary Indicate	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	No X
Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one reconstruction) Surface Water (A1)	equired; check al	Water-Stained Lea	, , ,	ept MLRA	Present? Secondary Indicate Water-Staine	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	No X
Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one recommend) Surface Water (A1) High Water Table (A2)	equired; check al	Water-Stained Lea	3)	ept MLRA	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	No X
Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one results) Surface Water (A1) High Water Table (A2) Saturation (A3)	equired; check al	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11)	B) ates (B13)	ept MLRA	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 3) terns (B10)	No X
Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one recommend) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	equired; check al	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra	ates (B13) Odor (C1)		Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, B) terns (B10) Water Table (C2) sible on Aerial Imagery (C9)	No X
Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one recommend) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) X Sediment Deposits (B2)	equired; check al	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide	B) ates (B13) Odor (C1) heres along Liv		Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2)	No X
Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one results) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) X Sediment Deposits (B2) Drift Deposits (B3)	equired; check al	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph	ates (B13) Odor (C1) heres along Liv	ing Roots (C3)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 3) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3)	No X
Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one recommend) 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)	equired; check al	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu	ates (B13) Odor (C1) heres along Liv aced Iron (C4) ction in Tilled S	ing Roots (C3)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 3) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5)	No X
Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one results) 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)	- - - - - -	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresse	ates (B13) Odor (C1) heres along Liv aced Iron (C4) ction in Tilled S ed Plants (D1)	ing Roots (C3)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A)	No X
Type: Depth (inches): HYDROLOGY Vetland Hydrology Indicators: Irimary Indicators (minimum of one recommend) 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)	- - - - - ery (B7)	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu	ates (B13) Odor (C1) heres along Liv aced Iron (C4) ction in Tilled S ed Plants (D1)	ing Roots (C3)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 3) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5)	No X
Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one results) 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 Imag	- - - - - ery (B7)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresse	ates (B13) Odor (C1) heres along Liv aced Iron (C4) ction in Tilled S ed Plants (D1)	ing Roots (C3)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A)	No X
Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one research of the primary Indicators (Malanda (Malan	- - - - ery (B7) _ rface (B8)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresse Other (Explain in B	ates (B13) Odor (C1) heres along Liv nced Iron (C4) ction in Tilled S ed Plants (D1) Remarks)	ing Roots (C3) soils (C6) (LRR A)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A)	No X
Type: Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one research of the primary Indicators (Malanda (Malan	ery (B7)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresse Other (Explain in F	ates (B13) Odor (C1) heres along Liv iced Iron (C4) ction in Tilled S ed Plants (D1) Remarks) Depth (inches	ing Roots (C3) soils (C6) (LRR A)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave Wetland	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Nater Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)	No X
Type: Depth (inches): HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one recovered by the state of the state	ery (B7)	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresse Other (Explain in F	ates (B13) Odor (C1) heres along Liv nced Iron (C4) ction in Tilled S ed Plants (D1) Remarks) Depth (inches	ing Roots (C3) soils (C6) (LRR A)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave Wetland Hydrology	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A)	
Type: Depth (inches): HYDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one research of the primary Indicators (Male In	ery (B7)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresse Other (Explain in F	ates (B13) Odor (C1) heres along Liv iced Iron (C4) ction in Tilled S ed Plants (D1) Remarks) Depth (inches	ing Roots (C3) soils (C6) (LRR A)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave Wetland	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Nater Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)	
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Project/Site:	Federal Way City Cer	nter Access		City/County:	Federal Way/ł	King	Sa	ampling Date:	7/24/2	2020
Applicant/Owner:						State: Wa		Sampling Po		2-SP-4
Investigator(s):	Per Johnson, Mat	tt Murphy, Aaron Tho	m		;	Section, Township, Ran	ige:	T21N R04	E S10	
Landform (hillslop	pe, terrace, etc.):		Depression	n	Local re	elief (concave, convex, no	ne): conc	ave S	lope (%):	<3%
Subregion (LRR)	: Northwest Forest	s and Coast (LRR A)		Lat: 47.315216	Lo	ng: <u>-122.290916</u>		Datum:	NAD 1983	(HARN)
Soil Unit (Name-	ID-Hydric Rating):	Alderwood	gravelly sand	dy loam -	AgB	- Not Hydric	NWI class	fication:	None	
•	drologic conditions on	• • •	•			es X No		no, explain in Re		
Are Vegetation		, or H				re "Normal Circumstand	•		es X	No
Are Vegetation		, or H				If needed, explain any a				
		-			it locations	, transects, impo	rtant featu	res, etc.		
	getation Present?	Yes_	<u>X</u>	No	Is the Sampl	led Area				
Hydric Soil Pres		Yes_	X Y	No	within a Wet	lando	v	Na		
Wetland Hydrolo	ogy Present?	Yes_	<u> </u>	No		riand? Yes	<u> </u>	No		
Precipitation:	Seattle Tacoma Airno	ort NOAA waathar sta	ation precipi	tation was above the	normal range fo	or the three months price	or to the site v	icit		
According to the	Seattle Tacoma Airpo	DIT NOAA Weather Sta	ilion, precipii	lation was above the	nomai range n	or the three months pric	or to the site v	oit.		
Remarks:										
W2-SP-4 is locat	ted approximately 500) feet west of Weyerh	aeuser Way	S and S 320th St, w	est of a ditch.					
VEGETATIO	N									
			Absolute	Dominant	Indicator	Dominance Test w				
Tree Stratum	(Plot size	e: <u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Dominar	nt Species			
1. Populus bals	samifera		65%	Yes	FAC	That Are OBL, FAC	W, or FAC:		5	(A)
2.										
3.						Total Number of Do	minant			
4.				_		Species Across All	Strata:		5	(B)
0	Ot 1 (District-		65% =	Total Cover		Demonstrat Demonstrate				
Sapling/Shrub S		e: <u>I=ZIII)</u>	000/	V	EA 0\A/	Percent of Dominar		10	00%	(A /D)
COITIUS alba			60%	Yes	FACW	That Are OBL, FAC		<u>II</u>	<u> </u>	(A/B)
Opiraca dou			20%	Yes	FACW	Prevalence Index of Total % Cover		ultiply by:		
 Lonicera inv Rosa nutkar 			15% 5%	<u>No</u> No	FAC FAC	OBL species		1 =	0	
5	па		3%	INO	FAC	FACW species	80 x 2		160	—
			100% =	Total Cover		FAC species			465	_
Herb Stratum	(Plot size	 -: r=1m)	10070 _	Total Gover		FACU species	.00	 1 =	0	—
Agrostis cap	`		35%	Yes	FAC	UPL species			0	—
Poa pratens			35%	Yes	FAC	Column Totals:	235 (A		625	(B)
3.						Prevale	nce Index = E	B/A =	2.66	_ ``
4.		_				Hydrophytic Vege	tation Indicat	ors:		
5.						1 - Rapid Test	for Hydrophy	tic Vegetation		
6.						X 2 - Dominance	Test is >50%)		
7.						3 - Prevalence	Index is ≤3.0	1		
8.						4 - Morphologi	cal Adaptatior	ns¹ (Provide sup	oorting	
9.						data in Ren	narks or on a	separate sheet)		
10						5 - Wetland No	on-Vascular P	lants ¹		
11						Problematic H	ydrophytic Ve	getation (Explain)1	
		_	70% =	Total Cover		¹ Indicators of hydric	soil and wetla	and hydrology m	ust	
Woody Vine Str	atum (Plot size	e: <u>r=2m)</u>				be present.				
1. <u>none</u> 2.						Hydrophytic				
			0% =	Total Cover		Vegetation	Yes	X No		
% Bare Ground	in Herb Stratum	30%				Present?				
Damania										
Remarks: Area appears to	be planted given that	the trees have collars	s around the	m.						

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Prexture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Histosol (A1)	Loc² M M M ation: PL=Pore Lining, M= ine; + = heavy (more clay) Indicators for Proble 2 cm Muck (A10) Red Parent Matel Very Shallow Dari Other (Explain in	; - = light (less clay) matic Hydric Soils ³ : rial (TF2) k Surface (TF12)	Remarks
Color (moist)	M M M M M ation: PL=Pore Lining, M= fine; + = heavy (more clay) Indicators for Proble 2 cm Muck (A10) Red Parent Matel Very Shallow Darl Other (Explain in 3Indicators of hydrophy hydrology must be presproblematic. Hydric Soil	CbGrL CbGrL Matrix. ; - = light (less clay) matic Hydric Soils³: rial (TF2) k Surface (TF12) Remarks)	Remarks
0-2 10YR 3/2 100 2.5Y 5/2 35 D 10YR 5/8 5 C 10YR 5/8 5 C	M M M M M ation: PL=Pore Lining, M= fine; + = heavy (more clay) Indicators for Proble 2 cm Muck (A10) Red Parent Matel Very Shallow Darl Other (Explain in 3Indicators of hydrophy hydrology must be presproblematic. Hydric Soil	CbGrL CbGrL Matrix. ; - = light (less clay) matic Hydric Soils³: rial (TF2) k Surface (TF12) Remarks)	Remarks
2-16	M ation: PL=Pore Lining, M= fine; + = heavy (more clay) Indicators for Proble 2 cm Muck (A10) Red Parent Mater Very Shallow Dar Other (Explain in 3Indicators of hydrophy hydrology must be presproblematic.	CbGrL Matrix. ; - = light (less clay) matic Hydric Soils³: rial (TF2) k Surface (TF12) Remarks) rtic vegetation and wetland	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Histosol (A1) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: HYDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13)	M ation: PL=Pore Lining, M= fine; + = heavy (more clay) Indicators for Proble 2 cm Muck (A10) Red Parent Mater Very Shallow Dar Other (Explain in 3Indicators of hydrophy hydrology must be presproblematic.	Matrix. ; - = light (less clay) matic Hydric Soils³: rial (TF2) k Surface (TF12) Remarks) rtic vegetation and wetland	
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3Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Histosol (A1) Histosol (A2) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) X Depleted Matrix (F3) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13)	Indicators for Proble 2 cm Muck (A10) Red Parent Mater Very Shallow Darr Other (Explain in 3Indicators of hydrophy hydrology must be presproblematic. Hydric Soil	; - = light (less clay) matic Hydric Soils³: rial (TF2) k Surface (TF12) Remarks)	
3Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Histosol (A1) Histosol (A2) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13)	Indicators for Proble 2 cm Muck (A10) Red Parent Mater Very Shallow Darr Other (Explain in 3Indicators of hydrophy hydrology must be presproblematic. Hydric Soil	; - = light (less clay) matic Hydric Soils³: rial (TF2) k Surface (TF12) Remarks)	
3 Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Histosol (A1) Histosol (A2) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13)	Indicators for Proble 2 cm Muck (A10) Red Parent Mater Very Shallow Darr Other (Explain in 3Indicators of hydrophy hydrology must be presproblematic. Hydric Soil	; - = light (less clay) matic Hydric Soils³: rial (TF2) k Surface (TF12) Remarks)	
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Black Histic (A3)	Very Shallow Dari Other (Explain in 3Indicators of hydrophy hydrology must be pre- problematic. Hydric Soil	k Surface (TF12) Remarks) rtic vegetation and wetland	
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): 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) Loamy Gleyed Matrix (F2) X Depleted Matrix (F2) Redox Dark Surface (F6) Redox Depressions (F8) Water Surface (F7) Redox Depressions (F8) Water Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F6) Water Surface (F7) Redox Dark Surface (F6) Water Surface (F7) Redox Dark Surface (F6) Water Surface (F7) Water Surface (F7) Water Surface (F7) Water Surface (F7) Surface (F7) Redox Dark Surface (F6) Water Surface (F7) Redox Dark Surface (F6) Water Surface (F7) Water Surface (F7) Water Surface (F7) Surface (F7) Redox Dark Surface (F6) Water Surface (F7) Water Surface (F7) Surface (F7) Surface (F7) Surface (F7) Water Surface (F7) S	Other (Explain in 3Indicators of hydrophy hydrology must be pre- problematic. Hydric Soil	Remarks) rtic vegetation and wetland	
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): 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 Depleted Matrix (F3) Redox Dark Surface (F7) Redox Depressions (F8) Redox Depressions (F8) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Dark Surface (F5) Avuatic Invertebrates (B9) (except MLRA Aquatic Invertebrates (B13)	³ Indicators of hydrophy hydrology must be pre- problematic. Hydric Soil	rtic vegetation and wetland	
Thick Dark Surface (A12)	hydrology must be pre- problematic. Hydric Soil		
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Restrictive Layer (if present): Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) High Water Table (A2) Saturation (A3) Water Marks (B1) Water Marks (B1) Aquatic Invertebrates (B13)	Hydric Soil		
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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) Water Marks (B1) Water Marks (B1) Water Marks (B1)		Yes X	No
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Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water Marks (B1) Water Marks (B1) Water Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)			
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High Water Table (A2) Saturation (A3) Water Marks (B1) 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required)	
Saturation (A3) Water Marks (B1) Salt Crust (B11) Aquatic Invertebrates (B13)	Water-Stained Le	aves (B9) (MLRA 1, 2,	
Water Marks (B1) Aquatic Invertebrates (B13)	4A, and 4B)		
Water Marks (B1) Aquatic Invertebrates (B13)	Drainage Patterns	s (B10)	
	Dry-Season Water	r Table (C2)	
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	Saturation Visible	on Aerial Imagery (C9)	
Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3)	Geomorphic Posi		
X Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	Shallow Aquitard		
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6)	FAC-Neutral Test		
X Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A)	Raised Ant Mound		
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Frost-Heave Hum		
Sparsely Vegetated Concave Surface (B8)	I IOSCIIOUVO IIGII	mocks (D1)	
			
Field Observations:			
Surface Water Present? Yes No X Depth (inches): Water Table Present?	Wetland	., ,	
Water Table Present? Yes No X Depth (inches):	Hydrology	Yes X	No
Saturation Present? Yes No X Depth (inches):	Present?		
(includes capillary fringe)	I resent:		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if a	Tresent:		
possible recorded and for some garage, manner in great process, pr			
Remarks:			

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Applications Day of Technology Page Day of Technology Da	Project/Site:	Federal Wa	y City Center Access		City/County:	Federal Way	y/King	Sampling Date:	:	7/24/2020
Landform (hills by the rick well) mills	Applicant/Owner:	: City of F	ederal Way		<u> </u>		State: Washington	on_ Sampling	Point:	W2-SP-5
Submit Charge C	Investigator(s):	Per Joh	nson, Matt Murphy, Aaron T	Thom			Section, Township, Range:	T21N R	04E S1	0
March Other Othe	Landform (hillslop	oe, terrace, etc	c.):	hillslop	e	Local	relief (concave, convex, none):	convex	Slope	(%): <3%
And callaratic Phydrologic conditions on the side hybrids (for this sints of year? And Vegetiation Soil or hydrology	Subregion (LRR)): Northwe	est Forests and Coast (LRR	(A)	Lat: 47.31520	<u>5</u> l	Long: -122.290703	Datum:	NAD	1983 (HARN)
Are Vagetation		-				<u>AgB</u>	. <u></u>			
SulfMARY OF FINDINGS	•	•	• • • • • • • • • • • • • • • • • • • •							
SumMARY OF FINDINGS - Attach site map showing sampling point totations, transects, important features, etc.	=		, Soil, o	r Hydrology	significantly of				Yes _	_X_No
Hydroids Variable Present? Yes										
No				-	<u> </u>	bint location	is, transects, important i	eatures, etc.		
Wetland Hydrology Present? Yes No X 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-4. It is located east of W2-SP-4 on a hilislope. **VEGETATION** **VEGETATION** **VEGETATION** **Precipitation: Absolute Dominant Indicator Species? Status Number of Dominant Species Number of Dominant		_				Is the Sam	pled Area			
Precipitation Precipitatio	,				-	_	letlen dO	No	Y	
According to the Seattle Tacoma Airport NOAA weather station, preopitation was above the normal range for the three months prior to the site visit. Remarks:		Jgy i resent	16.				163			
VEGETATION	•	Seattle Tac	oma Airport NOAA weather	station, preci	ipitation was above	the normal range	e for the three months prior to the	site visit.		
VEGETATION										
VEGETATION		naired unland	d nit to W2-SP-4 It is locat	ed east of W'	2-SP-4 on a hillelone	9				
Absolute Dominant Indicator Number of Dominant Species Status Number of Dominant Species Number of Dominan	W2-31 -3 is the p	Jaired uplant	7 pit to W2-31 -4. It is locat	eu east of WZ	2-31 -4 011 a 11111310pe	5.				
Absolute Dominant Indicator Species Status Status Status Species										
Absolute Dominant Indicator Species Status Status Status Species	VEGETATIO	NI .								
Tree Stratum	VEGETATION	11		Absoluto	Dominant	Indicator	Dominanco Tost workshi	not:		
Populus balsamifera	Tree Stratum		(Plot size: r=3m)			_				
2. 3.	1	leamifora	(1 lot size. <u>1–5m)</u>		· 	<u> </u>	·		2	(4)
Saplind/Shrub Stratum (Plot size: [=2m)		Sammera		00 /6	165	FAC	- ITIAL ATE OBL, FACW, OFF			(A)
Species Across All Strata: 5 (B)	3.				-	-	Total Number of Dominant			
Sapling/Shrub Stratum (Plot size: [=2m)	4.				<u> </u>		-		5	(B)
Percent of Dominant Species Perc	-			80%	= Total Cover	-	Opeolos / toross / tir Otrata.			(D)
Mahonia nervosa 20% Yes FACU That Are OBL, FACW, or FAC: 60% (A/B)	Sapling/Shrub §	Stratum	(Plot size: r=2m)	3070			Percent of Dominant Speci	ies		
2.	4			20%	Yes	FACU	·		60%	(A/B)
A Populus balsamifera	2. Oemleria ce	erasiformis				_				
FACW species x 2 =	3. Rubus arme	eniacus		9%	Yes	FAC	Total % Cover of:	Multiply by:		_
Herb Stratum (Plot size: re1m) 85% Yes FAC UPL species x 4 =	4. Populus bala	lsamifera		1%	No	FAC	OBL species	x 1 =		
Herb Stratum (Plot size: f=1m)	5.						FACW species	x 2 =		
1. Poa pratensis 2. Agrostis capillaris 3. 15% No FAC Column Totals: (A) (B) 3. Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 5. 1 - Rapid Test for Hydrophytic Vegetation 6.				45%	= Total Cover	_	FAC species	x 3 =		
2. Agrostis capillaris 3.	Herb Stratum		(Plot size: <u>r=1m)</u>				FACU species	x 4 =		
Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation	1. Poa pratens	sis		85%	Yes	FAC	UPL species	x 5 =		
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation	2. Agrostis cap	oillaris		15%	No	FAC	Column Totals:	(A)		(B)
1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation (Explain)¹ 100% = Total Cover Woody Vine Stratum (Plot size: r=2m) 1 none 2 Hydrophytic Vegetation Yes X No Present?	3.						Prevalence Ind	ex = B/A =		
X 2 - Dominance Test is >50%	4.					_	•			
7. 3 - Prevalence Index is ≤3.0¹ 8. 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 10. 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation (Explain)¹ 1 none 1 none 1 None 1 None 2 Hydrophytic Yegetation Yes X No Present?	5.				<u> </u>		·		1	
8. 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 10. 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation (Explain)¹ 11.	6.						X 2 - Dominance Test is	s >50%		
9. data in Remarks or on a separate sheet) 10. 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation (Explain)¹ 1Indicators of hydric soil and wetland hydrology must be present. None	7				<u> </u>		· — ·			
10	8.					_	· — · · ·	. ,		ng
Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Hydrophytic Vegetation Yes X No Present?	9.						-		et)	
100% Total Cover 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydric soil and wetland hydrology must be present. 1 Indicators of hydrology must be present. 1 Indic	10				<u> </u>		<u> </u>		4	
Woody Vine Stratum (Plot size: r=2m) 1. none 2.	11				<u> </u>		· 			
1. none Hydrophytic 2. 0% = Total Cover Vegetation Yes X No % Bare Ground in Herb Stratum Present?	18/ Iv - 1/2 O((Diet einer r=2m)	100%	= Total Cover		•	d wetland hydrology	/ must	
2. Hydrophytic 0% = Total Cover Vegetation Yes X No % Bare Ground in Herb Stratum Present?		atum	(Plot size: <u>i=ziii)</u>				be present.			
% Bare Ground in Herb Stratum Present?					-	-	- Hydrophytic			
				0%	= Total Cover		Vegetation	res X No		
Remarks:	% Bare Ground	in Herb Str	atum		•		Present?			
Nemarks.	Pomarke:									
	remarks.									

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SOIL				Sampling Point:	W2-SP-5
Profile Description (Describe to the de	epth needed to document the in	ndicator or confirm the absen	ce 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	
			· -		
			· -		
			·		
			· -		
			·		
<u> </u>			<u> </u>		
¹ Type: C=Concentration, D=Depletion, RI	M=Reduced Matrix, CS=Covered	or Coated Sand Grains. ² Lo	ocation: PL=Pore Lining,	M=Matrix.	
³ Texture: Sa = sand; Si = silt; C = clay; L :	= loam or loamy. Texture Modifie	r: co = coarse; f = fine; vf = ver	y fine; + = heavy (more cl	ay); - = light (less clay)	
Hydric Soil Indicators (Applicable to al	I LRRs, unless otherwise note	d):	Indicators for Prob	olematic Hydric Soils ³ :	
Histosol (A1)	Sandy Redox (S	5)	2 cm Muck (A1	0)	
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Ma	iterial (TF2)	
Black Histic (A3)	Loamy Mucky M	ineral (F1) (except MLRA 1)	Very Shallow D	Oark Surface (TF12)	
Hydrogen Sulfide (A4)	Loamy Gleyed N		Other (Explain		
Depleted Below Dark Surface (A11)	Depleted Matrix	` '		,	
Thick Dark Surface (A12)	Redox Dark Sur		_		
Sandy Mucky Mineral (S1)	Depleted Dark S			ohytic vegetation and wetland	
Sandy Gleyed Matrix (S4)	Redox Depressi		hydrology must be problematic.	present, unless disturbed or	
	Redox Depressi	5113 (1 0)	problematic.		
Restrictive Layer (if present):					
Type: road - compacted co	bble		Hydric Soil		
Depth (inches): 8"			Present?	Yes	No X
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of one requi	red; check all that apply)		Secondary Indicator	s (2 or more required)	
Surface Water (A1)	Water-Stained I	eaves (B9) (except MLRA	Water-Stained	Leaves (B9) (MLRA 1, 2,	
High Water Table (A2)	1, 2, 4A, and		4A, and 4B)		
Saturation (A3)	Salt Crust (B11)	,	Drainage Patte	irne (R10)	
Water Marks (B1)	Aquatic Inverteb			ater Table (C2)	
Sediment Deposits (B2)	Hydrogen Sulfide			ble on Aerial Imagery (C9)	
Drift Deposits (B3)	 , ,	, ,			
		pheres along Living Roots (C3)			
Algal Mat or Crust (B4)	Presence of Rec		Shallow Aquita		
Iron Deposits (B5)		uction in Tilled Soils (C6)	FAC-Neutral T	, ,	
Surface Soil Cracks (B6)		sed Plants (D1) (LRR A)		unds (D6) (LRR A)	
Inundation Visible on Aerial Imagery ((B7) Other (Explain in	Remarks)	Frost-Heave H	ummocks (D7)	
Sparsely Vegetated Concave Surface	e (B8)				
Field Observations:					
Surface Water Present? Yes_	No X	Depth (inches):	Wetland		
Water Table Present? Yes	No X	Depth (inches):	Hydrology	Yes	No X
Saturation Present? Yes	<u> </u>	Depth (inches):	Present?		
(includes capillary fringe)		· · · · · · · · · · · · · · · · · · ·			
Describe Recorded Data (stream gaug	e, monitoring well, aerial phot	os, previous inspections), if a	available:		
Pomarke:					
Remarks:					

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Project/Site:	Federal Way City Center Access		City/County:	Federal Way/Kir	ng	Samp	oling Date:	7/24/2020
Applicant/Owner:			· · ·		State: Wasi	_	Sampling Point:	W3-SP-6
Investigator(s):	Matt Murphy, Aaron Thom			Se	ection, Township, Range):	T21N R04E S)9
Landform (hillslop	pe, terrace, etc.):	depressio	n	Local relie	ef (concave, convex, none)): none	Slope	e (%): <u><3%</u>
Subregion (LRR)): Northwest Forests and Coast	(LRR A)	Lat: 47.315193	Long	g: <u>-122.293503</u>		Datum: NA) 1983 (HARN)
,	• •	erwood gravelly san		AgC -	Not Hydric	NWI classifica		None
•	drologic conditions on the site typic	•		Yes			explain in Rema	
Are Vegetation Are Vegetation	, Soil , Soil				e "Normal Circumstances needed, explain any ans	•		XNo
_								
	OF FINDINGS – Attach sit	-	No No	nt iocations, i	ransecis, importa	ilit italuita	i, etc.	
Hydric Soil Pres	getation Present?	Yes X Yes X	No	Is the Sampled	d Area			
Wetland Hydrolo		Yes X	No	within a Wetla	and?	X	No	
		103 X		<u> </u>				<u> </u>
Precipitation: According to the	Seattle Tacoma Airport NOAA we	ather station, precip	itation was above the	e normal range for	the three months prior	to the site visit.		
0	'	, , , , , , , , , , , , , , , , , , ,			'			
Remarks:	"				(1)515	00.01		
	ffectively a vegetated roadside ditored power and communications utilit		•					
'	plogy conditions below grade were	•			o.n, and abnaraan a		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2011110 11000100),
\ <u></u>								
VEGETATIO	N							
	(5)	Absolute	Dominant	Indicator	Dominance Test wor			
Tree Stratum 1. none	(Plot size: <u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Dominant			(4)
1. <u>none</u> 2.					That Are OBL, FACW	, or FAC:	2	(A)
3.					- · · · · · · · · · · · · · · · · · · ·			
4.			-		Total Number of Dom		0	(D)
			T-1-1 O-1-1-1		Species Across All St	rata:	2	(B)
Sanling/Shrub (Stratum (Plot size: <u>r=2m)</u>	=	= Total Cover		Percent of Dominant S	Charine		
Sapling/Shrub S	Stratum (FIUL SIZE. 1-2m)					•	100%	/ / /D)
1. <u>none</u> 2.					That Are OBL, FACW Prevalence Index wo			. (A/B)
3.			-		Total % Cover of		olv bv:	
4.			-		OBL species	x 1 =	, , , , , , , , , , , , , , , , , , , 	_
 5,					FACW species	x 2 =		
		0% =	= Total Cover		FAC species	x 3 =		
Herb Stratum	(Plot size: r=1m)		- 10.01 00.0.		FACU species	x 4 =		
1. Phalaris aru		100%	Yes	FACW	UPL species	x 5 =		
Juncus effus		40%	Yes	FACW	Column Totals:	(A)		(B)
3. Agrostis cap		30%	No	FAC	Prevalenc	e Index = B/A	=	
4. Lotus cornic		15%	No	FAC	Hydrophytic Vegetat	tion Indicators		
5.					X 1 - Rapid Test fo	r Hydrophytic V	/egetation	
6.					X 2 - Dominance T	est is >50%		
7.					3 - Prevalence In	ndex is ≤3.0 ¹		
8.					4 - Morphologica	l Adaptations ¹ ((Provide support	ing
9.		<u> </u>			data in Rema	rks or on a sep	arate sheet)	
10.		 			5 - Wetland Non-	-Vascular Plant	.s ¹	
11.					Problematic Hyd	rophytic Vegeta	ation (Explain) ¹	
		185% =	= Total Cover		¹ Indicators of hydric so	oil and wetland	hydrology must	
Woody Vine Str	ratum (Plot size: r=2m)				be present.			
1. <u>none</u> 2.			-		Hydrophytic			
		0% =	= Total Cover		Vegetation	Yes X	. No	
% Bare Ground	in Herb Stratum 0%		- 10.01 00.0.		Present?			
<u> </u>								
Remarks:								



ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES

Project No.: 554-2441-022

US Army Corps of Engineers Western Mountains, Valleys, and Coast Region (Version 2.0)

SOIL				Sampling Point:	W3-SP-6
Profile Description (Describe to the d	epth needed to document the in	dicator or confirm the absence	of indicators):		
Depth Matrix		Redox Features			
(inches) Color (moist)	% Color (moist)	% Type ¹	Loc ²	Texture ³	Remarks
Not observed					
<u> </u>					
<u> </u>					
¹ Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, CS=Covered	or Coated Sand Grains. ² Loca	ation: PL=Pore Lining, N	∕I=Matrix.	
3 Texture: S = sand; Si = silt; C = clay; L =	loam or loamy. Texture Modifier:	co = coarse; f = fine; vf = very fir	ne; + = heavy (more clay); - = light (less clay)	
Hydric Soil Indicators (Applicable to a	II LRRs, unless otherwise noted):	Indicators for Prob	lematic Hydric Soils ³ :	
Histosol (A1)	Sandy Redox (S5	5)	2 cm Muck (A1	0)	
Histic Epipedon (A2)	Stripped Matrix (S	36)	Red Parent Ma	erial (TF2)	
Black Histic (A3)		neral (F1) (except MLRA 1)	Very Shallow D	ark Surface (TF12)	
Hydrogen Sulfide (A4)	Loamy Gleyed Ma		Other (Explain i	n Remarks)	
Depleted Below Dark Surface (A11)	Depleted Matrix (
Thick Dark Surface (A12)	Redox Dark Surfa		³ Indicators of hydrop	hytic vegetation and wetland	
Sandy Mucky Mineral (S1)	Depleted Dark Su			resent, unless disturbed or	
Sandy Gleyed Matrix (S4)	Redox Depressio	ns (F8)	problematic.		
Restrictive Layer (if present):					
Type:	_		Hydric Soil		
Depth (inches):			Present?	Yes X	No
Remarks: Assumed hydric. No soil was pit dug for r	numerous reasons.				
Remarks:	numerous reasons.				
Remarks:	numerous reasons.			· · · · · · · · · · · · · · · · · · ·	
Remarks: Assumed hydric. No soil was pit dug for r	numerous reasons.				
Remarks: Assumed hydric. No soil was pit dug for r			Secondary Indicators	s (2 or more required)	
Remarks: Assumed hydric. No soil was pit dug for r HYDROLOGY Wetland Hydrology Indicators:	ired; check all that apply)	- eaves (B9) (except MLRA	-	s (2 or more required) Leaves (B9) (MLRA 1, 2,	
Remarks: Assumed hydric. No soil was pit dug for r HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ	ired; check all that apply)		-	· · · · · · · · · · · · · · · · · · ·	
Remarks: Assumed hydric. No soil was pit dug for r HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ Surface Water (A1)	ired; check all that apply)Water-Stained Le		Water-Stained	Leaves (B9) (MLRA 1, 2,	
Remarks: Assumed hydric. No soil was pit dug for remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestion of the second of the se	ired; check all that apply) Water-Stained Le	В)	Water-Stained 4A, and 4B)	Leaves (B9) (MLRA 1, 2,	
Remarks: Assumed hydric. No soil was pit dug for remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestrements) Surface Water (A1) High Water Table (A2) Saturation (A3)	ired; check all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11)	B) ates (B13)	Water-Stained 4A, and 4B) Drainage Patter Dry-Season Wa	Leaves (B9) (MLRA 1, 2,	
Remarks: Assumed hydric. No soil was pit dug for remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestrate Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ired; check all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp	B) ates (B13) Odor (C1) heres along Living Roots (C3)	Water-Stained 4A, and 4B) Drainage Patter Dry-Season Wa	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2)	
Remarks: Assumed hydric. No soil was pit dug for remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestrated Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ired; check all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr. Hydrogen Sulfide Oxidized Rhizosp	B) ates (B13) Odor (C1) heres along Living Roots (C3) uced Iron (C4)	Water-Stained 4A, and 4B) Drainage Pattel Dry-Season Wa Saturation Visib X Geomorphic Po	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ele on Aerial Imagery (C9) sition (D2) d (D3)	
Remarks: Assumed hydric. No soil was pit dug for research to the soil was pit dug for research to soil was pit d	ired; check all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizosp Presence of Redu	B) ates (B13) Odor (C1) wheres along Living Roots (C3) uced Iron (C4) uction in Tilled Soils (C6)	Water-Stained 4A, and 4B) Drainage Pattel Dry-Season Wa Saturation Visib X Geomorphic Po Shallow Aquitar X FAC-Neutral Te	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ale on Aerial Imagery (C9) asition (D2) d (D3) est (D5)	
Remarks: Assumed hydric. No soil was pit dug for research to the soil was pit dug for	ired; check all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress	ates (B13) Odor (C1) heres along Living Roots (C3) uced Iron (C4) uction in Tilled Soils (C6) and Plants (D1) (LRR A)	Water-Stained 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib X Geomorphic Po Shallow Aquitar X FAC-Neutral Te	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) est (D5) unds (D6) (LRR A)	
Remarks: Assumed hydric. No soil was pit dug for research to the soil was pit dug for	ired; check all that apply) Water-Stained Leter 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebre 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	ates (B13) Odor (C1) heres along Living Roots (C3) uced Iron (C4) uction in Tilled Soils (C6) and Plants (D1) (LRR A)	Water-Stained 4A, and 4B) Drainage Pattel Dry-Season Wa Saturation Visib X Geomorphic Po Shallow Aquitar X FAC-Neutral Te	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) est (D5) unds (D6) (LRR A)	
Remarks: Assumed hydric. No soil was pit dug for research to the soil was pit dug for	ired; check all that apply) Water-Stained Leter 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebre 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	ates (B13) Odor (C1) heres along Living Roots (C3) uced Iron (C4) uction in Tilled Soils (C6) and Plants (D1) (LRR A)	Water-Stained 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib X Geomorphic Po Shallow Aquitar X FAC-Neutral Te	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) est (D5) unds (D6) (LRR A)	
Remarks: Assumed hydric. No soil was pit dug for research to the soil was pit dug for research to soil was pit d	ired; check all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress (B7) X Other (Explain in	ates (B13) Odor (C1) Theres along Living Roots (C3) Luced Iron (C4) Luction in Tilled Soils (C6) Led Plants (D1) (LRR A) Remarks)	Water-Stained 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib X Geomorphic Po Shallow Aquitar X FAC-Neutral Te Raised Ant Mou	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) est (D5) unds (D6) (LRR A)	
Remarks: Assumed hydric. No soil was pit dug for research to the soil was pit dug for research to soil was pit d	ired; check all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress (B7) X Other (Explain in	ates (B13) Odor (C1) Cheres along Living Roots (C3) Cuced Iron (C4) Cuction in Tilled Soils (C6) Ced Plants (D1) (LRR A) Remarks) Depth (inches):	Water-Stained 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib X Geomorphic Po Shallow Aquitar X FAC-Neutral Te Raised Ant Mou Frost-Heave Hu	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ale on Aerial Imagery (C9) asition (D2) d (D3) ast (D5) ands (D6) (LRR A) ammocks (D7)	
Remarks: Assumed hydric. No soil was pit dug for research to the soil was pit dug for research to soil was pit d	ired; check all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress (B7) X Other (Explain in e (B8)	ates (B13) Odor (C1) cheres along Living Roots (C3) cuced Iron (C4) cuction in Tilled Soils (C6) ced Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-Stained 4A, and 4B) Drainage Patter Dry-Season Water Saturation Visite X Geomorphic Potential Shallow Aquitar X FAC-Neutral Terestand Ant Mounty Frost-Heave House Wetland Hydrology	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) le on Aerial Imagery (C9) sition (D2) d (D3) est (D5) unds (D6) (LRR A)	No
Remarks: Assumed hydric. No soil was pit dug for research to the soil was pit dug for research to soil was pit d	ired; check all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress (B7) X Other (Explain in	ates (B13) Odor (C1) Theres along Living Roots (C3) Tuced Iron (C4) Tuction in Tilled Soils (C6) Tilled Plants (D1) (LRR A) Remarks) Depth (inches):	Water-Stained 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib X Geomorphic Po Shallow Aquitar X FAC-Neutral Te Raised Ant Mou Frost-Heave Hu	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ale on Aerial Imagery (C9) asition (D2) d (D3) ast (D5) ands (D6) (LRR A) ammocks (D7)	No
Remarks: Assumed hydric. No soil was pit dug for research to the soil was pit dug for	ired; check all that apply) Water-Stained Let 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebret Hydrogen Sulfide Oxidized Rhizospersence of Reduction Recent Iron Reduction Stunted or Stress (B7) (B7) X Other (Explain in et (B8)	ates (B13) Odor (C1) Theres along Living Roots (C3) Luced Iron (C4) Luction in Tilled Soils (C6) Led Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib X Geomorphic Po Shallow Aquitar X FAC-Neutral Te Raised Ant Mou Frost-Heave Hu Wetland Hydrology Present?	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ale on Aerial Imagery (C9) asition (D2) d (D3) ast (D5) ands (D6) (LRR A) ammocks (D7)	No
Remarks: Assumed hydric. No soil was pit dug for research to the solid was pit dug for research to soil was	ired; check all that apply) Water-Stained Let 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebret Hydrogen Sulfide Oxidized Rhizospersence of Reduction Recent Iron Reduction Stunted or Stress (B7) (B7) X Other (Explain in et (B8)	ates (B13) Odor (C1) Theres along Living Roots (C3) Luced Iron (C4) Luction in Tilled Soils (C6) Led Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib X Geomorphic Po Shallow Aquitar X FAC-Neutral Te Raised Ant Mou Frost-Heave Hu Wetland Hydrology Present?	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ale on Aerial Imagery (C9) asition (D2) d (D3) ast (D5) ands (D6) (LRR A) ammocks (D7)	No
Remarks: Assumed hydric. No soil was pit dug for research to the solid was pit dug for research to soil was pit dug for research to soi	ired; check all that apply) Water-Stained Let 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizospe Presence of Reduce Recent Iron Reduce Stunted or Stress (B7) (B7) X Other (Explain in e (B8) No X Recental photo	ates (B13) Odor (C1) wheres along Living Roots (C3) uced Iron (C4) uction in Tilled Soils (C6) and Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches): Depth (inches):	Water-Stained 4A, and 4B) Drainage Patter Dry-Season Wa Saturation Visib X Geomorphic Po Shallow Aquitar X FAC-Neutral Te Raised Ant Mou Frost-Heave Hu Wetland Hydrology Present?	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ale on Aerial Imagery (C9) asition (D2) at (D3) ast (D5) ands (D6) (LRR A) ammocks (D7) Yes X	

Project/Site: F	Federal Way City Center Access		City/County:	Federal Way	ı/King	Sampling Date:	7/24/2020
Applicant/Owner:	City of Federal Way				State: Washingto	n Sampling	Point: W3-SP-7
Investigator(s):	Matt Murphy, Aaron Thom			_	Section, Township, Range:	 T21N R0	04E S09
Landform (hillslope	e, terrace, etc.):	hillslope	;	Local	relief (concave, convex, none):	convex	Slope (%): <3%
Subregion (LRR):	: Northwest Forests and Coast (LRR A)	Lat: 47.315208	Lo	ong: -122.292679	Datum:	NAD 1983 (HARN)
Soil Unit (Name-I	D-Hydric Rating): Alde	erwood gravelly san	ndy loam -	AgB	- Not Hydric NWI	classification:	None
•	rologic conditions on the site typica	•				(If no, explain in	
Are Vegetation	, Soil	_ , or Hydrology _	significantly dist	turbed?	Are "Normal Circumstances" pres		Yes X No
Are Vegetation	, Soil				(If needed, explain any answers in	,	
SUMMARY C	OF FINDINGS – Attach site	-	ig sampling poir	nt locations	s, transects, important fe	eatures, etc.	
Hydrophytic Veg		Yes X	No	la tha Cama	ulad Ausa		
Hydric Soil Prese		Yes		Is the Samp	otland?		
Wetland Hydrolo	gy Present?	Yes	No <u>X</u>	within a we	Yes	No	<u>X</u>
Precipitation:							
According to the	Seattle Tacoma Airport NOAA wea	ther station, precip	oitation was above the	normal range	for the three months prior to the	site visit.	
Remarks:							
	mple plot for Wetland W3 located u	upslope and east o	f Wetland W3, upon fi	ill prism for gra	evel driveway and adjacent to pow	ver pole. Due to pro	ximity of buried power
	ons utilities, disturbed soil condition	is from the S 320th	n fill embankement, an	nd abnundant u	unsafe human debris (e.g., hypero	dermic needles), a s	soils and hydrology
conditions below	grade were not explored.						
VEGETATION							-
	<u>-</u>	Absolute	Dominant	Indicator	Dominance Test workshe	 et:	
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	<u>Status</u>	Number of Dominant Specie		
1. none	(1.161.6126.	<u>70 00 00 1</u>	<u> </u>	<u>Otatao</u>	That Are OBL, FACW, or FA		2 (A)
2.					ITIAL AIG ODE, I AOVV, O. 17	<u> </u>	(\racktriangle)
3.					Total Number of Dominant		
4.							3 (B)
"			Total Cayor		Species Across All Strata:		3 (B)
Sapling/Shrub S	Stratum (Plot size: <u>r=2m)</u>	=	= Total Cover		Percent of Dominant Specie	20	
14		90%	Voc	FAC			67% (A/B)
1. Rubus armei 2.	niacus	90 /0	Yes	FAC	That Are OBL, FACW, or FA		<u>0170</u> (A/D)
3.					Total % Cover of:		
4					OBL species	x 1 =	
<u> </u>					FACW species	x 2 =	
J		90% =	= Total Cover		FAC species	x3=	
Herb Stratum	(Plot size: r=1m)	<u> </u>	= Total Covei		FACU species	x 4 =	
		650/	Voc	EAC	UPL species		
Agrostis cap Anthoxanthu		65%	Yes You	FAC	Column Totals:	(A)	(B)
7 11 711 70 7111 711 711		20%	Yes	FACU	Prevalence Inde		(D)
<u>. ea praterier</u>		10%	No No	FAC	Hydrophytic Vegetation In	-	
 Hypericum p 5. 	епогатит	5%	No	FACU	1 - Rapid Test for Hydr		
6.					X 2 - Dominance Test is	. , .	
7.					3 - Prevalence Index is		
8. ————							
9.					4 - Morphological Adap data in Remarks or	,	•
10.					5 - Wetland Non-Vasci		<i>(</i> 1)
l 					Problematic Hydrophyt		ain\1
11		4000/	Total Occupa				
Woody Vine Stra	atum (Plot size: <u>r=2m)</u>	100%=	= Total Cover		¹ Indicators of hydric soil and be present.	l wetiana nyarology	must
1. none	1101 3120				ре ргезопа.		
2.					Hydrophytic		
		0% =	= Total Cover	_		es X No	
% Bare Ground	in Herb Stratum 0%				Present?		
Remarks:							
Tronian No.							

ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES

SOIL			Sampling Point:	W3-SP-7
Profile Description (Describe to the depth nee	eded to document the indicator or confirm the absen-	ce of indicators):		
Depth Matrix	Redox Features			
(inches) Color (moist) %	Color (moist) % Type ¹	Loc ²	Texture ³	Remarks
Not observed				
				
<u> </u>		 -		
<u> </u>	<u> </u>			
¹ Type: C=Concentration, D=Depletion, RM=Redu	ced Matrix, CS=Covered or Coated Sand Grains. ² Lo	cation: PL=Pore Lining, M=	Matrix.	
³ Texture: Sa = sand; Si = silt; C = clay; L = loam c	or loamy. Texture Modifier: co = coarse; f = fine; vf = very	y fine; + = heavy (more clay	; - = light (less clay)	
Hydric Soil Indicators (Applicable to all LRRs,	unless otherwise noted):	Indicators for Proble	matic Hydric Soils ³ :	
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)		
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Mate	rial (TF2)	
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dar	k Surface (TF12)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in		
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		,	
Thick Dark Surface (A12)	Redox Dark Surface (F6)			
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		tic vegetation and wetland	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	nydrology must be pre problematic.	sent, unless disturbed or	
		ргологнано.		
Restrictive Layer (if present):				
Туре:		Hydric Soil		
Depth (inches):		Present?	Yes	No X
Remarks:				
Assumed lack of hydric soils. Soils were not exca	vated.			
HYDROLOGY				
Wetland Hydrology Indicators:				
Primary Indicators (minimum of one required; che	ck all that apply)	Secondary Indicators	(2 or more required)	
Surface Water (A1)	Water-Stained Leaves (B9) (except MLRA	•	eaves (B9) (MLRA 1, 2,	
High Water Table (A2)	1, 2, 4A, and 4B)	4A, and 4B)	saves (D3) (IVILITA 1, 2,	
	•	,	o (D40)	
Saturation (A3) Water Marks (B1)	Salt Crust (B11) Aquatic Invertebrates (B13)	Drainage Pattern		
	 '	Dry-Season Wate		
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)		on Aerial Imagery (C9)	
Drift Deposits (B3)	Oxidized Rhizospheres along Living Roots (C3)	Geomorphic Pos		
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard		
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6)	FAC-Neutral Tes	t (D5)	
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)	Raised Ant Moun	ds (D6) (LRR A)	
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Frost-Heave Hun	nmocks (D7)	
Sparsely Vegetated Concave Surface (B8)				
Field Observations:				
Surface Water Present? Yes	No X Depth (inches):	Wetland		
Water Table Present? Yes	No Depth (inches):	Hydrology	Yes	No X
Saturation Present? Yes	No Depth (inches):	Present?		
(includes capillary fringe)				
Describe Recorded Data (stream gauge, moni	toring well, aerial photos, previous inspections), if a	vailable:		
Remarks: Assumed lack of saturation in disturbed soils. Soil	nit was not dua			
	L			

ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES

Project/Site:	Federal Way City Cente	er Access		City/County:	Federal Way/Kin	na	Sampling Date: 8/13/2020
Applicant/Owner:					-	State: Washingto	
Investigator(s):	Per Johnson				Se	ection, Township, Range:	
Landform (hillslope	e, terrace, etc.):		depressio	on	Local relie	ef (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-I	D-Hydric Rating):	Arents, A	Alderwood ma	aterial -	AmC -		classification: None
•	rologic conditions on th		•		Yes		(If no, explain in Remarks)
Are Vegetation	, Soil			significantly dist naturally probler		"Normal Circumstances" pre	
Are Vegetation	, Soil				•	needed, explain any answers	•
					nt locations, τ	transects, important f	eatures, etc.
Hydrophytic Veg		Yes_	X	No	Is the Sampled	l Δrea	
Hydric Soil Prese		Yes_	X	No	within a Wetlan	nd?	Ma
Wetland Hydrolo	gy Present?	Yes_	<u> </u>	No		Yes X	No
Precipitation: According to the	Seattle Tacoma Airport	· NOAA weather st	tation precip	sitation was within the	normal range for t	the three months prior to the	site visit
According to the	Seattle Tacoma Amport	NOAA WOALIOI G.	alion, proor	Itation was within the	Homai rango io	The times months prior to the	Site visit.
Remarks:							
		0 1	,	, ·		,	-8 location is approximately 20 feet
the Olympic Pipel		vertiow pipe iroin	Wetland wo	(a stormwater ponu)	which exterios we	St below the 1-5 on-ramp	to the eastern toe of a fill slope, west of
VEGETATION	N .						
		3m semi-	Absolute	Dominant	Indicator	Dominance Test workshe	
Tree Stratum	(Plot size:	circle)	% Cover	Species?	<u>Status</u>	Number of Dominant Speci	ies
1. Alnus rubra			90%	Yes	FAC	That Are OBL, FACW, or F	FAC: 1 (A)
2. Fraxinus latit			10%	No	FACW		
3. Sorbus aucu	ıparia		2%	No	NOL	Total Number of Dominant	
4.		 -				Species Across All Strata:	1 (B)
Canling/Chrub C	/Plot cizo:	3m semi-	102% =	= Total Cover		Daraget of Dominant Speci	
Sapling/Shrub S	Stratum (Plot size:	circle)				Percent of Dominant Specie	
1. <u>none</u> 2.						That Are OBL, FACW, or F Prevalence Index worksh	7.C (7.72)
3.						Total % Cover of:	Multiply by:
4.						OBL species	x 1 =
5.		<u> </u>				FACW species	x 2 =
		2m comi	0% =	= Total Cover		FAC species	x 3 =
Herb Stratum	(Plot size:	2m semi- circle)	<u> </u>	- 1000 0 - 1 - 1		FACU species	x 4 =
1. none	`	,				UPL species	x 5 =
2.						Column Totals:	(A) (B)
3.						Prevalence Inde	ex = B/A =
4.						Hydrophytic Vegetation II	ndicators:
5.						1 - Rapid Test for Hyd	Irophytic Vegetation
6.						X 2 - Dominance Test is	>50%
7.						3 - Prevalence Index is	
8.							ptations ¹ (Provide supporting
9.							r on a separate sheet)
10.						5 - Wetland Non-Vasc	
11							rtic Vegetation (Explain) ¹
Woody Vine Stra	atum (Plot size:	1m semi- circle)	0% =	= Total Cover		¹ Indicators of hydric soil and be present.	d wetland hydrology must
1. <u>none</u> 2.						Hydrophytic	
			0% =	= Total Cover			res X No
% Bare Ground	in Herb Stratum	100%		- 10101 0010.		Present?	
Remarks:							

rofile Description	(Describe to the de	epth needed	to document the inc	dicator or confi	irm the absence	e 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	С	M	SiL	
					- <u></u>			
		_						
Type: C-Concentr	ation D-Denletion R	M-Reduced	Matrix, CS=Covered of	or Coated Sand	Grains ² Loca	ation: PL=Pore Lining	M-Matrix	
• •	•					_	clay); - = light (less clay)	
			ess otherwise noted)		- IIIC, VI - VCIY I		oblematic Hydric Soils ³ :	
•	oro (Apprioable to a	i Litito, unit	•				•	
Histosol (A1)	(4.0)	-	Sandy Redox (S5)			2 cm Muck (A	,	
Histic Epipedon		-	Stripped Matrix (S			Red Parent M		
Black Histic (A3	•	-	Loamy Mucky Min		ot MLRA 1)		Dark Surface (TF12)	
Hydrogen Sulfic		-	X Loamy Gleyed Ma			Other (Explain	n in Remarks)	
	Dark Surface (A11)	-	X Depleted Matrix (F	,				
Thick Dark Surf	` ,	_	Redox Dark Surfa			³ Indicators of hydro	ophytic vegetation and wetlar	nd
Sandy Mucky M		-	Depleted Dark Su			hydrology must be	present, unless disturbed or	
Sandy Gleyed N	Matrix (S4)	-	Redox Depression	ns (F8)		problematic.		
estrictive Layer (i	f present):							
т						Herdela Call		
Type:						Hydric Soil		
Depth (inches):						Present?	Yes X	No
• • •						-	Yes X	No
Depth (inches):						-	Yes X	No
Depth (inches):						-	Yes X	No
Depth (inches): emarks:						-	Yes X	No
Depth (inches): Remarks: HYDROLOGY Vetland Hydrology		red; check a	Il that apply)			Present?	Yes X	No
Depth (inches): Temarks: HYDROLOGY Vetland Hydrology Irimary Indicators (inches):	r Indicators: minimum of one requi	red; check a		aves (B9) (exce	ept MLRA	Present? Secondary Indicate	ors (2 or more required)	No
Depth (inches): HYDROLOGY Vetland Hydrology rimary Indicators (r	r Indicators: ninimum of one requi	red; check al	Water-Stained Lea	, , ,	ept MLRA	Present? Secondary Indicate	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	No
Depth (inches): HYDROLOGY Vetland Hydrology Irimary Indicators (r Surface Water (x) High Water Tab	r Indicators: ninimum of one requi	red; check a	Water-Stained Lea	, , ,	ept MLRA	Secondary Indicate Water-Staine 4A, and 4B	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	No
Depth (inches): Remarks: HYDROLOGY Vetland Hydrology rimary Indicators (r Surface Water (according to the content of the	r Indicators: ninimum of one requi (A1) lle (A2)	red; check a	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11)	3)	ept MLRA	Secondary Indicate Water-Staine 4A, and 4B Drainage Pate	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 3) terns (B10)	No
Depth (inches): Idemarks: Inches Street St	r Indicators: minimum of one requi (A1) ble (A2)	- - -	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra	3) ates (B13)	ept MLRA	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate X Dry-Season V	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 3) terns (B10) Water Table (C2)	No
Depth (inches): HYDROLOGY Vetland Hydrology Irimary Indicators (r Surface Water (r X High Water Tab X Saturation (A3) Water Marks (B Sediment Depo	r Indicators: minimum of one requi (A1) le (A2) (1) sits (B2)	- - -	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra X Hydrogen Sulfide	ates (B13) Odor (C1)		Secondary Indicate Water-Staine 4A, and 4B Drainage Pate X Dry-Season V Saturation Vis	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 3) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9)	No
Pepth (inches): Remarks: HYDROLOGY Vetland Hydrology rimary Indicators (r Surface Water (and the content of the content o	r Indicators: minimum of one requi (A1) ble (A2) (A1) sits (B2) (A33)	- - -	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra X Hydrogen Sulfide Oxidized Rhizosph	ates (B13) Odor (C1) neres along Livi		Secondary Indicate Water-Staine 4A, and 4E Drainage Pate X Dry-Season V Saturation Vis X Geomorphic I	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2)	No
HYDROLOGY Vetland Hydrology Trimary Indicators (r Surface Water (x High Water Tab X Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (I Algal Mat or Cru	r Indicators: minimum of one requi (A1) ble (A2) (A1) sits (B2) (A3) ust (B4)	- - -	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra X Hydrogen Sulfide Oxidized Rhizosph Presence of Redu	ates (B13) Odor (C1) neres along Livin	ng Roots (C3)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate X Dry-Season V Saturation Vis X Geomorphic I Shallow Aquit	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3)	No
Depth (inches): Itemarks: Itema	r Indicators: minimum of one requi (A1) le (A2) sits (B2) sits (B4) ust (B4)	- - -	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra X Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu	ates (B13) Odor (C1) neres along Livinced Iron (C4) ction in Tilled Sc	ng Roots (C3) bils (C6)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate X Dry-Season V Saturation Vis X Geomorphic I Shallow Aquit X FAC-Neutral	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5)	No
Pepth (inches): Remarks: HYDROLOGY Vetland Hydrology Inimary Indicators (incompany I	r Indicators: minimum of one requi (A1) ble (A2) c1) sits (B2) c33) ust (B4) c35) acks (B6)	- - - - - -	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra X Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresse	ates (B13) Odor (C1) neres along Livinated Iron (C4) ction in Tilled So	ng Roots (C3) bils (C6)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate X Dry-Season V Saturation Vis X Geomorphic I Shallow Aquit X FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) lounds (D6) (LRR A)	No
Depth (inches): Image: Inches	r Indicators: minimum of one requi (A1) lle (A2) (A1) sits (B2) (B3) ust (B4) (B5) acks (B6) lle on Aerial Imagery	- - - - - - (B7)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra X Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu	ates (B13) Odor (C1) neres along Livinated Iron (C4) ction in Tilled So	ng Roots (C3) bils (C6)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate X Dry-Season V Saturation Vis X Geomorphic I Shallow Aquit X FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5)	No
Pepth (inches): Itemarks: Itema	r Indicators: minimum of one requi (A1) ble (A2) c1) sits (B2) s33) ust (B4) s25) acks (B6) le on Aerial Imagery ated Concave Surface	- - - - - - (B7)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra X Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresse	ates (B13) Odor (C1) neres along Livinated Iron (C4) ction in Tilled So	ng Roots (C3) bils (C6)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate X Dry-Season V Saturation Vis X Geomorphic I Shallow Aquit X FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) lounds (D6) (LRR A)	No
Depth (inches): Itemarks: ItyDROLOGY Vetland Hydrology Itimary Indicators (r Surface Water (r X High Water Tab X Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (I Algal Mat or Cru Iron Deposits (E Surface Soil Cra Inundation Visib Sparsely Vegeta Iteld Observations	r Indicators: minimum of one requi (A1) ble (A2) c1) sits (B2) a33) ust (B4) acks (B6) ble on Aerial Imagery ated Concave Surface :	- - - - - - (B7)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra X Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresse	ates (B13) Odor (C1) heres along Livinced Iron (C4) ction in Tilled Soled Plants (D1) (Remarks)	ng Roots (C3) bils (C6) LRR A)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate X Dry-Season V Saturation Vis X Geomorphic I Shallow Aquit X FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) lounds (D6) (LRR A)	No
Pepth (inches): Itemarks: Itemary Indicators (inches): Surface Water (inches): Itemary Indicators (inches): Surface Water Tab. X Saturation (A3) Water Marks (inches): Sediment Deposits (inches): Itemary Indicators (inches): Sediment Deposits (inches): Itemarks: I	r Indicators: minimum of one requirements (A1) ple (A2) (A1) sits (B2) (A3) sits (B4) (A3) sits (B4) (A3) sits (B4) (A3) sits (B6)	- - - - (B7) e (B8)	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra X Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduc Stunted or Stresse X Other (Explain in F	ates (B13) Odor (C1) neres along Livinced Iron (C4) ction in Tilled Sc ed Plants (D1) (Remarks) Depth (inches)	ng Roots (C3) pils (C6) LRR A)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate X Dry-Season V Saturation Vis X Geomorphic I Shallow Aquit X FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) lounds (D6) (LRR A)	No
Depth (inches): Itemarks: ItyDROLOGY Vetland Hydrology Itimary Indicators (r Surface Water (r X High Water Tab X Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (I Algal Mat or Cru Iron Deposits (E Surface Soil Cra Inundation Visib Sparsely Vegeta Iteld Observations	r Indicators: minimum of one requirements (A1) ple (A2) (A1) sits (B2) (A3) sits (B4) (A3) sits (B4) (A3) sits (B4) (A3) sits (B6)	- - - - (B7) e (B8)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra X Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresse	ates (B13) Odor (C1) heres along Livinced Iron (C4) ction in Tilled Soled Plants (D1) (Remarks)	ng Roots (C3) pils (C6) LRR A)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pati X Dry-Season V Saturation Vis X Geomorphic I Shallow Aquit X FAC-Neutral Raised Ant M Frost-Heave	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) lounds (D6) (LRR A)	No
Pepth (inches): Itemarks: Itemary Indicators (inches): Surface Water (inches): Itemary Indicators (inches): Surface Water Tab. X Saturation (A3) Water Marks (inches): Sediment Deposits (inches): Itemary Indicators (inches): Sediment Deposits (inches): Itemarks: I	r Indicators: minimum of one requi (A1) ble (A2) c1) sits (B2) s33) ust (B4) s55) acks (B6) le on Aerial Imagery ated Concave Surface : eent? Yes tent? Yes Yes	(B7) e (B8)	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra X Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduc Stunted or Stresse X Other (Explain in F	ates (B13) Odor (C1) neres along Livinced Iron (C4) ction in Tilled Sc ed Plants (D1) (Remarks) Depth (inches)	ng Roots (C3) pils (C6) (LRR A)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate X Dry-Season V Saturation Vis X Geomorphic I Shallow Aquit X FAC-Neutral Raised Ant M Frost-Heave	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) eard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)	
Depth (inches): Itemarks: ItyDROLOGY Vetland Hydrology Surface Water Table Sediment Depo Drift Deposits (I Algal Mat or Cru Iron Deposits (I Surface Soil Cra Inundation Visib Sparsely Vegeta Vetland Observations Surface Water Preservator Table Preservator Table Preservator Includes capillary from the company of the company	r Indicators: minimum of one requi (A1) ple (A2) (A1) sits (B2) (A3) sit (B4) (A3) secks (B6) ple on Aerial Imagery ated Concave Surface (Concave Surface) ((B7) e (B8)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra X Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct Stunted or Stresso X Other (Explain in Filter) No X No X	ates (B13) Odor (C1) neres along Livinced Iron (C4) ction in Tilled Soled Plants (D1) (Remarks) Depth (inches) Depth (inches)	ng Roots (C3) bils (C6) LRR A) : : surface	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate X Dry-Season W Saturation Vis X Geomorphic I Shallow Aquit X FAC-Neutral Raised Ant M Frost-Heave Wetland Hydrology Present?	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) eard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)	
Depth (inches): Itemarks: ItyDROLOGY Vetland Hydrology Surface Water Table Sediment Depo Drift Deposits (I Algal Mat or Cru Iron Deposits (I Surface Soil Cra Inundation Visib Sparsely Vegeta Vetland Observations Surface Water Preservator Table Preservator Table Preservator Includes capillary from the company of the company	r Indicators: minimum of one requi (A1) ple (A2) (A1) sits (B2) (A3) sit (B4) (A3) secks (B6) ple on Aerial Imagery ated Concave Surface therefore a Yes mit? Yes mit? Yes mit? Yes mitge)	(B7) e (B8)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra X Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresso X Other (Explain in F	ates (B13) Odor (C1) neres along Livinced Iron (C4) ction in Tilled Soled Plants (D1) (Remarks) Depth (inches) Depth (inches)	ng Roots (C3) bils (C6) LRR A) : : surface	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate X Dry-Season W Saturation Vis X Geomorphic I Shallow Aquit X FAC-Neutral Raised Ant M Frost-Heave Wetland Hydrology Present?	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) eard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)	

Project/Site: Federal Way City Center Access		City/County:	Federal Wa	y/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 S	316
Landform (hillslope, terrace, etc.):	hillslop	е	Local	relief (concave, convex, none):	none Slop	oe (%): 3-5%
Subregion (LRR): Northwest Forests and Coast (I	_RR A)	Lat: 47.313866	L	Long:122.296394	Datum: NA	AD 1983 (HARN)
Soil Unit (Name-ID-Hydric Rating): Are	ents, Alderwood n	naterial -	AmC	- Not Hydric NWI c	classification:	None
Are climatic / hydrologic conditions on the site typical	I for this time of y	ear?		Yes X No	(If no, explain in Rem	arks)
Are Vegetation, Soil				Are "Normal Circumstances" pres	ent? Yes	X No
Are Vegetation, Soil	, or Hydrology	naturally proble	ematic?	(If needed, explain any answers in	Remarks.)	
SUMMARY OF FINDINGS - Attach site	map showir	ng sampling poi	nt location	is, transects, important fe	atures, etc.	
Hydrophytic Vegetation Present?	Yes X	No				
Hydric Soil Present?	Yes	No X	Is the Sam	pled Area		
Wetland Hydrology Present?	Yes	No X	within a W	/etland? Yes	No X	
Precipitation: According to the Seattle Tacoma Airport NOAA wea Remarks:	ther station, preci	pitation was within the	normal range	for the three months prior to the si	te visit.	
Sample plot is within the uplands adjacent to W5-SP VEGETATION	-8.					
VEGETATION	A la a a la sta	Daminant	la dia atau	Daminana Taat wantahaa	4-	
Trac Ctastum (Diet size (F-3m)	Absolute	Dominant	Indicator	Dominance Test workshee		
Tree Stratum (Plot size: r=3m) 1. Alous rubro	% Cover	Species?	Status -	Number of Dominant Species		(4)
Allius Tubia	70%	Yes	FAC	That Are OBL, FACW, or FA	AC: 3	(A)
2. <u>Thuja plicata</u> 3.	30%	Yes	FAC	-		
4.				Total Number of Dominant	_	(5)
				Species Across All Strata:	5	(B)
(7)	100%	= Total Cover				
Sapling/Shrub Stratum (Plot size: r=2m)				Percent of Dominant Species	000	,
Rubus ursinus Pubus spactabilis	50%	Yes	FACU	That Are OBL, FACW, or FA		<u>(</u> (A/B)
Nubus speciabilis	25%	Yes	FAC	Prevalence Index workshee		
3. Oemleria cerasiformis	15%	No	FACU	Total % Cover of:	Multiply by:	_
4.	_			OBL species	x 1 =	
5	_			FACW species	x 2 =	
	90%	= Total Cover		FAC species	x 3 =	
Herb Stratum (Plot size: r=1m)				FACU species	x 4 =	
1. Polystichum munitum	30%	Yes	FACU	UPL species	x 5 =	
2. Equisetum hyemale	2%	No	FACW	Column Totals:	(A)	(B)
3				Prevalence Index		
4				Hydrophytic Vegetation Inc		
5				1 - Rapid Test for Hydro		
6				X 2 - Dominance Test is >		
7	_			3 - Prevalence Index is		
8	_			4 - Morphological Adapt	ations ¹ (Provide suppor	rting
9	_			data in Remarks or d	on a separate sheet)	
10		- <u></u>		5 - Wetland Non-Vascul	lar Plants ¹	
11	_			Problematic Hydrophytic	c Vegetation (Explain) ¹	
	32%	= Total Cover		¹ Indicators of hydric soil and	wetland hydrology must	t
Woody Vine Stratum (Plot size: r=2m)				be present.		
1. <u>none</u>				Llydrophysio		
2		= Total Cover		_ Hydrophytic Vegetation Ye	es X No	
% Bare Ground in Herb Stratum 20%	0%	= Tutal Cover		Present?	3 <u>v</u> 140 —	
				i rosont:		
Remarks:						
40% moss cover in herb strata						

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SOIL						Sampling Point:	W5-SP-9
Profile Description (Describe to	the depth needed	to document the i	ndicator or confi	irm the absend	ce of indicators):		
Depth N	//atrix		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=Deple	tion, RM=Reduced I	Matrix, CS=Covered	I or Coated Sand	Grains. ² Loo	cation: PL=Pore Lining,	M=Matrix.	
3 Texture: Sa = sand; Si = silt; C = 3	clay; L = loam or loa	my. Texture Modifie	r: co = coarse; f =	= fine; vf = very	fine; + = heavy (more c	lay); - = light (less clay)	
Hydric Soil Indicators (Applicabl	e to all LRRs, unle	ss otherwise note	d):		Indicators for Pro	blematic Hydric Soils ³ :	
Histosol (A1)		Sandy Redox (S	55)		2 cm Muck (A	10)	
Histic Epipedon (A2)	_	Stripped Matrix ((S6)		Red Parent Ma		
Black Histic (A3)	_		lineral (F1) (excep	ot MI RA 1)		Dark Surface (TF12)	
Hydrogen Sulfide (A4)	_	Loamy Gleyed N		ot METOT 1)	Other (Explain	, ,	
Depleted Below Dark Surface	-(Δ11)	Depleted Matrix	` ,		Other (Explain	Till Rolliano)	
Thick Dark Surface (A12)	_	Redox Dark Sur			-	phytic vegetation and wetland	
Sandy Mucky Mineral (S1)	_	Depleted Dark S				present, unless disturbed or	
Sandy Gleyed Matrix (S4)	_	Redox Depressi	ons (F8)		problematic.		
Restrictive Layer (if present):							
Type: gravel/cobbles	s/roots				Hydric Soil		
Depth (inches): 8					Present?	Yes	No X
Remarks:							
Soil appears to be fill for I-5 embar	kment.						
HYDROLOGY							
Wetland Hydrology Indicators:							
	م برمینتمیل مامماد ما	that apply			Casandan Indianta	ra (2 or mara raquirad)	
Primary Indicators (minimum of one	e requirea; cneck aii		_		-	rs (2 or more required)	
Surface Water (A1)	_		eaves (B9) (exce	ept MLRA		I Leaves (B9) (MLRA 1, 2,	
High Water Table (A2)		1, 2, 4A, and	4B)		4A, and 4B)		
Saturation (A3)	_	Salt Crust (B11)			Drainage Patte	erns (B10)	
Water Marks (B1)	_	Aquatic Inverteb	rates (B13)		Dry-Season W	/ater Table (C2)	
Sediment Deposits (B2)	_	Hydrogen Sulfide	e Odor (C1)		Saturation Visi	ible on Aerial Imagery (C9)	
Drift Deposits (B3)	_	Oxidized Rhizos	pheres along Livi	ng Roots (C3)	Geomorphic P	Position (D2)	
Algal Mat or Crust (B4)	_	Presence of Red	duced Iron (C4)		Shallow Aquita	ard (D3)	
Iron Deposits (B5)	_	Recent Iron Red	luction in Tilled Sc	oils (C6)	FAC-Neutral T	est (D5)	
Surface Soil Cracks (B6)	_	Stunted or Stres	sed Plants (D1) (LRR A)	Raised Ant Mo	ounds (D6) (LRR A)	
Inundation Visible on Aerial Im	agery (B7)	Other (Explain in	n Remarks)		Frost-Heave H	lummocks (D7)	
Sparsely Vegetated Concave	Surface (B8)						
Field Observations:	· , ,						
Surface Water Present?	Voc	No. V	Donth (inches)	۸.	Wetland		
Water Table Present?	Yes I	NO X	Depth (inches)			Van	No. V
			Depth (inches)		Hydrology	Yes	No X
Saturation Present? (includes capillary fringe)	Yes1	No X	Depth (inches))	Present?		
(morados sapiliary milye)							
Describe Recorded Data (stream	n gauge, monitorin	g well, aerial phot	os, previous ins	pections), if a	vailable:		
Remarks:							

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Project/Site:	Federal Way City Center	r Access		City/County:	Federal W	Vay/King	Sampling [Date: 4/	/30/2019
Applicant/Owner:						State: Washi	-	pling Point:	W5-SP-23
Investigator(s):	Per Johnson				•	Section, Township, Range:	T2	1N R04E S16	
Landform (hillslop	pe, terrace, etc.):		Depressi	on	Local re	elief (concave, convex, none):			%): None
Subregion (LRR)): Northwest Forests a	nd Coast (LRR A))	Lat: 47.312046	_ Loı	ng: -122.296600	Da	atum: NAD 1	983 (HARN)
Soil Unit (Name-	-ID-Hydric Rating):	Arents, A	lderwood m	naterial -	AmC	- Not Hydric N	NWI classification:	PSS/	EM1C
•	drologic conditions on the		•			es <u>X</u> No		ain in Remark	
Are Vegetation	, Soil					re "Normal Circumstances"	•	Yes	X_No
Are Vegetation		, or H	-		·	If needed, explain any answ	ŕ		
					nt locations,	, transects, importar	nt features, et	<u>c.</u>	
	getation Present?	Yes_	<u>X</u>	No	Is the Sample	lad Araa			
Hydric Soil Pres		Yes_	X	No	within a Wet	land?			
Wetland Hydrolo	ogy Present?	Yes_	X	No	I Within a Wet	riand? Yes	X No		
	Seattle Tacoma Airport N	NOAA weather sta	ation, precip	pitation was within the	normal range fo	or the three months prior to	the site visit.		
Remarks: Sample plot is lo	ocated within Wetland 5, 1	15 feet east of del	ineated bog	g edge. Corresponds to	o DP-1 from 20°	19 bog delineation.			
VEGETATIO	N								
			Absolute	Dominant	Indicator	Dominance Test work	ksheet:		
Tree Stratum	(Plot size:	<u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Dominant S	pecies		
1. Alnus rubra			90%	Yes	FAC	That Are OBL, FACW,	or FAC:	2	(A)
2.									
3.						Total Number of Domin	nant		
4.						Species Across All Stra	ata:	3	(B)
		_	90%	= Total Cover					
Sapling/Shrub S	Stratum (Plot size:	<u>r=2m)</u>				Percent of Dominant Sp	pecies		
 Oemleria ce 	erasiformis		50%	Yes	FACU	That Are OBL, FACW,	or FAC:	<u>67%</u>	(A/B)
2.						Prevalence Index wor			
3.						Total % Cover of:	Multiply by:	<u></u>	
4						OBL species	x 1 =		
5						FACW species	x 2 =		
		_	50%	= Total Cover		FAC species	x 3 =		
Herb Stratum	(Plot size:	<u>r=1m)</u>				FACU species	x 4 =		
 Glyceria stri 	iata		40%	Yes	OBL	UPL species	x 5 =		
2. <u>Urtica dioica</u>	3		5%	No	FAC	Column Totals:	(A)		(B)
3.							Index = B/A =		
4						Hydrophytic Vegetation			
5.							Hydrophytic Veget	ation	
6.						X 2 - Dominance Te			
7						3 - Prevalence Ind			
8.		<u>_</u>					Adaptations ¹ (Prov		ļ
9.							ks or on a separate	sheet)	
10.						5 - Wetland Non-V		1	
11							ophytic Vegetation		
Woody Vine Str	ratum (Plot size: r	<u>=2m)</u>	45%	= Total Cover		¹ Indicators of hydric soi be present.	il and wetland hydro	ology must	
1. <u>none</u> 2.						Hydrophytic			
			0%	= Total Cover		Vegetation	Yes X	No	
% Bare Ground	in Herb Stratum	0%		- Total Gover		Present?	<u> </u>		
Remarks:									
Vegetation plots	chosen to capture wetlar	nd versus upland l	hummocks.						

Parametrix

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SOIL							Sampling Point:	W5-SP-23
Profile Description	(Describe to the de	pth neede	d to document the inc	licator or con	firm the absenc	e of indicators):		
Depth	Matrix			Redox	Features		_	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ³	Remarks
+2-0			<u> </u>					Organic debris
0-8	10YR 3/2	98	10YR 4/6	2	<u>C</u>	M	SiL	
8-14	10YR 3/2	80	2.5Y 6/2	15	<u>D</u>	M	SiL	
			10YR 4/6	5	C	M		
<u> </u>			· ———					
								
			 _				 -	
• •	•		d Matrix, CS=Covered o			cation: PL=Pore Lining,		
			•		f = fine; vf = very	fine; + = heavy (more cl		
•	rs (Applicable to al	i LKKS, un	less otherwise noted)				olematic Hydric Soils ³ :	
Histosol (A1)			Sandy Redox (S5)			2 cm Muck (A1	,	
Histic Epipedon (Stripped Matrix (S			Red Parent Ma		
Black Histic (A3)			Loamy Mucky Min	, , ,	ept MLRA 1)		Oark Surface (TF12)	
Hydrogen Sulfide	` '		Loamy Gleyed Ma Depleted Matrix (F	, ,		Other (Explain	in Remarks)	
Thick Dark Surfa	Dark Surface (A11)		X Redox Dark Surfa	,				
Sandy Mucky Mir			Depleted Dark Su				ohytic vegetation and wetlan	d
Sandy Gleyed Ma			Redox Depression			problematic.	present, unless disturbed or	
				(. 0)		problemate.		
estrictive Layer (if						Hudria Cail		
Type: I Depth (inches):						Hydric Soil Present?	Yes X	No
Deptif (inches).	n/a					i resent:	Tes X	
HYDROLOGY								
Vetland Hydrology	Indicators:							
rimary Indicators (m		red: check	all that apply)			Secondary Indicator	rs (2 or more required)	
X Surface Water (A	•	,	Water-Stained Lea	aves (R9) (exc	ent MIRA	•	Leaves (B9) (MLRA 1, 2,	
X High Water Table			1, 2, 4A, and 4E		opt WERV	4A, and 4B)		
X Saturation (A3)	o (, i <u>r</u>)		Salt Crust (B11)	-,		Drainage Patte		
Water Marks (B1	1)		Aquatic Invertebra	ites (B13)			ater Table (C2)	
Sediment Depos			X Hydrogen Sulfide				ble on Aerial Imagery (C9)	
Drift Deposits (B	, ,		Oxidized Rhizosph	, ,	ving Roots (C3)	Geomorphic P		
Algal Mat or Crus	st (B4)		Presence of Redu	ced Iron (C4)		Shallow Aquita	rd (D3)	
Iron Deposits (B	5)		Recent Iron Redu	ction in Tilled S	Soils (C6)	FAC-Neutral T	est (D5)	
Surface Soil Cra	cks (B6)		Stunted or Stresse	ed Plants (D1)	(LRR A)	Raised Ant Mo	unds (D6) (LRR A)	
Inundation Visible	e on Aerial Imagery	(B7)	Other (Explain in F	Remarks)		Frost-Heave H	ummocks (D7)	
Sparsely Vegeta	ted Concave Surface	e (B8)						
eld Observations:								
Surface Water Prese	ent? Yes_	X	No	Depth (inche	s): 3	Wetland		
Vater Table Present	? Yes	Х	No	Depth (inche	s): 0	Hydrology	Yes X	No
Saturation Present? includes capillary frii	Yes _ nge)	Х	No	Depth (inche	s): 0	Present?		
Describe Recorded	Data (stream gaug	e, monitor	ing well, aerial photos	s, previous in	spections), if av	railable:		
Remarks:								
Apparent "moat" betw	veen bog and rest of	wetland.						

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Project/Site:	Federal Way City Cent	ter Access		City/County:			Sampling Date	e: 4/30)/2019
Applicant/Owner:						State: Washing	. •		V5-SP-24
Investigator(s):	Jeff Meyer and Ka	ylee Moser				Section, Township, Range:	T21N	R04E S16	
Landform (hillslop	e, terrace, etc.):		Depressi	on	Local re	elief (concave, convex, none):	concave	Slope (%):	: 3-5%
Subregion (LRR)	: Northwest Forests	and Coast (LR	R A)	Lat: 47.312042	Lo	ng: -122.296822	Datum	n: NAD 198	33 (HARN)
Soil Unit (Name-I	D-Hydric Rating):		Orcas Peat		Or	- Hydric NV	VI classification:	PSS/EN	/1C
•	rologic conditions on t		•			'es X No	(If no, explain		
Are Vegetation	, Soil			significantly dist		Are "Normal Circumstances" p		Yes X	_No
Are Vegetation		,		naturally proble		If needed, explain any answer			
					nt locations	, transects, important	teatures, etc.		
Hydrophytic Veg			es X	No	Is the Sample	led Δrea			
Hydric Soil Prese			es X	No	within a Wet	Hand?	, Na		
Wetland Hydrolo	gy Present?	Y	es X	No	1	Yes Yes	<u> </u>		
Precipitation:	Seattle Tacoma Airno	rt NOAA weathe	ar station praci	nitation was within the	normal range fo	or the three months prior to th	a sita visit		
According to the	ocatiic racoma Airpoi	THOAA Weathe	i station, proof	pitation was within the	normal range it	or the three months phor to th	C SILC VISIL.		
Remarks:									
W5-SP-24 is loca	ated inside a delineated	d bog within We	tland W5, appr	oximately 10 feet west	of the eastern	edge of the bog. Correspond	ls to DP-2 from 2019) bog delinea	ition.
VEGETATIO	N								
			Absolute	Dominant	Indicator	Dominance Test works	heet:		
Tree Stratum	(Plot size:	: <u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Dominant Spe	ecies		
1. Tsuga heter	ophylla		100%	Yes	FACU	That Are OBL, FACW, or	FAC:	1	_(A)
2.									
3.						Total Number of Domina			
4.						Species Across All Strata	<u> </u>	3	_(B)
0	Maratana (Distrata		100%	= Total Cover		Daniel of Daniel of Ore			
Sapling/Shrub S		<u>r=2m)</u>	000/	V	E4011	Percent of Dominant Spe		33%	(A /D)
Sambucus n			30%	Yes	FACU	That Are OBL, FACW, or		3376	(A/B)
2. Rubus speci	TADIIIS		15%	Yes	FAC	Prevalence Index works Total % Cover of:	Sneet: Multiply by:		
4.						OBL species	x 1 =		
5.			-			FACW species	x 2 =	-	
			45%	= Total Cover		FAC species	x 3 =		
Herb Stratum	(Plot size:	: r=1m)				FACU species	x 4 =		
1. none	,					UPL species	x 5 =		
2.						Column Totals:	(A)		(B)
3.						Prevalence In	idex = B/A =		
4.						Hydrophytic Vegetation	Indicators:		
5.						1 - Rapid Test for H	ydrophytic Vegetatio	'n	
6.						2 - Dominance Test	is >50%		
7.						3 - Prevalence Index	c is ≤3.0 ¹		
8.						X 4 - Morphological Ad	daptations ¹ (Provide	supporting	
9.						data in Remarks	or on a separate sh	eet)	
10						5 - Wetland Non-Va			
11						Problematic Hydrop	-		
	(District	r-2m)	0%	= Total Cover		¹ Indicators of hydric soil a	and wetland hydrolog	jy must	
Woody Vine Stra	atum (Plot size:	<u>1=2111)</u>				be present.			
2.			-			Hydrophytic			
			0%	= Total Cover		Vegetation	Yes X No		<u></u>
% Bare Ground	in Herb Stratum	10%				Present?			_
Remarks:									
	lla meets special chara	acteristics; is a b	oog adapted sp	ecies.					

Parametrix

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SOIL							Sampling Point	t: W5-SP-24
Profile Description	on (Describe to the	depth neede	ed to document the i			ce of indicators):		
Depth	Matri				Features		2	
(inches)	Color (moist)	%	Color (moist)	<u></u> %	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								
_ **			ed Matrix, CS=Covered			cation: PL=Pore Lining,		
			nless otherwise note		f = fine; vf = very	fine; + = heavy (more of		
_	ators (Applicable to	ali LKKS, ui		•			blematic Hydric Soils ³ :	
X Histosol (A1)	(4.0)		Sandy Redox (S	•		2 cm Muck (A	,	
Histic Epipedo			Stripped Matrix		(NAL D A A)	Red Parent M		
Black Histic (A				Mineral (F1) (exce	ept MLRA 1)		Dark Surface (TF12)	
Hydrogen Sul		1	Loamy Gleyed M	, ,		Other (Explain	i in Remarks)	
Thick Dark Su	ow Dark Surface (A11 urface (A12)	,	Depleted Matrix Redox Dark Sur					
Sandy Mucky			Depleted Dark S			-	phytic vegetation and wetl	
Sandy Gleyed			Redox Depressi			problematic.	present, unless disturbed	or
				(1 0)		prozioniano.		
Restrictive Layer						Uvdria Sail		
	e: <u>n/a</u>					Hydric Soil	Voc. V	No
Depth (inches):	n/a	-				Present?	Yes X	No
Remarks:								
HYDROLOGY	,							
Wetland Hydrolog								
,	(minimum of one red	wired: check	all that apply)			Socondary Indicate	ors (2 or more required)	
		iuirea, crieck	• • • • • • • • • • • • • • • • • • • •		and MI DA	-		
Surface Wate X High Water Ta	` '		Water-Stained L 1, 2, 4A, and	, , ,	ept MLRA	water-Stained 4A, and 4B	d Leaves (B9) (MLRA 1, 2,	
X Saturation (A3	, ,		Salt Crust (B11)	,		Drainage Patt	,	
Water Marks			Aquatic Inverteb				Vater Table (C2)	
Sediment Dep			Hydrogen Sulfid			 '	ible on Aerial Imagery (C9	١
Drift Deposits				spheres along Liv	ving Roots (C3)	Geomorphic F		,
Algal Mat or C			Presence of Re	-	ring redete (ee)	Shallow Aquita		
Iron Deposits				duction in Tilled S	Soils (C6)	FAC-Neutral		
Surface Soil C				ssed Plants (D1)			ounds (D6) (LRR A)	
	sible on Aerial Imager	y (B7)	Other (Explain in		,		Hummocks (D7)	
	etated Concave Surfa			,			,	
Field Observation	ns:							
Surface Water Pr		į	No X	Depth (inche	s).	Wetland		
Water Table Pres			No No	Depth (inche	· —	Hydrology	Yes X	No
Saturation Presen			No No	Depth (inche		Present?		
(includes capillary			_ ` ` `					
Describe Record	led Data (stream ga	uge, monito	ring well, aerial phot	tos, previous in	spections), if av	vailable:		
Remarks:								
Remarks:								

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Project/Site:	Federal Way City Center	Access		City/County:	Federal W	ay/King		San	npling Date:	8/	18/2020
Applicant/Owner:	City of Federal Way						State: Was	shington	Sampling F	Point:	W6-SP-10
Investigator(s):	Matt Murphy, Aaron T	hom			-	Section, 7	Γownship, Rang	e:	T21N R0-	4E S16	
Landform (hillslope	e, terrace, etc.):	va	lley narrow		Loc	al relief (conca	ave, convex, none	e): none	<u> </u>	Slope (%): <u>3-5%</u>
Subregion (LRR)	: Northwest Forests an	id Coast (LRR A)	Lat:	47.310406	_	Long: -12	22.302139		Datum:	NAD 1	983 (HARN)
		Arents, Alder		-	AmB		t Hydric	NWI classifi	cation:	No	one
•	rologic conditions on the	**	•			Yes			o, explain in F		
Are Vegetation	, Soil , Soil	, or Hydr	rology	significantly dist	urbed?		al Circumstance explain any ans	•		Yes	X_No
Are Vegetation						,	'		,		
	OF FINDINGS – Att			<u> </u>	it locatio	ns, transe	ects, import	ant feature	es, etc.		
Hydrophytic Veg					Is the Sa	mpled Area					
Hydric Soil Prese			X No		within a	-	V	v	N.		
Wetland Hydrolo	gy Present?	Yes	X No		1 ***********		Yes_	<u> </u>	No		
Precipitation:	O till - T A' till A	10 4 4		2012 - 01		Can that there					
According to the	Seattle Tacoma Airport N	IOAA weather statio	n, precipitation	was within the i	normai rang	e for the thre	e months prior	to the site visi	τ.		
Remarks:											
	ted within Wetland W6, al	ong right (west) ban	k of Stream 1	(East Fork Hylel	bos Creek)	in Belmor Pa	ırk. Located aloı	ng narrow floo	dbench adjac	ent to c	hannel with
steep slopes.											
VEGETATIO	N										
		Ab	solute	Dominant	Indicator	Domi	inance Test wo	orksheet:			
Tree Stratum	(Plot size:	3m x 1m) %	<u>Cover</u>	Species?	<u>Status</u>	Numb	per of Dominant	Species			
1. Thuja plicata	1		5%	Yes	FAC	That a	Are OBL, FACV	V, or FAC:		4	(A)
2.						_					
3.						Total	Number of Don	ninant			
4						Speci	ies Across All S	Strata:		4	(B)
			<u>5%</u> = Tota	l Cover							
Sapling/Shrub S	Stratum (Plot size: 2	<u>2m x 1m)</u>				Perce	ent of Dominant	Species			
1. Rubus arme	niacus		20%	Yes	FAC	_	Are OBL, FACV			100%	(A/B)
2. Rubus spect	tabilis	1	10%	Yes	FAC		alence Index w		tiols by		
3.						_	Total % Cover o		tiply by:		
4.						_	species	x1	_		
5.						_	V species	x2	_		
Houb Ctrotum	(Dist size 4r		= Tota	l Cover			species	x3	_		
Herb Stratum	(Plot size: 1r		-00/		E4 0)4/		J species species	x 4 x 5	_		
Phalaris arui Fauisetum te			50%	Yes	FACW	_	nn Totals:	(A)	_		(B)
			15%	No	FACW	_	_	ce Index = B/	_ ^ _		(D)
3. <u>Solanum dul</u> 4.	Camara		15%	No	FAC	Hvdr	ophytic Vegeta				
5.			 -	_	-	_	1 - Rapid Test f				
6.					-	_	2 - Dominance		g		
7.		<u> </u>	 -			_	3 - Prevalence I				
8.							4 - Morphologica		1 (Provide su	pporting	1
9.						_		arks or on a s	•		,
10.				_		_ ,	5 - Wetland Nor	n-Vascular Pla	ints ¹		
11.			 _			_	Problematic Hyd	drophytic Vege	etation (Expla	in) ¹	
Woody Vino Str	atum (Plot size: <u>r=</u>		= Tota	l Cover			ators of hydric s	soil and wetlar	nd hydrology r	must	
Woody Vine Stra 1. none	atum (FIOUSIZE: I=	<u></u>				be pi	resent.				
2.						_ '	Hydrophytic				
			0% = Tota	l Cover		,	Vegetation	Yes	X No		
% Bare Ground	in Herb Stratum o	pen water					Present?				
Remarks:											
Tromaino.											

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SOIL							Sampling Point:	W6-SP-10
Profile Description	on (Describe to the o	depth needed	d to document the in	ndicator or con	ifirm the absenc	e of indicators):		
Depth	Matrix				x Features		•	
(inches)	Color (moist)	<u>%</u>	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	
								
								
								
					21		 _	
	•		Matrix, CS=Covered			cation: PL=Pore Lining,		
					$i = \text{fine}; \ \text{vt} = \text{very}$	fine; + = heavy (more cl		
•	tors (Applicable to a	āli LKKS, um	less otherwise noted	,			blematic Hydric Soils ³ :	
Histosol (A1)		ı	Sandy Redox (St	•		2 cm Muck (A1	,	
Histic Epipedo		,	Stripped Matrix (Red Parent Ma		
Black Histic (A		,	Loamy Mucky Mi		ept MLRA 1)		Dark Surface (TF12)	
Hydrogen Sulfi	` '		Loamy Gleyed M			Other (Explain	in Remarks)	
	ow Dark Surface (A11)		Depleted Matrix (` ,				
Thick Dark Su Sandy Mucky I		-	X Redox Dark Surfa Depleted Dark Su				ophytic vegetation and wetland	d
Sandy Mucky i		-	Redox Depression			hydrology must be problematic.	present, unless disturbed or	
	. ,		TOUGH ESPISION	Лю (1 С,		problema.s.		
Restrictive Layer Type						Hydric Soil		
Depth (inches):	£					Present?	Yes X	No
Deptii (ποπου _γ .								NU
HYDROLOGY	1 11 -1							
Wetland Hydrolog		····iradi ahaak (-!! that apply)			Casandary Indicato	(2 or mare required)	
•	(minimum of one requ	uired; check a		- (5.2) (·	ors (2 or more required)	
Surface Water		•	Water-Stained Le	, , ,	ept MLRA		d Leaves (B9) (MLRA 1, 2,	
X High Water Ta			1, 2, 4A, and 4	•		4A, and 4B)		
X Saturation (A3 Water Marks (,	,	Salt Crust (B11)			Drainage Patte		
		·	Aquatic Invertebr			X Dry-Season W		
Sediment Dep Drift Deposits	, ,	-	Hydrogen Sulfide Oxidized Rhizosp	` '	Poote (C3)	X Geomorphic Po	ible on Aerial Imagery (C9)	
Algal Mat or C	` '	-	Presence of Red	-	-	Shallow Aquita		
Iron Deposits (-	Recent Iron Red			X FAC-Neutral T		
Surface Soil C		-	Stunted or Stress				ounds (D6) (LRR A)	
	sible on Aerial Imagery	v (B7)	Other (Explain in		(LIXIV.)		Hummocks (D7)	
	etated Concave Surfa	•		11011,			.ummooko (= : ,	
Field Observation								
Surface Water Pre			No X	Depth (inche	is);	Wetland		
Water Table Prese			No X	Depth (inche		Hydrology	Yes X	No
Saturation Present			No		es): 0, surface	Present?		
(includes capillary				- • · · · · · ·	0). 0, 2			
Describe Recorde	ed Data (stream gau	ıge, monitori	ing well, aerial photo	os, previous in	spections), if av	railable:		
Remarks:								
	stic and 8-inch concre	te pipe drain i	into Wetland W6 and	Stream 1 from	east (golf course)). Stream 1 adjacent to \$	SP-10 has standing water pre	esent.

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Landform (initiation, terracis, te	Project/Site:	Federal Way City Center A	ccess	City/County:	Federal Way	/King	Sampling Date:	: 8/18/2020
Local trief (pitterse, turnexe, nerg.) hillstope	Applicant/Owner:	City of Federal Way			-	State: Washing	tonSamplinç	Point: W6-SP-11
Subsequence Lange Northwest Forests and Coast (LRR A) Lat. 37.10421 Lange	Investigator(s):	Per Johnson, Aaron Th	om		_	Section, Township, Range:	 T21N R	04E S16
Sol Living Name-ID-Hydroc Rating): Annals. Addensect inflated by Annals. Annals Note Hydrocology (Annals of Hydrocology): Annals of Hydrocology (Annals of Hydrocology	Landform (hillslop	e, terrace, etc.):	hillslope)	Local r	relief (concave, convex, none):	convex	Slope (%): >10%
Are climated Pydrologic conditions on the size typical for this time of year? Yes	Subregion (LRR)	: Northwest Forests and	Coast (LRR A)	Lat: 47.310421		ong: -122.302277	Datum:	: NAD 1983 (HARN)
Air Vegetation Soil	Soil Unit (Name-I	D-Hydric Rating):	Arents, Alderwood m	aterial -	AmB	- Not Hydric NW	I classification:	None
Auto-processor Sol	Are climatic / hyd	Irologic conditions on the si	te typical for this time of ye	ear?		Yes X No	(If no, explain ir	n Remarks)
Summary Summ	Are Vegetation					·		Yes X No
Hydroc Soli Present?	Are Vegetation	, Soil	, or Hydrology	naturally proble	ematic?	(If needed, explain any answers	in Remarks.)	
No	SUMMARY C	OF FINDINGS – Atta	ch site map showir	ıg sampling poiı	nt locations	s, transects, important	features, etc.	
Welland Hybrology Present? Yes	Hydrophytic Veg	etation Present?						
Procipitation:	•		Yes		_	41		
	Wetland Hydrolo	gy Present?	Yes	No <u>X</u>	within a we	riand? Yes	No	X
Absolute	Remarks:		DAA weather station, precip	oitation was within the	normal range f	for the three months prior to the	site visit.	
Absolute	VEGETATIO	N						
Tree Stratum	123217(110)		Absolute	Dominant	Indicator	Dominance Test worksh		
1. Salik soculariana 80% Yes FAC That Are OBL, FACW, or FAC: 4	Tree Stratum	(Plot size:			_			
2	1	`		' -		·		4 (A)
Total Number of Dominant Species Across All Strata: 6 (B)	<u> </u>					111017110 052, 171011, 01		(/,/
Sapiling/Shrub Stratum	3.	•				Total Number of Dominan	t	
110% = Total Cover FAC Percent of Dominant Species That Are OBL, FACW, or FAC S7% (A/B) FACU FACW	4.							6 (B)
Percent of Dominant Species	-		110%	= Total Cover		openios / toross / til otrata.		(2)
Rubus armeniacus 30% Yes FAC That Are OBL, FACW, or FAC: 67% (A/B)	Sapling/Shrub S	Stratum (Plot size:		- 1 otal 00 o		Percent of Dominant Spec	cies	
2. Rubus ursinus 15% Yes FACU FACU Faculty Total % Cover of: Multiply by: Total % Cover of: Multiply by: Total % Cover of: Multiply by: Multiply by: Multiply by: Total % Cover of: Multiply by: Multiply by: Multiply by: Total % Cover of: Multiply by: Multiply by: Multiply by: Total % Cover of: Multiply by: Multip	1			Yes	FAC	· ·		67% (A/B)
Total % Cover of: Multiply by:								(-,-)
FACW species X 2 = FAC species X 3 = FACU species X 4 = FACU species X 4 = FACU species X 4 = FACU species X 5 = FACU species X 4 = FACU species X 5 = FACU species X 4 = FACU species X 4 = FACU species X 5 = FACU species X 4 = FACU species X 5 = FACU species X 4 = FACU species X 5 = TACU species X 5 =	3.							
Herb Stratum	4.					OBL species	x 1 =	
Herb Stratum	5.					FACW species	x 2 =	
FACU species			45%	= Total Cover			x 3 =	
2. Column Totals: (A) (B) 3. Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 5. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ 10. 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation (Explain)¹ ¹Indicators of hydric soil and wetland hydrology must be present. 1. Ilex aquifolium 2% Yes FACU FACU 4 Hydrophytic Vegetation (Explain)¹ Yegetation Yes X No Present?	Herb Stratum	(Plot size: r=1	<u></u>			FACU species	x 4 =	
2. Column Totals: (A) (B) 3. Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 5. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ 10. Problematic Hydrophytic Vegetation (Explain)¹ 1 Ilex aquifolium 2% Yes FACU Woody Vine Stratum (Plot size: r=2m) 2% Yes FACU 4 Hydrophytic Vegetation Yes X No Present?	1. Equisetum te	elmateia	5%	Yes	FACW	UPL species	x 5 =	
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation	2.					Column Totals:	(A)	(B)
1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation (Explain)¹ The indicators of hydric soil and wetland hydrology must be present. Woody Vine Stratum (Plot size: r=2m) 1. Ilex aquifolium 2% Yes FACU Hydrophytic Vegetation Yes X No Present?	3.					Prevalence Inc	dex = B/A =	
X 2 - Dominance Test is >50%	4.					Hydrophytic Vegetation	Indicators:	
3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation (Explain)¹ 11.	5.		<u> </u>			1 - Rapid Test for Hy	drophytic Vegetation	١
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation (Explain)¹ 11.	6.		<u> </u>			X 2 - Dominance Test i	s >50%	
data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain) 1 Illex aquifolium 2 Yes FACU Hydrophytic Vegetation Yes X No Present?	7.					3 - Prevalence Index	is ≤3.0 ¹	
10	8.					4 - Morphological Ada	aptations ¹ (Provide s	supporting
Problematic Hydrophytic Vegetation (Explain) Sweet and Stratum (Plot size: r=2m) 1. Ilex aquifolium 2% Yes FACU 2. Yes FACU Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation (Explain) Problematic Hydrophytic vegetation (Explain) Hydrophytic Vegetation (Explain) Problematic Hydrophytic vegetation (Explain) Problematic Hydrophytic vegetation (Explain) Problematic Hydrophytic vegetation (Explain) Present:	9.					data in Remarks of	or on a separate she	et)
Solution Stratum Solution Stratum Solution Stratum Solution Stratum Solution Stratum Solution Stratum Solution Solu	10.					5 - Wetland Non-Vas	cular Plants ¹	
Moody Vine Stratum (Plot size: r=2m)	11.					Problematic Hydroph	ytic Vegetation (Exp	lain) ¹
1. Ilex aquifolium 2% Yes FACU 2. Hydrophytic Vegetation Yes X % Bare Ground in Herb Stratum 55% Present?				= Total Cover	_	¹ Indicators of hydric soil a	nd wetland hydrology	y must
Z% = Total Cover Hydrophytic W Bare Ground in Herb Stratum 55% Vegetation Yes X No Present? Present				V	E. A. O	be present.		
2% = Total Cover Vegetation Yes X No No Present?		ım	2%	Yes	<u> FACU</u>	Hydronhytic		
% Bare Ground in Herb Stratum 55% Present?			2%	= Total Cover			Yes X No	
Remarks:	% Bare Ground	in Herb Stratum		. 3.4. 30701		_		
Kemarks:	D							
	kemarks:							

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SOIL							Sampling Point:	W6-SP-11
Profile Description	n (Describe to the d	epth needed to	o document the i	ndicator or conf	firm the absen	ce 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-Concentr	ation, D=Depletion, F	2M-Reduced Ma	atrix CS-Covered	d or Coated Sand	I Grains ² I o	cation: PL=Pore Lining, N	M-Matrix	
• •	•					fine; + = heavy (more cla		
	ors (Applicable to a				<u> </u>		elematic Hydric Soils ³ :	
•	oro (Appriousio to o	בונונט, מוווסס		•			•	
Histosol (A1)	(40)		_Sandy Redox (S	,		2 cm Muck (A1		
Histic Epipedon	, ,		_Stripped Matrix	` '	(14154.4)	Red Parent Ma		
Black Histic (A3			_	Mineral (F1) (exce	pt MLRA 1)		ark Surface (TF12)	
Hydrogen Sulfic			_Loamy Gleyed I	, ,		Other (Explain	in Remarks)	
	v Dark Surface (A11)		Depleted Matrix					
Thick Dark Surf			_Redox Dark Su			³ Indicators of hydrop	hytic vegetation and wetlar	nd
Sandy Mucky M			_ Depleted Dark S				resent, unless disturbed or	
Sandy Gleyed N	Matrix (S4)	_	_Redox Depress	ions (F8)		problematic.		
Restrictive Layer (if present):							
Type:						Hydric Soil		
Depth (inches):						Present?	Yes	No X
Remarks:								
HYDROLOGY								
Wetland Hydrology	y Indicators:							
Primary Indicators (I	minimum of one requ	uired; check all t	hat apply)			Secondary Indicator	s (2 or more required)	
Surface Water	(A1)		Water-Stained I	Leaves (B9) (exc	ept MLRA	Water-Stained	Leaves (B9) (MLRA 1, 2,	
—— High Water Tab	, ,		 1, 2, 4A, and		•	4A, and 4B)	, , ,	
Saturation (A3)	, ,		Salt Crust (B11))		Drainage Patte	rns (B10)	
Water Marks (E	31)		Aquatic Invertel			Dry-Season Wa		
Sediment Depo	osits (B2)		Hydrogen Sulfic	le Odor (C1)		Saturation Visit	ole on Aerial Imagery (C9)	
Drift Deposits (B3)		Oxidized Rhizos	spheres along Liv	ing Roots (C3)	Geomorphic Po	osition (D2)	
Algal Mat or Cr	ust (B4)			duced Iron (C4)	, ,	Shallow Aquita	rd (D3)	
Iron Deposits (E	B5)		Recent Iron Rec	duction in Tilled S	soils (C6)	FAC-Neutral Te	est (D5)	
Surface Soil Cr				ssed Plants (D1)		Raised Ant Mo	unds (D6) (LRR A)	
	ole on Aerial Imagery	(B7)	Other (Explain i		,	Frost-Heave H		
	ated Concave Surfac		_ ` `	,			, ,	
Field Observations		` ,						
Surface Water Pres		N	n Y	Depth (inches	٠١٠	Wetland		
Water Table Preser		No.	0 X	Depth (inches		Hydrology	Yes	No X
Saturation Present?	-		o X	Depth (inches		Present?		No X
(includes capillary f	-			Depth (inches	o)	Present?		
· · · · · · · · · · · · · · · · · · ·	5 ,							
Describe Recorde	d Data (stream gau	ge, monitoring	well, aerial pho	tos, previous ins	spections), if a	vailable:		
Remarks:								

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Project/Site: Federal Way City Center Acce	ess	City/County:	Federal Way/l	King	Sampling Date: 8/18/2020
Applicant/Owner: City of Federal Way				State: Washington	n Sampling Point: SP-12
Investigator(s): Per Johnson, Aaron Thom	l			Section, Township, Range:	T21N R04E S16
Landform (hillslope, terrace, etc.):	flat		 Local re	elief (concave, convex, none):	none Slope (%): <3%
Subregion (LRR): Northwest Forests and Co	past (LRR A)	.at: 47.305656	_	ng: -122.301895	Datum: NAD 1983 (HARN)
Soil Unit (Name-ID-Hydric Rating):	Alderwood gravelly sand	loam -	AgB	- Not Hydric NWI	classification: None
Are climatic / hydrologic conditions on the site t	ypical for this time of year	?	Y	es X No	(If no, explain in Remarks)
Are Vegetation, Soil				are "Normal Circumstances" pres	
Are Vegetation, Soil	, or Hydrology	naturally proble	ematic? (I	If needed, explain any answers in	n Remarks.)
SUMMARY OF FINDINGS - Attach	site map showing	sampling poi	nt locations	, transects, important fe	eatures, etc.
Hydrophytic Vegetation Present?		No	l		
Hydric Soil Present?	Yes	No <u>X</u>	Is the Sampl		
Wetland Hydrology Present?	Yes	No <u>X</u>	within a Wet	land? Yes	No <u>X</u>
Precipitation: According to the Seattle Tacoma Airport NOAA Remarks: Upland sample plot located 20 feet east from sometical changes to hydrology such as altered	oundwall and 75 feet from	exit 142A sign. Sn	ags present nea	arby wihtin a facultative dominate	ed vegetation community, suggesting
not associated with a wetland.					
VEGETATION					
	Absolute	Dominant	Indicator	Dominance Test workshee	
<u>Tree Stratum</u> (Plot size: <u>r=3</u>	m) % Cover	Species?	<u>Status</u>	Number of Dominant Specie	es
1. Populus balsamifera	70%	Yes	FAC	That Are OBL, FACW, or FA	AC: 4 (A)
2. Salix scouleriana	30%	Yes	FAC		
3.				Total Number of Dominant	
4.				Species Across All Strata:	5(B)
	100% =	Total Cover			
Sapling/Shrub Stratum (Plot size: r=2	<u></u>			Percent of Dominant Specie	s
1. Rubus ursinus	15%	Yes	FACU	That Are OBL, FACW, or FA	AC: <u>80%</u> (A/B)
2. Rubus armeniacus	10%	Yes	FAC	Prevalence Index workshe	et:
3. Acer macrophyllum	2%	No	FACU	Total % Cover of:	Multiply by:
4.				OBL species	x 1 =
5.				FACW species	x 2 =
	27% =	Total Cover		FAC species	x 3 =
<u>Herb Stratum</u> (Plot size: $r=1m$)				FACU species	x 4 =
Agrostis stolonifera	100%	Yes	FAC	UPL species	x 5 =
2				Column Totals:	(A)(B)
3				Prevalence Inde	
4				Hydrophytic Vegetation In	
5.				1 - Rapid Test for Hydr	
6.				X 2 - Dominance Test is	
7			-	3 - Prevalence Index is	
8					otations ¹ (Provide supporting
9.					on a separate sheet)
10			-	5 - Wetland Non-Vascu	
11				Problematic Hydrophyt	
Woody Vine Stratum (Plot size: r=2m)	100% =	Total Cover		¹ Indicators of hydric soil and be present.	wetland hydrology must
1. <u>none</u> 2.				Hydrophytic	
% Bare Ground in Herb Stratum 09		Fotal Cover			es <u>X</u> No
Remarks:					

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SOIL							Sampling Point:	SP-12
Profile Descript	ion (Describe to the d	epth needed to	document the in	ndicator or conf	irm the absen	ce 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
	<u> </u>							
¹ Type: C-Concer	ntration, D=Depletion, R	M-Reduced Ma	atrix CS-Covered	Lor Coated Sand	Grains ² Lo	ocation: PL=Pore Lining, N	M-Matrix	
	•					y fine; + = heavy (more cla		
	ators (Applicable to a				= IIIIe, VI = Very		elematic Hydric Soils ³ :	
,	`	ii LKKS, uilles:		,			-	
Histosol (A1)			_Sandy Redox (S	•		2 cm Muck (A1		
Histic Epiped			_Stripped Matrix			Red Parent Ma		
Black Histic (-	ineral (F1) (exce	pt MLRA 1)		ark Surface (TF12)	
Hydrogen Su			_Loamy Gleyed N	` '		Other (Explain	in Remarks)	
	ow Dark Surface (A11)		_Depleted Matrix					
Thick Dark S			_Redox Dark Sur			³ Indicators of hydrog	hytic vegetation and wetlar	nd
Sandy Mucky	Mineral (S1)		_Depleted Dark S	Surface (F7)			resent, unless disturbed or	
Sandy Gleye	d Matrix (S4)		_Redox Depressi	ons (F8)		problematic.		
Restrictive Layer	r (if present):							
Тур	e:					Hydric Soil		
Depth (inches):						Present?	Yes	No X
Remarks:								
								_
HYDROLOGY	1							
Wetland Hydrolo	gy Indicators:							
Primary Indicators	(minimum of one requ	ired; check all tl	nat apply)	<u></u>		Secondary Indicator	s (2 or more required)	
Surface Wate	er (A1)		Water-Stained L	eaves (B9) (exce	ept MLRA	Water-Stained	Leaves (B9) (MLRA 1, 2,	
High Water T	, ,		1, 2, 4A, and			4A, and 4B)		
Saturation (A	, ,		Salt Crust (B11)	ŕ		Drainage Patte	rns (B10)	
Water Marks	,		Aquatic Inverteb			Dry-Season Wa		
Sediment De			Hydrogen Sulfid				ole on Aerial Imagery (C9)	
Drift Deposits	, ,			pheres along Livi	ing Roots (C3)	Geomorphic Po		
Algal Mat or	` '		Presence of Red	-		Shallow Aquita		
Iron Deposits			_	luction in Tilled S	oils (C6)	FAC-Neutral Te		
Surface Soil			_	sed Plants (D1)			unds (D6) (LRR A)	
	sible on Aerial Imagery	(B7)	Other (Explain in		(LICITY)	Frost-Heave H		
	jetated Concave Surfac		_ Culci (Explain ii	r remarks)		1103111047011	arrinooko (<i>D1</i>)	
		C (D0)						
Field Observatio								
Surface Water Pi			X X	Depth (inches		Wetland		
Water Table Pres	·	No		Depth (inches		Hydrology	Yes	No X
Saturation Preser (includes capillary	_	No) X	Depth (inches):	Present?		
Describe Record	ded Data (stream gauç	ge, monitoring	well, aerial phot	os, previous ins	spections), if a	vailable:		
Remarks:								

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Project/Site:	Federal Way City Center Access	3		City/County:	Federal Wa	ay/King		Sampling Date	e: 8/18/2020	& 11/11/2020
Applicant/Owner:	City of Federal Way					Sta	te: Washington	Samplin	ng Point:	W9-SP-13
Investigator(s):	Per Johnson, Aaron Thom				_	Section, Townsh	nip, Range:	T21N	R04E S16	
Landform (hillslope	e, terrace, etc.):	slo	ped depres	ssion	Loca	I relief (concave, con	nvex, none):	oncave	Slope (%	%): <u><3%</u>
Subregion (LRR)	Northwest Forests and Coas	st (LRR A)		Lat: 47.314583	_	Long: -122.296	806	Datun	n: <u>NAD 19</u>	983 (HARN)
	D-Hydric Rating):				AmC	- Not Hydrid		assification:	Noi	_
•	rologic conditions on the site typ		-			Yes X	No	(If no, explain		
Are Vegetation	, Soil , Soil	, or Hy	drology drology	significantly dist	turbed?	Are "Normal Circ (If needed, explai			Yes X	No
Are Vegetation			_	<u></u>		, , ,	•	,		
	OF FINDINGS – Attach s			· · ·	it location	is, transects,	important rea	itures, etc.		
Hydrophytic Veg Hydric Soil Prese		Yes Yes	<u>х</u>	No	Is the Sam	npled Area				
Wetland Hydrolo		Yes	X	No	within a W	-	Yes X	No		
	gy Fresent?	168_		INO	1		Yes X	No		
Precipitation:	Seattle Tacoma Airport NOAA v	veather staf	tion precip	itation was within the	normal range	o for the three mon	the prior to the 8/1	8/2020 and 11	/11/2020 cit	o vicite
According to the	Seattle Tacoma Airport NOAA v	realitei Stat	Jon, precip	itation was within the	nomai range	e for the three mon	tris prior to trie o/	0/2020 and 11/	11/2020 516	s visits.
Remarks:										
SP for Wetland 9	located within the looping north	bound I-5 o	n-ramp, so	outh of S 320th Street	. This SP wa	s observed on bot	h 8/18/2020 and 1	1/11/2020.		
VEGETATIO	N									
		P	Absolute	Dominant	Indicator		Test worksheet			
Tree Stratum	(Plot size: <u>r=3m</u>) 2	% Cover	Species?	<u>Status</u>	Number of [Dominant Species			
1. <u>none</u>						That Are OF	BL, FACW, or FAC): 	1	(A)
2.						_				
3.						Total Numb	er of Dominant			
4						_ Species Acr	oss All Strata:		1	(B)
		_	0% =	= Total Cover						
Sapling/Shrub S	<u>r=2m</u> (Plot size: <u>r=2m</u>	1					Dominant Species		4000/	
1. <u>none</u> 2.						_	BL, FACW, or FAC		<u>100%</u>	(A/B)
3.		— –				_	Index workshee 6 Cover of:	t: Multiply by:		
4.		 -				OBL species		x 1 =		
5 <u> </u>		 -				FACW species		x 2 =		
J		 -	0% =	= Total Cover	-	FAC species		x 3 =		
Herb Stratum	(Plot size: r=1m		076 =	= Total Cover		FACU speci		x 4 =		
1. Phalaris arui	`	L	100%	Yes	FACW	UPL species		x 5 =		
2.	landood		10070	100	171011	Column Tota		(A)		(B)
3.		 -				_	Prevalence Index	-		`
4.						Hydrophyti	c Vegetation Ind	icators:		
5.						- 1 - Rap	oid Test for Hydro	ohytic Vegetatio	n	
6.						X 2 - Dor	ninance Test is >	50%		
7.						3 - Pre	valence Index is ≤	3.0 ¹		
8.						4 - Mor	phological Adapta	tions ¹ (Provide	supporting	
9.						data	a in Remarks or o	n a separate sh	eet)	
10.						5 - We	tland Non-Vascula	ır Plants ¹		
11.						Problei	matic Hydrophytic	Vegetation (Ex	plain) ¹	
Woody Vine Stra	atum (Plot size: <u>r=2m)</u>	_	100% =	= Total Cover		¹ Indicators of be present.	of hydric soil and v	etland hydrolog	yy must	
1.						_				
2				T : 10		_ Hydroj	-	V Na		
% Bare Ground	in Herb Stratum 0%		0% =	= Total Cover		Vegeta Preser		X No		_
Remarks:										
	ns did not change between the 8	3/18/2020 a	and 11/11/2	2020 field visit.						

Parametrix

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SOIL							Sampling Point	t: W9-SP-13
Profile Descripti	ion (Describe to the	depth needec	d to document the ind	licator or cor	nfirm the absence	e of indicators):	· · · · · · · · · · · · · · · · · · ·	
Depth	Matrix	X		Redo	x 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	С	M		
	<u> </u>							
¹ Type: C=Concer	ntration D=Depletion.	RM-Reduced	Matrix, CS=Covered o	or Coated San	od Grains ² l oc	ation: PL=Pore Lining,	M-Matrix	
	•					fine; + = heavy (more cl		
			less otherwise noted)		1 = 1110, 11 = 10.,		blematic Hydric Soils ³ :	
Histosol (A1)	`	u,	Sandy Redox (S5)	•		2 cm Muck (A1	-	
Histic Epiped		-	Stripped Matrix (S	•		Red Parent Ma	,	
Black Histic (-	Loamy Mucky Min	,	SONE MI DA 1)		Dark Surface (TF12)	
Black Histic (` '	-	X Loamy Gleyed Ma	, , ,	ept wilka i)	Other (Explain	, ,	
		<u>.</u>	X Depleted Matrix (F			Other (Explain	III Keillains)	
Thick Dark S	ow Dark Surface (A11	, <u>.</u>	Redox Dark Surfa	,				
Sandy Mucky		-	Depleted Dark Suna	• •			phytic vegetation and wetl	
Sandy Mucky Sandy Gleyed		-	Redox Depression			hydrology must be problematic.	present, unless disturbed of	or
			Kenny Debiession	IS (FO)		ргоолеттанс.		
Restrictive Layer								
Тур						Hydric Soil		
Depth (inches):		-				Present?	Yes X	No
Remarks:								
Soils were only ob	oserved on 11/11/2020	J.						
			·					
HYDROLOGY	<i></i>							
Wetland Hydrolo	gy Indicators:							
Primary Indicators	s (minimum of one req	uired; check a	all that apply)			Secondary Indicato	rs (2 or more required)	
Surface Wate	•		Water-Stained Lea	2005 (Bd) (exi	cent MI RA	•	Leaves (B9) (MLRA 1, 2,	
X High Water T	` '	-	1, 2, 4A, and 4E		жерстиште	4A, and 4B)	, , ,	
X Saturation (A			Salt Crust (B11)	رد)		X Drainage Patte		
Water Marks	,	-	Aquatic Invertebra	atae (R13)			/ater Table (C2)	
Sediment De		-	Hydrogen Sulfide	, ,			ible on Aerial Imagery (C9	١
Drift Deposits		-	Oxidized Rhizosph		issing Poots (C3)	X Geomorphic P		1
Algal Mat or (-		•	• , ,		, ,	
	, ,	-	Presence of Redu			Shallow Aquita		
Iron Deposits		-	Recent Iron Reduc			FAC-Neutral T		
Surface Soil ((D7)	Stunted or Stresse		(LKK A)		ounds (D6) (LRR A)	
	sible on Aerial Imager	· · · · · · · · · · · · · · · · · · ·	Other (Explain in F	Remarks)		Frost-neave n	lummocks (D7)	
	getated Concave Surfa	ice (Rs)						
Field Observatio								
Surface Water Pr			No X	Depth (inche	·	Wetland		
Water Table Pres			No	Depth (inche		Hydrology	Yes X	No
Saturation Preser		SX	No	Depth (inche	es): 0	Present?		
(includes capillary	y fringe)							
Describe Record	ded Data (stream gar	uge monitori	ng well, aerial photos	e previous ir	espections), if av	ailahle.		
Describe Note.	160 Data (50 5am 5	ige, mome	ilg well, derial piletti	3, previous	apoolionoj, n a	allabic.		
Remarks:								
							N9 providing two seconda	
							lrainage marks was observe e wetland unit downslope t	
-			and within the wetland that aturated with a shallow				3 Welland unit downslope t	U d Calchibasiii.

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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: \(\)	N9-SP-14
Investigator(s):	Per Johnson, Aaron Thom			_	Section, Township, Range:	T21N R04E S16	
Landform (hillslop	e, terrace, etc.):	hillslope	Э	Local	relief (concave, convex, none):	none Slope (%)): <3%
Subregion (LRR)	: Northwest Forests and Coast (LRR A)	Lat: 47.314621	_	.ong: -122.296700	Datum: NAD 19	83 (HARN)
Soil Unit (Name-	ID-Hydric Rating): Ar	ents, Alderwood m	naterial -	AmC		assification: Non	
•	Irologic conditions on the site typica	•				(If no, explain in Remarks)	
Are Vegetation	, Soil	_, or Hydrology	significantly dist	turbed?	Are "Normal Circumstances" prese		_No
Are Vegetation	, Soil	_			(If needed, explain any answers in	,	
		•	· · ·	nt location:	s, transects, important fea	atures, etc.	
	etation Present?	Yes X		Is the Sam	nlad Araa		
Hydric Soil Pres		Yes X		within a We			
Wetland Hydrolo	gy Present?	Yes X	No	Within a We	etland? Yes	NoX	
Precipitation:	Coattle Teacher Aimport NOAA		mitatiananithin tha		for the three meaths with to the 0/s	10/0000 1 11/11/0000 - 11-	: = := :
According to the	Seattle Tacoma Airport NOAA wea	ther station, precip	pitation was within the	normal range	for the three months prior to the 8/1	18/2020 and 11/11/2020 site	· VISITS.
Remarks:		-	-				
Paired upland pit	for W9 located just north and upslo	ope of W9 within I-	5 footprint. This samp	ple plot was ob	oserved on both 8/18/2020 and 11/1	1/2020.	
VEGETATIO	N .	-	-				
		Absolute	Dominant	Indicator	Dominance Test worksheet	:	
Tree Stratum	(Plot size: <u>r=3m)</u>	% Cover	Species?	Status	Number of Dominant Species	i	
1. none	·		-	<u>-</u>	That Are OBL, FACW, or FAC		(A)
2.					, .		- ` ′
3.					Total Number of Dominant		
4.					Species Across All Strata:	2	(B)
		0%	= Total Cover			_	_ \-'
Sapling/Shrub S	Stratum (Plot size: r=2m)				Percent of Dominant Species		
1. none	 .				That Are OBL, FACW, or FAC	D: <u>100%</u>	(A/B)
2.					Prevalence Index workshee		
3.					Total % Cover of:	Multiply by:	
4.					OBL species	x 1 =	
5.					FACW species	x 2 =	
		0%	= Total Cover		FAC species	x 3 =	
Herb Stratum	(Plot size: r=1m)				FACU species	x 4 =	
Holcus lana	•	60%	Yes	FAC	UPL species	x 5 =	
2. Agrostis sto		40%	Yes	FAC	Column Totals:	(A)	(B)
 Hypochaeris 		5%	No	FACU	Prevalence Index	= B/A =	
Plantago lar		2%	No	FACU	Hydrophytic Vegetation Ind	icators:	
5.					1 - Rapid Test for Hydro	phytic Vegetation	
6.					X 2 - Dominance Test is >	50%	
7.					3 - Prevalence Index is ≤	£3.0 ¹	
8.					4 - Morphological Adapta	ations ¹ (Provide supporting	
9.					data in Remarks or o		
10.	_				5 - Wetland Non-Vascula	ar Plants ¹	
11.					Problematic Hydrophytic	Vegetation (Explain) ¹	
		107%	= Total Cover		¹ Indicators of hydric soil and v		
Woody Vine Str	atum (Plot size: <u>r=2m)</u>				be present.		
1. none							
2.					Hydrophytic		
0/ Bana Grannal	in Hank Canataun	0%	= Total Cover		Vegetation Yes	sX No	_
% Bare Ground	in Herb Stratum				Present?		
Remarks:					L		
Vegetation condi	tions did not change between the 8/	/18/2020 and 11/1	1/2020 field visits.				
1							

Parametrix

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Fexture: Sa = sand; Si = silt; C = clay; L = loam or loamy	Redox Features Color (moist) % Type¹ 10YR 4/6 5 C 10YR 4/6 15 C etrix, CS=Covered or Coated Sand Grains. 2I y. Texture Modifier: co = coarse; f = fine; vf = ve	Loc² Texture³ Re M GrL M GrL M GrL 2Location: PL=Pore Lining, M=Matrix.	emarks
(inches) Color (moist) % 0-4 10YR 3/2 100 4-8 10YR 4/2 95 8-16+ 10YR 5/1 85 Expect C=Concentration, D=Depletion, RM=Reduced Margenture: Sa = sand; Si = silt; C = clay; L = loam or loam; and control of the c	Color (moist) % Type¹ 10YR 4/6 5 C 10YR 4/6 15 C atrix, CS=Covered or Coated Sand Grains. ²I y. Texture Modifier: co = coarse; f = fine; vf = vec s otherwise noted):	M GrL M GrL M GrL PL=Pore Lining, M=Matrix. Story fine; + = heavy (more clay); - = light (less clay)	emarks
0-4 10YR 3/2 100 4-8 10YR 4/2 95 8-16+ 10YR 5/1 85 Type: C=Concentration, D=Depletion, RM=Reduced Ma Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy lydric Soil Indicators (Applicable to all LRRs, unless Histosol (A1)	10YR 4/6 5 C 10YR 4/6 15 C attrix, CS=Covered or Coated Sand Grains. 2 y. Texture Modifier: co = coarse; f = fine; vf = vector of the coarse of the coars	M GrL M GrL M GrL PL=Pore Lining, M=Matrix. Story fine; + = heavy (more clay); - = light (less clay)	emarks
4-8 10YR 4/2 95 8-16+ 10YR 5/1 85 Type: C=Concentration, D=Depletion, RM=Reduced Ma Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy lydric Soil Indicators (Applicable to all LRRs, unless Histosol (A1)	atrix, CS=Covered or Coated Sand Grains. ² Iy. Texture Modifier: co = coarse; f = fine; vf = ve s otherwise noted):	M GrL CLocation: PL=Pore Lining, M=Matrix. Pery fine; + = heavy (more clay); - = light (less clay)	
8-16+ 10YR 5/1 85 Type: C=Concentration, D=Depletion, RM=Reduced Ma Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy Hydric Soil Indicators (Applicable to all LRRs, unless Histosol (A1)	atrix, CS=Covered or Coated Sand Grains. ² Iy. Texture Modifier: co = coarse; f = fine; vf = ve s otherwise noted):	M GrL CLocation: PL=Pore Lining, M=Matrix. Pery fine; + = heavy (more clay); - = light (less clay)	
Type: C=Concentration, D=Depletion, RM=Reduced Ma Texture: Sa = sand; Si = silt; C = clay; L = loam or loam; Hydric Soil Indicators (Applicable to all LRRs, unless Histosol (A1)	atrix, CS=Covered or Coated Sand Grains. ² I y. Texture Modifier: co = coarse; f = fine; vf = ve s otherwise noted):	CLocation: PL=Pore Lining, M=Matrix. Pery fine; + = heavy (more clay); - = light (less clay)	
Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy lydric Soil Indicators (Applicable to all LRRs, unless Histosol (A1)	y. Texture Modifier: co = coarse; f = fine; vf = ve s otherwise noted):	ery fine; + = heavy (more clay); - = light (less clay)	
Fexture: Sa = sand; Si = silt; C = clay; L = loam or loamy ydric Soil Indicators (Applicable to all LRRs, unlessHistosol (A1)	y. Texture Modifier: co = coarse; f = fine; vf = ve s otherwise noted):	ery fine; + = heavy (more clay); - = light (less clay)	
Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy lydric Soil Indicators (Applicable to all LRRs, unless Histosol (A1)	y. Texture Modifier: co = coarse; f = fine; vf = ve s otherwise noted):	ery fine; + = heavy (more clay); - = light (less clay)	
Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy lydric Soil Indicators (Applicable to all LRRs, unless Histosol (A1)	y. Texture Modifier: co = coarse; f = fine; vf = ve s otherwise noted):	ery fine; + = heavy (more clay); - = light (less clay)	
Fexture: Sa = sand; Si = silt; C = clay; L = loam or loamy lydric Soil Indicators (Applicable to all LRRs, unless Histosol (A1)	y. Texture Modifier: co = coarse; f = fine; vf = ve s otherwise noted):	ery fine; + = heavy (more clay); - = light (less clay)	
Fexture: Sa = sand; Si = silt; C = clay; L = loam or loamy lydric Soil Indicators (Applicable to all LRRs, unless Histosol (A1)	y. Texture Modifier: co = coarse; f = fine; vf = ve s otherwise noted):	ery fine; + = heavy (more clay); - = light (less clay)	
lydric Soil Indicators (Applicable to all LRRs, unless Histosol (A1)	s otherwise noted):		_
Histosol (A1)	,	Indicators for Problematic Hydric Soils ³ :	
	Sandy Redox (S5)		
Histic Epipedon (A2)	Canay Moder (CO)	2 cm Muck (A10)	
	_Stripped Matrix (S6)	Red Parent Material (TF2)	
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)	
	_Depleted Matrix (F3)		
Thick Dark Surface (A12)	_Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland	
Sandy Mucky Mineral (S1)	_Depleted Dark Surface (F7)	hydrology must be present, unless disturbed or	
Sandy Gleyed Matrix (S4)	_Redox Depressions (F8)	problematic.	
Restrictive Layer (if present):			
Туре:		Hydric Soil	
Depth (inches):		Present? Yes X No	
Remarks:			
IYDROLOGY			
Vetland Hydrology Indicators:			
rimary Indicators (minimum of one required; check all th	nat apply)	Secondary Indicators (2 or more required)	
Surface Water (A1)	Water-Stained Leaves (B9) (except MLRA	Water-Stained Leaves (B9) (MLRA 1, 2,	
High Water Table (A2)	1, 2, 4A, and 4B)	4A, and 4B)	
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)	
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)	
	•	Coturation Visible on Assistance (CO)	
Sediment Deposits (B2)	_Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)	
-	_Hydrogen Sulfide Odor (C1) _Oxidized Rhizospheres along Living Roots (C3		
Sediment Deposits (B2)			
Sediment Deposits (B2) Drift Deposits (B3)	Oxidized Rhizospheres along Living Roots (C3	3) Geomorphic Position (D2)	
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Oxidized Rhizospheres along Living Roots (C3 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2) Shallow Aquitard (D3)	
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Oxidized Rhizospheres along Living Roots (C3 Presence of Reduced Iron (C4)	3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)	
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	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)	3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)	
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)	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)	3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)	
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) Field Observations:	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)	3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)	
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) Field Observations: Surface Water Present? Yes No	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) X Depth (inches):	3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland	Y.
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) Field Observations: Surface Water Present? Yes No Water Table Present? Yes No	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) X Depth (inches): X Depth (inches):	3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Yes No	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) Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No	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) X Depth (inches):	3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Yes No	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) Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No	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) X Depth (inches): X Depth (inches):	3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Yes No	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) Field Observations: Surface Water Present? Yes No Water Table Present? Yes No	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) X Depth (inches): Depth (inches): 7	3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Yes No Present?	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) Field Observations: Surface Water Present? Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe)	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) X Depth (inches): Depth (inches): 7	3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Yes No Present?	x

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Project/Site:	Federal Way City Center	Access		City/County:	Federal Way/k	King	Sam	npling Date:	8/19/2020
Applicant/Owner:						State: Was		Sampling Point:	
Investigator(s):	Per Johnson, Aaron	Thom				Section, Township, Rang	je:	T21N R04E S	09
Landform (hillslope	e, terrace, etc.):		hillslope		Local re	elief (concave, convex, none	e): none	Slope	e (%): >10%
Subregion (LRR)	: Northwest Forests ar	nd Coast (LRR A	.)	Lat: 47.315601	_ Lor	ng: -122.296219		Datum: NAI	D 1983 (HARN)
	ID-Hydric Rating):		gravelly sar		7.90	- Not Hydric	NWI classific		PSSCx
•	drologic conditions on the	• •	-			es X No		o, explain in Rema	
Are Vegetation Are Vegetation	, Soil , Soil					re "Normal Circumstance f needed, explain any ans	•		X No
•	DF FINDINGS – Att								
	getation Present?	Yes	y silowili X	No		, transects, import	diil icaluic	:5, EIG.	
Hydric Soil Prese		Yes	X	No	Is the Sample	ed Area			I
Wetland Hydrolo		Yes	X	No	within a Wetl	land? Yes	X	No	
Precipitation: According to the Remarks:	Seattle Tacoma Airport N						to the site visit.		-
Approximately 1 f	foot east of ponded area,	along narrow ba	ınd of seaso	nally to occasionally ir	nnundated Wetla	and 10.			
VEGETATIO	<u>IN</u>		Absolute	Dominant	Indicator	Dominance Test wo			
Tree Stratum	(Plot size:	r=3m)	% Cover	Species?	Status	Number of Dominant			
1. Alnus rubra	`	<u>1–0111/</u>	85%	<u>Species :</u> Yes	FAC	That Are OBL, FACV		5	(A)
2. Amus rubra			0070	100	17.0		V, 01 17.C.		(',')
3.						Total Number of Don	ninant		
4.						Species Across All S		5	(B)
		 =	85% :	= Total Cover					` ′
Sapling/Shrub S	Stratum (Plot size:	<u>r=2m)</u>				Percent of Dominant	Species		
1. Cornus alba	1		30%	Yes	FACW	That Are OBL, FACV	V, or FAC:	100%	<u>′</u> (A/B)
2. Salix lasiand	dra		25%	Yes	FACW	Prevalence Index w			
3. Rubus arme	niacus		5%	No	FAC	Total % Cover of	of: Multi	iply by:	_
4.						OBL species	x 1 =	<u> </u>	
5.						FACW species	x 2 =	= <u></u>	
		_	60% :	= Total Cover		FAC species	x 3 =		
Herb Stratum	(Plot size:	<u>r=1m)</u>				FACU species	x 4 =		
1. Carex obnup			25%	Yes	OBL	UPL species	x 5 =	<u> </u>	(P)
Phalaris arui Ranunculus			20%	Yes	FACW	Column Totals:	(A) ce Index = B/A	· _	(B)
3. <u>Ranunculus</u> 4.	repens	 -	5%	No	<u>FAC</u>	Hydrophytic Vegeta			
5.						1 - Rapid Test fo			
6.						X 2 - Dominance		V Ogotation	
7.						3 - Prevalence I			
8.								1 (Provide support	ting
9.							arks or on a se		
10.						5 - Wetland Nor	n-Vascular Plar	nts ¹	
11.						Problematic Hyd	drophytic Vege	tation (Explain) ¹	
Woody Vine Stra	atum (Plot size: [=	=2m)	50% :	= Total Cover		¹ Indicators of hydric s be present.	soil and wetland	d hydrology must	
1. <u>none</u> 2.						Hydrophytic			
			0% :	= Total Cover		Vegetation	Yes	X No	
	in Herb Stratum	0%		- 10.6.		Present?			
Remarks:									

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SOIL							Sampling Point:	W10-SP-15
Profile Descripti	on (Describe to the	depth neede	d to document the in	dicator or cor	firm the absence	e of indicators):		
Depth	Matr	ix		Redox	x 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	
			<u> </u>					
			<u> </u>					
			<u> </u>					
¹ Type: C=Concen	tration, D=Depletion,	RM=Reduced	Matrix, CS=Covered	or Coated San	d Grains. ² Loc	ation: PL=Pore Lining,	M=Matrix.	
³ Texture: Sa = sar	nd; Si = silt; C = clay;	L = loam or lo	oamy. Texture Modifier	co = coarse;	f = fine; vf = very t	fine; + = heavy (more c	lay); - = light (less clay)	
Hydric Soil Indica	ators (Applicable to	all LRRs, un	less otherwise noted):		Indicators for Pro	blematic Hydric Soils ³ :	
Histosol (A1)			Sandy Redox (S5	5)		2 cm Muck (A	10)	
Histic Epipedo	on (A2)		Stripped Matrix (S	36)		Red Parent Ma	aterial (TF2)	
Black Histic (/	A3)		Loamy Mucky Mir	neral (F1) (exc	ept MLRA 1)	Very Shallow I	Dark Surface (TF12)	
Hydrogen Sul	fide (A4)		Loamy Gleyed Ma	atrix (F2)		Other (Explain	in Remarks)	
Depleted Belo	ow Dark Surface (A1	1)	Depleted Matrix (F3)				
Thick Dark Su	urface (A12)		X Redox Dark Surfa	ace (F6)		³ Indicators of hydro	phytic vegetation and wetla	nd
Sandy Mucky	Mineral (S1)		Depleted Dark Su	ırface (F7)		•	present, unless disturbed or	
Sandy Gleyed	d Matrix (S4)		Redox Depressio	ns (F8)		problematic.		
Restrictive Layer	(if present):							
Тур	e:					Hydric Soil		
Depth (inches):		_				Present?	Yes X	No
Remarks:								
HYDROLOGY	•							
Wetland Hydrolo	gy Indicators:							
Primary Indicators	(minimum of one re	quired; check a	all that apply)			Secondary Indicato	rs (2 or more required)	
Surface Wate	er (A1)	-	Water-Stained Le	aves (B9) (exc	cept MLRA	•	Leaves (B9) (MLRA 1, 2,	
X High Water T	, ,		1, 2, 4A, and 4			4A, and 4B)	, , ,	
X Saturation (A3			Salt Crust (B11)	,		Drainage Patte		
Water Marks	(B1)		Aquatic Invertebra	ates (B13)			ater Table (C2)	
Sediment Dep	posits (B2)		Hydrogen Sulfide	Odor (C1)		Saturation Vis	ble on Aerial Imagery (C9)	
Drift Deposits	(B3)		Oxidized Rhizosp	heres along Li	ving Roots (C3)	Geomorphic P	osition (D2)	
Algal Mat or C	Crust (B4)		Presence of Redu	uced Iron (C4)		Shallow Aquita	ard (D3)	
Iron Deposits	(B5)		Recent Iron Redu	ction in Tilled	Soils (C6)	FAC-Neutral T	est (D5)	
Surface Soil C	Cracks (B6)		Stunted or Stress	ed Plants (D1)	(LRR A)	Raised Ant Mo	ounds (D6) (LRR A)	
Inundation Vis	sible on Aerial Image	ry (B7)	Other (Explain in	Remarks)		Frost-Heave H	łummocks (D7)	
Sparsely Veg	etated Concave Surf	ace (B8)						
Field Observation	ns:							
Surface Water Pr	esent? Yes	S	No X	Depth (inche	es):	Wetland		
Water Table Pres	ent? Yes	s X	No	Depth (inche	es): 8	Hydrology	Yes X	No
Saturation Preser	nt? Yes	s X	No	Depth (inche	es): 0	Present?		<u> </u>
(includes capillary	r fringe)		· · ·					
December 5	lad Date (etc		:			-ilabla		
Describe Record	ied Data (stream ga	uge, monitori	ing well, aerial photo	s, previous in	spections), if av	aliable:		
Remarks:								
	ated about 1-foot fror	n sample plot.						

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Project/Site:	Federal Way City Cente	r Access	City/County:	Federal Way/K	King	Sampling Date: 8/19/2020
Applicant/Owner:					State: Washington	· • ———
Investigator(s):	Per Johnson, Aaron	Thom			Section, Township, Range:	T21N R04E S09
Landform (hillslop	pe, terrace, etc.):	hills	slope	Local re	elief (concave, convex, none):	none Slope (%): >10%
Subregion (LRR)): Northwest Forests a	,	Lat: 47.315613	Lor	ng: -122.296112	Datum: NAD 1983 (HARN)
		Alderwood gravelly		7 tg C		classification: None
•	•	e site typical for this time	•		es X No	(If no, explain in Remarks)
Are Vegetation Are Vegetation		, or Hydrolog , or Hydrolog			re "Normal Circumstances" pres f needed, explain any answers i	
•			<u> </u>			
				int locations,	, transects, important fe	eatures, etc.
Hydric Soil Pres	getation Present?	Yes X Yes		Is the Sample	ed Area	
Wetland Hydrolo		Yes	No X	within a Wetl		No. Y
-	Jgy i resent:	103	NU			No <u>X</u>
Precipitation: According to the	Seattle Tacoma Airport	NOAA weather station, p	precipitation was within the	e normal range fo	or the three months prior to the s	site visit.
Remarks:						
Located approxir	mately 6 feet from W10-S	SP-15, upslope approxim	ately 4 feet in elevation for	rom ponded water	r.	
i						
VEGETATIO	N					
		Absolu		Indicator	Dominance Test workshee	
Tree Stratum	(Plot size:	<u>3mx2m)</u> <u>% Cov</u>	_	<u>Status</u>	Number of Dominant Specie	
1. Alnus rubra		90%		FAC	That Are OBL, FACW, or FA	AC: <u>3</u> (A)
2. Salix scoule	eriana	10%	No No	FAC		
3.					Total Number of Dominant	
4.					Species Across All Strata:	(B)
l 	- · · · · · · · · · · · · · · · · · · ·		= Total Cover			
Sapling/Shrub S		<u>r=2m)</u>			Percent of Dominant Specie	
1. <u>Oemleria ce</u>		50%		FACU	That Are OBL, FACW, or FA	
2. Rubus arme	eniacus	15%	Yes Yes	<u>FAC</u>	Prevalence Index workshe Total % Cover of:	eet: Multiply by:
						-
4. 					OBL species	x1 =
5.			T-t-LO-you		FACW species FAC species	x z =
Herb Stratum	(Plot size:	65%	= Total Cover		FACU species	x
,	(Plot size:	<u>r=1m)</u>	Voo	EAO	UPL species	x 4 =
 Ranunculus 2. 	repens	90%	S Yes	<u>FAC</u>	Column Totals:	(A)(B)
3.					Prevalence Inde	<u> </u>
4.					Hydrophytic Vegetation In	
5. ————					1 - Rapid Test for Hydr	
6.					X 2 - Dominance Test is	
7.					3 - Prevalence Index is	
8.				·		otations ¹ (Provide supporting
9.				·		on a separate sheet)
10.					5 - Wetland Non-Vascu	·
11.				<u> </u>		tic Vegetation (Explain) ¹
· ·		90%	= Total Cover		¹ Indicators of hydric soil and	
Woody Vine Str	ratum (Plot size: <u>r</u>				be present.	
1. <u>none</u>						
2					Hydrophytic	
% Bare Ground	in Herb Stratum	10%	= Total Cover		Vegetation Ye Present?	es X No
% Date Ground	In Herb Stratum _	10%			Present?	
Remarks:						

Parametrix

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•						Sampling Point:	W10-SP-16
	(Describe to the de	pth needed to	document the in	ndicator or confirm the a	bsence of indicators):		
Depth	Matrix			Redox Features			
(inches)	Color (moist)	%	Color (moist)	% Typ	e ¹ Loc ²	Texture ³	Remarks
0-6	10YR 4/2	100				GrSaL	
						_	
¹ Type: C=Concentra	ation D-Depletion RM	M-Reduced Mat	riv CS-Covered	or Coated Sand Grains.	² Location: PL=Pore Lii	ning M-Matrix	
• •	•					ore clay); - = light (less clay)	
	ors (Applicable to all					r Problematic Hydric Soils ³ :	
Histosol (A1)	oro (Apprioable to an					•	
	(40)		Sandy Redox (S	,	2 cm Muc		
Histic Epipedon			Stripped Matrix (ent Material (TF2)	
Black Histic (A3)			-	ineral (F1) (except MLRA		llow Dark Surface (TF12)	
Hydrogen Sulfide			Loamy Gleyed N		Other (Ex	rplain in Remarks)	
	Dark Surface (A11)		Depleted Matrix				
Thick Dark Surfa			Redox Dark Sur		³ Indicators of h	hydrophytic vegetation and wetla	nd
Sandy Mucky Mi			Depleted Dark S			at be present, unless disturbed or	•
Sandy Gleyed M	Matrix (S4)		Redox Depressi	ons (F8)	problematic.		
Restrictive Layer (if	f present):						
Type:	compacted with cobb	oles	,		Hydric Soil		
Depth (inches):	6				Present?	Yes	No X
Remarks:							
	d 6 inches because of	cobbles and roo	ots intermixed wi	thin compacted layer. Soil	was dry and friable at tim	ne of site visit.	
					,		
HADBOI OCA							
HYDROLOGY	Indicators						
Wetland Hydrology							
Wetland Hydrology	r Indicators: minimum of one requir	red; check all tha	at apply)	_	Secondary Ind	licators (2 or more required)	
Wetland Hydrology	minimum of one requir			_ eaves (B9) (except MLRA	-	dicators (2 or more required) ained Leaves (B9) (MLRA 1, 2,	
Wetland Hydrology Primary Indicators (n	minimum of one requir			, , , ,	-	ained Leaves (B9) (MLRA 1, 2,	
Wetland Hydrology Primary Indicators (n Surface Water (. High Water Tabl Saturation (A3)	minimum of one requir (A1) ble (A2)	_	Water-Stained L	4B)	Water-St	ained Leaves (B9) (MLRA 1, 2,	
Wetland Hydrology Primary Indicators (n Surface Water (. High Water Table	minimum of one requir (A1) ble (A2)	_	Water-Stained L	4B)	Water-Sta 4A, and Drainage	ained Leaves (B9) (MLRA 1, 2, d 4B)	
Wetland Hydrology Primary Indicators (n Surface Water (. High Water Tabl Saturation (A3)	minimum of one requir (A1) ale (A2)	_ _	Water-Stained L 1, 2, 4A, and Salt Crust (B11)	4B) rates (B13)	Water-St. 4A, and Drainage Dry-Seas	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10)	
Wetland Hydrology Primary Indicators (n Surface Water (. High Water Table Saturation (A3) Water Marks (B	minimum of one requir (A1) ble (A2) (1) sits (B2)	_ _ _	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide	4B) rates (B13)	Water-St. 4A, and Drainage Dry-Seas Saturation	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) con Water Table (C2)	
Primary Indicators (n Surface Water (. High Water Tabl Saturation (A3) Water Marks (B Sediment Depos	minimum of one requir (A1) ble (A2) (A1) sits (B2) (B2)	_ _ _	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide	rates (B13) e Odor (C1) pheres along Living Roots	Water-St: 4A, and Drainage Dry-Seas Saturation (C3) Geomorp	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9)	
Primary Indicators (n Surface Water (High Water Table Saturation (A3) Water Marks (B: Sediment Deposits (B:	minimum of one requirement (A1) le (A2) le (A2) le (B2) le (B3) le (B4)	_ _ _ _	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec	rates (B13) e Odor (C1) pheres along Living Roots	Water-St: 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) In Visible on Aerial Imagery (C9) whic Position (D2)	
Wetland Hydrology Primary Indicators (n Surface Water (n High Water Table Saturation (A3) Water Marks (B) Sediment Depose Drift Deposits (B) Algal Mat or Cru	minimum of one requir (A1) ble (A2) (1) sits (B2) (33) ust (B4)		Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red	rates (B13) e Odor (C1) pheres along Living Roots duced Iron (C4)	Water-St. 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A FAC-Neu	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) con Water Table (C2) n Visible on Aerial Imagery (C9) chic Position (D2) Aquitard (D3)	
Wetland Hydrology Primary Indicators (n Surface Water (n High Water Table Saturation (A3) Water Marks (B Sediment Depose Drift Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra	minimum of one requir (A1) ble (A2) (1) sits (B2) (33) ust (B4)		Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Red	rates (B13) e Odor (C1) pheres along Living Roots duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A)	Water-St: 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A FAC-Neu Raised A	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) shic Position (D2) Aquitard (D3) stral Test (D5)	
Wetland Hydrology Primary Indicators (n Surface Water (n High Water Table Saturation (A3) Water Marks (B) Sediment Deposit Drift Deposits (B) Algal Mat or Cru Iron Deposits (B) Surface Soil Cra	minimum of one requirement (A1) ble (A2) c1) sits (B2) c33) ust (B4) c35) cacks (B6)	B7)	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres	rates (B13) e Odor (C1) pheres along Living Roots duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A)	Water-St: 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A FAC-Neu Raised A	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) shic Position (D2) Aquitard (D3) stral Test (D5) nt Mounds (D6) (LRR A)	
Wetland Hydrology Primary Indicators (n Surface Water (n High Water Table Saturation (A3) Water Marks (B) Sediment Deposits (B) Algal Mat or Cru Iron Deposits (B) Surface Soil Cra Inundation Visible	minimum of one requirement (A1) le (A2) le (A2) li) sits (B2) li) sits (B4) list (B4) list (B6) le on Aerial Imagery (Lated Concave Surface	B7)	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres	rates (B13) e Odor (C1) pheres along Living Roots duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A)	Water-St: 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A FAC-Neu Raised A	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) shic Position (D2) Aquitard (D3) stral Test (D5) nt Mounds (D6) (LRR A)	
Wetland Hydrology Primary Indicators (n Surface Water (n High Water Table Saturation (A3) Water Marks (B) Sediment Depose Drift Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visible Sparsely Vegeta	minimum of one requirement (A1) A1) A1) A1) A1) A1) A1) A1)	B7)	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres	rates (B13) e Odor (C1) pheres along Living Roots duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) a Remarks)	Water-St: 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A FAC-Neu Raised A Frost-Hea	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) shic Position (D2) Aquitard (D3) stral Test (D5) nt Mounds (D6) (LRR A)	
Wetland Hydrology Primary Indicators (n Surface Water (n High Water Table Saturation (A3) Water Marks (B) Sediment Deposits (B) Algal Mat or Crue Iron Deposits (B) Surface Soil Crae Inundation Visible Sparsely Vegeta Field Observations: Surface Water Preservations	minimum of one requirement (A1) A1) A1) A1) A1) A1) A1) A1)	B7) No	Water-Stained L 1, 2, 4A, and salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) i Remarks) Depth (inches):	Water-St: 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A FAC-Neu Raised A Frost-Hea	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) n Visible on Aerial Imagery (C9) bhic Position (D2) Aquitard (D3) stral Test (D5) nt Mounds (D6) (LRR A) ave Hummocks (D7)	No. X
Wetland Hydrology Primary Indicators (n Surface Water (n High Water Table Saturation (A3) Water Marks (B Sediment Depose Drift Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visible Sparsely Vegeta Field Observations: Surface Water Presen	minimum of one requirement (A1) A1) A1) A1) A1) A2) A3) A3) A35) A36 A36 A37 A38 A39 A39 A39 A39 A39 A39 A39	B7) NoNo	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-St. 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A FAC-Neu Raised A Frost-Hea Wetland Hydrolog	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) In Visible on Aerial Imagery (C9) Shic Position (D2) Aquitard (D3) Itral Test (D5) Int Mounds (D6) (LRR A) Interpretation (D7) Ave Hummocks (D7)	No X
Primary Indicators (n Surface Water (n High Water Table Saturation (A3) Water Marks (B Sediment Depose Drift Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visible Sparsely Vegeta Field Observations: Surface Water Present Saturation Present?	minimum of one requirement (A1) A1) A2) A3) A3) A35) A36 A36 A37 A38 A39 A39 A39 A39 A39 A39 A39	B7) No	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) i Remarks) Depth (inches):	Water-St: 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A FAC-Neu Raised A Frost-Hea	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) In Visible on Aerial Imagery (C9) Shic Position (D2) Aquitard (D3) Itral Test (D5) Int Mounds (D6) (LRR A) Interpretation (D7) Ave Hummocks (D7)	No X
Primary Indicators (n Surface Water (n High Water Table Saturation (A3) Water Marks (B Sediment Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visible Sparsely Vegeta Field Observations: Surface Water Presen	minimum of one requirement (A1) A1) A1) A1) A1) A1) A1) A2) A33) A34 A35) A36 A36 A37 A38 A39 A39 A49 A49 A49 A49 A49 A49	B7) NoNo	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-St. 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A FAC-Neu Raised A Frost-Hea Wetland Hydrolog	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) In Visible on Aerial Imagery (C9) Shic Position (D2) Aquitard (D3) Itral Test (D5) Int Mounds (D6) (LRR A) Interpretation (D7) Ave Hummocks (D7)	No X
Wetland Hydrology Primary Indicators (n Surface Water (n High Water Table Saturation (A3) Water Marks (B) Sediment Deposits (B) Algal Mat or Cru Iron Deposits (B) Surface Soil Cra Inundation Visible Sparsely Vegeta Field Observations: Surface Water Presen Saturation Present? (includes capillary fri	minimum of one requirement (A1) A1) A1) A1) A1) A1) A1) A1)	B7)	Water-Stained L 1, 2, 4A, and salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-St: 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A FAC-Neu Raised A Frost-Hea Wetland Hydrolog Present?	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) In Visible on Aerial Imagery (C9) Shic Position (D2) Aquitard (D3) Itral Test (D5) Int Mounds (D6) (LRR A) Interpretation (D7) Ave Hummocks (D7)	No X
Primary Indicators (n Surface Water (n High Water Table Saturation (A3) Water Marks (B) Sediment Deposits (B) Algal Mat or Cru Iron Deposits (B) Surface Soil Cra Inundation Visible Sparsely Vegeta Field Observations: Surface Water Present Water Table Present Saturation Present? (includes capillary fri	minimum of one requirement (A1) A1) A1) A1) A1) A1) A1) A1)	B7)	Water-Stained L 1, 2, 4A, and salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-St: 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A FAC-Neu Raised A Frost-Hea Wetland Hydrolog Present?	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) In Visible on Aerial Imagery (C9) Shic Position (D2) Aquitard (D3) Itral Test (D5) Int Mounds (D6) (LRR A) Interpretation (D7) Ave Hummocks (D7)	No X
Primary Indicators (n Surface Water (n High Water Table Saturation (A3) Water Marks (B) Sediment Deposits (B) Algal Mat or Cru Iron Deposits (B) Surface Soil Cra Inundation Visible Sparsely Vegeta Field Observations: Surface Water Present Water Table Present Saturation Present? (includes capillary fri	minimum of one requirement (A1) A1) A1) A1) A1) A1) A1) A1)	B7)	Water-Stained L 1, 2, 4A, and salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-St: 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A FAC-Neu Raised A Frost-Hea Wetland Hydrolog Present?	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) In Visible on Aerial Imagery (C9) Shic Position (D2) Aquitard (D3) Itral Test (D5) Int Mounds (D6) (LRR A) Interpretation (D7) Ave Hummocks (D7)	No X
Primary Indicators (n Surface Water (n High Water Table Saturation (A3) Water Marks (B Sediment Depose Drift Deposits (B Algal Mat or Cru Iron Deposits (B Surface Soil Cra Inundation Visible Sparsely Vegeta Field Observations: Surface Water Present Saturation Present? (includes capillary fri	minimum of one requirement (A1) A1) A1) A1) A1) A1) A1) A1)	B7)	Water-Stained L 1, 2, 4A, and salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-St: 4A, and Drainage Dry-Seas Saturation (C3) Geomorp Shallow A FAC-Neu Raised A Frost-Hea Wetland Hydrolog Present?	ained Leaves (B9) (MLRA 1, 2, d 4B) Patterns (B10) son Water Table (C2) In Visible on Aerial Imagery (C9) Shic Position (D2) Aquitard (D3) Itral Test (D5) Int Mounds (D6) (LRR A) Interpretation (D7) Ave Hummocks (D7)	No X

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Project/Site:	Federal Way City Center Acce	ess	City/County:	Federal Way/k	King	Sampling Dat	e: 8/19/2020
Applicant/Owner					State: Washi	•	ng Point: W11-SP-17
Investigator(s):	Per Johnson, Aaron Thom	n		 _ ;	Section, Township, Range:	T21N	R04E S09
Landform (hillslop	pe, terrace, etc.):	depress	ion	Local re	elief (concave, convex, none):	concave	Slope (%): <3%
Subregion (LRR)	,	` ,	Lat: 47.317001	_ Lor	ng: -122.295387		m: NAD 1983 (HARN)
		Water				NWI classification:	PEM1F
•	drologic conditions on the site	,,			es X No	(If no, explain	
Are Vegetation Are Vegetation	, Soil , Soil		significantly dis-		f needed, explain any answ	•	Yes <u>X</u> No
o .	OF FINDINGS – Attach						
	getation Present?	Yes X	No	Triodations,	, transcots, importar	it icatares, etc.	
Hydric Soil Pres	=	Yes X	No No	Is the Sample	ed Area		
Wetland Hydrold		Yes X	No	within a Wet	land? Yes	X No_	
Precipitation: According to the Remarks:	Seattle Tacoma Airport NOAA	A weather station, preci	ipitation was within the	normal range fo	or the three months prior to	the site visit.	
	orthern project boundary east o	of I-5 northbound on rai	mp.				
VEGETATIO	*N	Absolute	Dominant	Indicator	Dominance Test work	rahaat:	
Tree Stratum	(Plot size: r=3	Bm) % Cover	Species?	Status	Number of Dominant S		
1. Fraxinus lati	`	90%	<u>Species :</u> Yes	FACW	That Are OBL, FACW,		3 (A)
2. Alnus rubra		10%	No	FAC	111007110 002, 17.01.,		
3. Populus bal		10%	No	FAC	Total Number of Domin	nant	
4.					Species Across All Stra		3 (B)
		110%	= Total Cover				
Sapling/Shrub S	Stratum (Plot size: r=2	<u></u>	•		Percent of Dominant Sp	pecies	
1. Spiraea dou	<i>ıglasii</i>	15%	Yes	FACW	That Are OBL, FACW,	or FAC:	<u>100%</u> (A/B)
2. Rubus spec	tabilis	10%	Yes	FAC	Prevalence Index wor		
3. Fraxinus lat		5%	<u>No</u>	FACW	Total % Cover of:		
4. Populus bal	lsamifera	5%	No	FAC	OBL species	x 1 =	
5.			-		FACW species	x 2 =	
J			= Total Cover		FAC species	x 3 =	
Herb Stratum	(Plot size: r=1	 Im)	= 10tal Cover		FACU species	x 4 =	
Carex obnu	` —	2%	No	OBL	UPL species	x 5 =	
Geum macr	,	1%	No	FAC	Column Totals:	(A)	(B)
3.					Prevalence	Index = B/A =	
4.			·		Hydrophytic Vegetation	on Indicators:	
5.			<u> </u>		1 - Rapid Test for	Hydrophytic Vegetation	on
6.					X 2 - Dominance Tes	st is >50%	
7.					3 - Prevalence Ind		
8.						Adaptations ¹ (Provide	
9.		<u> </u>				ks or on a separate sh	neet)
10.					5 - Wetland Non-V		1
11.						ophytic Vegetation (Ex	
Woody Vine Str	ratum (Plot size: <u>r=2m)</u>		_= Total Cover		¹ Indicators of hydric soi be present.	and wetland hydrolog	gy must
2.			-		Hydrophytic		
% Bare Ground	l in Herb Stratum 97	0%	= Total Cover		Vegetation Present?	Yes X No	·
Remarks:							

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Profile Description							Sampling Point:	W11-SP-17
	on (Describe to the dep	oth needed to	document the inc	licator or confi	irm the absence	e of indicators):		
Depth	Matrix			Redox	Features 1			
(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	<u> </u>	L	
Firmer C-Connector		4 Deduced Mc		Coated Sand	Crains 2 oor	ation: PL=Pore Lining,	M. Marin	
• •	ntration, D=Depletion, RM nd; Si = silt; C = clay; L =					_		_
	ators (Applicable to all						plematic Hydric Soils ³ :	
Histosol (A1)			Sandy Redox (S5))		2 cm Muck (A1	0)	
Histic Epipedo	on (A2)		Stripped Matrix (S	,		Red Parent Ma	•	
Black Histic (A			Loamy Mucky Min		ot MLRA 1)		Park Surface (TF12)	
Hydrogen Sulf			Loamy Gleyed Ma	. , , ,	,	Other (Explain	, ,	
	ow Dark Surface (A11)		Depleted Matrix (F				,,	
Thick Dark Su		X	Redox Dark Surfa	,		<u> </u>		
Sandy Mucky			Depleted Dark Su				ohytic vegetation and wetland present, unless disturbed or	d
Sandy Gleyed		<u> </u>	Redox Depression			problematic.	resent, unless disturbed or	
Restrictive Layer	(if present):							
Туре	e: n/a					Hydric Soil		
Depth (inches):	n/a			Present?	Yes X	No		
	,							
HYDROLOGY Vetland Hydrolog								
, ,	(minimum of one require	ed: check all th						
•			at annly)			Secondary Indicator	e (2 or more required)	
Surface Water High Water Ta		,		(PO) (ovoc	MI DA	-	s (2 or more required)	
	adie (AZ)		_Water-Stained Lea		ept MLRA	Water-Stained	s (2 or more required) Leaves (B9) (MLRA 1, 2,	
			Water-Stained Lea		ept MLRA	Water-Stained 4A, and 4B)	Leaves (B9) (MLRA 1, 2,	
Saturation (A3	3)		Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11)	В)	ept MLRA	Water-Stained 4A, and 4B) Drainage Patte	Leaves (B9) (MLRA 1, 2,	
Saturation (A3 Water Marks (3) (B1)		Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra	B) ates (B13)	ept MLRA	Water-Stained 4A, and 4B) Drainage Patte Dry-Season W	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2)	
Saturation (A3 Water Marks (Sediment Dep	3) (B1) posits (B2)		Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide	B) ates (B13) Odor (C1)		Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visit	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ole on Aerial Imagery (C9)	
Saturation (A3 Water Marks (Sediment Dep Drift Deposits	3) (B1) posits (B2) s (B3)	_	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph	B) ates (B13) Odor (C1) heres along Livi		Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visit X Geomorphic Potential	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2)	
Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C	3) (B1) posits (B2) 5 (B3) Crust (B4)		Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4)	ng Roots (C3)	Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visil X Geomorphic Po	Leaves (B9) (MLRA 1, 2, erns (B10) ater Table (C2) ble on Aerial Imagery (C9) osition (D2) rd (D3)	
Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits	3) (B1) posits (B2) 5 (B3) Crust (B4) (B5)		Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4) ction in Tilled So	ng Roots (C3) pils (C6)	Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visil X Geomorphic Po Shallow Aquita X FAC-Neutral T	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ble on Aerial Imagery (C9) position (D2) rd (D3) est (D5)	
Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C	3) (B1) posits (B2) s (B3) Crust (B4) (B5) Cracks (B6)		Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct	ates (B13) Odor (C1) heres along Livi uced Iron (C4) ction in Tilled So ed Plants (D1) (ng Roots (C3) pils (C6)	Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visil X Geomorphic Pounce Shallow Aquita X FAC-Neutral T Raised Ant Mo	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ble on Aerial Imagery (C9) besition (D2) rd (D3) est (D5) unds (D6) (LRR A)	
Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis	3) (B1) posits (B2) c (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Imagery (B	B7)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu	ates (B13) Odor (C1) heres along Livi uced Iron (C4) ction in Tilled So ed Plants (D1) (ng Roots (C3) pils (C6)	Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visil X Geomorphic Po Shallow Aquita X FAC-Neutral T	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ble on Aerial Imagery (C9) besition (D2) rd (D3) est (D5) unds (D6) (LRR A)	
Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege	(B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Imagery (Betated Concave Surface	B7)	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct	ates (B13) Odor (C1) heres along Livi uced Iron (C4) ction in Tilled So ed Plants (D1) (ng Roots (C3) pils (C6)	Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visil X Geomorphic Pounce Shallow Aquita X FAC-Neutral T Raised Ant Mo	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ble on Aerial Imagery (C9) besition (D2) rd (D3) est (D5) unds (D6) (LRR A)	
Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege ield Observation	(B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Imagery (Betated Concave Surface	B7) (B8)	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct Stunted or Stresso Other (Explain in F	ates (B13) Odor (C1) heres along Livi uced Iron (C4) ction in Tilled So ed Plants (D1) (Remarks)	ng Roots (C3) oils (C6) (LRR A)	Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visil X Geomorphic Po Shallow Aquita X FAC-Neutral T Raised Ant Mo Frost-Heave H	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ble on Aerial Imagery (C9) besition (D2) rd (D3) est (D5) unds (D6) (LRR A)	
Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege ield Observation Surface Water Pre	(B1) posits (B2) c (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Imagery (Betated Concave Surface ns: resent? Yes	B7) (B8) No	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresso Other (Explain in B	ates (B13) Odor (C1) heres along Livi uced Iron (C4) ction in Tilled So ed Plants (D1) (Remarks) Depth (inches)	ng Roots (C3) pils (C6) [LRR A)	Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visil X Geomorphic Po Shallow Aquita X FAC-Neutral T Raised Ant Mo Frost-Heave H	Leaves (B9) (MLRA 1, 2, rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) besition (D2) rd (D3) est (D5) unds (D6) (LRR A) ummocks (D7)	No
Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation Surface Water Presentation Presentation Presentation Presentation	(B1) (B1) (B2) (B3) (Crust (B4) (B5) (Cracks (B6) (Sible on Aerial Imagery (Betated Concave Surface (Pesent? Yes_ (Pesent? Yes_(Pesent? Yes_(Pesen	B7) (B8)	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresse Other (Explain in F	ates (B13) Odor (C1) heres along Livi uced Iron (C4) ction in Tilled So ed Plants (D1) (Remarks)	ng Roots (C3) poils (C6) (LRR A)	Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visil X Geomorphic Po Shallow Aquita X FAC-Neutral T Raised Ant Mo Frost-Heave H	Leaves (B9) (MLRA 1, 2, rns (B10) ater Table (C2) ble on Aerial Imagery (C9) besition (D2) rd (D3) est (D5) unds (D6) (LRR A)	No
Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation Surface Water Prese Water Table Prese Saturation Presen (includes capillary	(B1) (B1) (B2) (B3) (Crust (B4) (B5) (Cracks (B6) (Sible on Aerial Imagery (Betated Concave Surface (Pesent? Yes_ (Pesent? Yes_(Pesent? Yes_(Pesen	B7) (B8) No No	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresso Other (Explain in B	ates (B13) Odor (C1) heres along Livi uced Iron (C4) ction in Tilled So ed Plants (D1) (Remarks) Depth (inches) Depth (inches)	ng Roots (C3) poils (C6) (LRR A)):):):	Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visii X Geomorphic Pour Shallow Aquita X FAC-Neutral T Raised Ant Mount Frost-Heave H Wetland Hydrology Present?	Leaves (B9) (MLRA 1, 2, rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) besition (D2) rd (D3) est (D5) unds (D6) (LRR A) ummocks (D7)	No
Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation Surface Water Pres Water Table Prese Saturation Presen (includes capillary Describe Record Remarks:	(B1) (B1) (B3) (Crust (B2) (B3) (Crust (B4) (B5) (Cracks (B6) (Sible on Aerial Imagery (Betated Concave Surface (Cracks (B6) (Cracks (B	B7) (B8) No No	Water-Stained Lea 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Redu Stunted or Stresso Other (Explain in B	ates (B13) Odor (C1) heres along Livi uced Iron (C4) ction in Tilled So ed Plants (D1) (Remarks) Depth (inches) Depth (inches)	ng Roots (C3) poils (C6) (LRR A)):):):	Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visii X Geomorphic Pour Shallow Aquita X FAC-Neutral T Raised Ant Mount Frost-Heave H Wetland Hydrology Present?	Leaves (B9) (MLRA 1, 2, rrns (B10) ater Table (C2) ble on Aerial Imagery (C9) besition (D2) rd (D3) est (D5) unds (D6) (LRR A) ummocks (D7)	No

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Project/Site:	Federal Way City Center	r Access		City/County:	Federal Wa	ay/King		Sampling Date:	8/19/	/2020
Applicant/Owner:							Washington		Point: W1	
Investigator(s):	Per Johnson, Aaron	Thom				Section, Township	, Range:	T21N R	04E S09	
Landform (hillslop	e, terrace, etc.):		hillslop)	Loca	al relief (concave, conve	ex, none):	none	Slope (%):	<3%
Subregion (LRR)	: Northwest Forests a	nd Coast (LRR A)	Lat: 47.316986	_	Long: -122.29559	3	Datum:	NAD 1983	3 (HARN)
Soil Unit (Name-I	D-Hydric Rating):	Alderwood	gravelly sa	ndy loam -	AgC	- Not Hydric	NWI clas	ssification:	None	;
Are climatic / hyd	Irologic conditions on the	site typical for th	is time of y	ear?		Yes X		(If no, explain in	Remarks)	
Are Vegetation	, Soil					Are "Normal Circum	•		Yes X	_No
Are Vegetation	, Soil					(If needed, explain a	•	,		
SUMMARY C	OF FINDINGS – At				nt location	ns, transects, in	nportant feat	ures, etc.		
	etation Present?	_								
Hydric Soil Prese		Yes_	Х			npled Area				
Wetland Hydrolo	gy Present?	Yes		No <u>X</u>	within a V	vetiand?	Yes	No	<u>X</u>	
Remarks:	Seattle Tacoma Airport I		ation, preci	pitation was within the	normal rango	e for the three months	s prior to the site	visit.		
VEGETATIO		or W11-5P-17								
			Absolute	Dominant	Indicator	Dominance To	est worksheet:			
Tree Stratum	(Plot size:	r=3m)	% Cover	Species?	Status	Number of Do	minant Species			
Fraxinus latit	,		80%	Yes	FACW		FACW, or FAC:		2	(A)
2. Alnus rubra			20%	No	FAC	_ " '	, , ,			_ ` ′
3. Acer macrop	phyllum		15%	No	FACU	Total Number	of Dominant			
4.	· •					Species Acros			4	(B)
			115%	= Total Cover		_				_ ` ′
Sapling/Shrub S	Stratum (Plot size:	r=2m)				Percent of Dor	minant Species			
1. Lonicera inv		<u></u>	15%	Yes	FAC	That Are OBL,	FACW, or FAC:		<u>50%</u>	(A/B)
2. Vaccinium o			10%	Yes	UPL	_	dex worksheet:			
3. Rubus speci			5%	No	FAC	Total % C	Cover of:	Multiply by:		
Spiraea doug			2%	No	FACW	OBL species		x 1 =		
5.						FACW species	<u> </u>	x 2 =		
			32%	= Total Cover		FAC species		x 3 =		
Herb Stratum	(Plot size:	r=1m)				FACU species		x 4 =		
Rubus ursini	us	<u></u>	60%	Yes	FACU	UPL species		x 5 =		
2.						Column Totals	. 	(A)		(B)
3.						– Pre	evalence Index =	= B/A =		
4.						Hydrophytic \	Vegetation Indic	cators:		
5.						- 1 - Rapid	Test for Hydropl	hytic Vegetation		
6.						2 - Domin	nance Test is >50	0%		
7.						3 - Preval	lence Index is ≤3	3.0 ¹		
8.						4 - Morph	ological Adaptat	ions¹ (Provide s	upportina	
9.							Remarks or on			
10.						– 5 - Wetlai	nd Non-Vascular	· Plants¹		
11.						Problema	tic Hydrophytic \	/egetation (Expl	ain) ¹	
Woody Vine Stra	atum (Plot size: <u>r</u>	<u>=2m)</u>	60%	= Total Cover		- 	nydric soil and we	-		
1. <u>none</u>				· —		_ Usalianah				
2		 -	0%	= Total Cover		_ Hydrophy Vegetation		No	v	
% Bare Ground	in Herb Stratum _	40%	0%	= Total Cover		Present?	_	NO	X	-
Remarks:						•				

Parametrix

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SOIL							Sampling Point:	W11-SP-18		
Profile Description	on (Describe to the de	epth needed to	document the ir	dicator or con	firm the absenc	e 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	<u> </u>			
10+	10YR 5/1	100					L			
¹ Type: C=Concent	ration, D=Depletion, R	M=Reduced Ma	atrix, CS=Covered	or Coated San	d Grains. ² Loc	ation: PL=Pore Lining, I	M=Matrix.			
³ Texture: Sa = sand	d; Si = silt; C = clay; L	= loam or loam	y. Texture Modifie	r: co = coarse; f	f = fine; vf = very	fine; + = heavy (more cl	ay); - = light (less clay)			
Hydric Soil Indica	tors (Applicable to a	II LRRs, unles	s otherwise noted	d):		Indicators for Prob	olematic Hydric Soils ³ :			
Histosol (A1)			_Sandy Redox (S	5)		2 cm Muck (A1	0)			
Histic Epipedo	n (A2)		Stripped Matrix (S6)		Red Parent Ma	terial (TF2)			
Black Histic (A	.3)		_Loamy Mucky M	ineral (F1) (exce	ept MLRA 1)	Very Shallow D				
Hydrogen Sulfi	ide (A4)		_Loamy Gleyed M	latrix (F2)		Other (Explain in Remarks)				
Depleted Belov	w Dark Surface (A11)		_Depleted Matrix	(F3)						
Thick Dark Sui	rface (A12)	<u>X</u>	_Redox Dark Surf	ace (F6)		³ Indicators of hydror	ohytic vegetation and wetlar	nd		
Sandy Mucky I	Mineral (S1)		_Depleted Dark S	urface (F7)			present, unless disturbed or			
Sandy Gleyed	Matrix (S4)		_Redox Depression	ons (F8)		problematic.				
Restrictive Layer	(if present):									
Туре	:					Hydric Soil				
Depth (inches):						Present?	Yes X	No		
Remarks:										
HYDROLOGY										
Wetland Hydrolog	y Indicators:									
Primary Indicators	(minimum of one requi	red; check all t	hat apply)	_		Secondary Indicator	s (2 or more required)			
Surface Water	(A1)		Water-Stained L	eaves (B9) (exc	ept MLRA	Water-Stained	Leaves (B9) (MLRA 1, 2,			
—— High Water Ta			– 1, 2, 4A, and 4		•	4A, and 4B)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Saturation (A3)	` '		Salt Crust (B11)	,		Drainage Patte	erns (B10)			
Water Marks (B1)		Aquatic Inverteb	rates (B13)			ater Table (C2)			
Sediment Depo	osits (B2)		– Hydrogen Sulfide	Odor (C1)		Saturation Visil	ble on Aerial Imagery (C9)			
Drift Deposits	(B3)		Oxidized Rhizos	oheres along Liv	ving Roots (C3)	Geomorphic Po	osition (D2)			
Algal Mat or C	rust (B4)		Presence of Rec	luced Iron (C4)		Shallow Aquita	rd (D3)			
Iron Deposits ((B5)		Recent Iron Red	uction in Tilled S	Soils (C6)	FAC-Neutral T	est (D5)			
Surface Soil C	racks (B6)		Stunted or Stres	sed Plants (D1)	(LRR A)	Raised Ant Mo	unds (D6) (LRR A)			
Inundation Visi	ble on Aerial Imagery	(B7)	Other (Explain in	Remarks)		Frost-Heave H	ummocks (D7)			
Sparsely Vege	tated Concave Surfac	e (B8)	_			<u> </u>				
Field Observation	s:									
Surface Water Pre	esent? Yes	No	o X	Depth (inche	s):	Wetland				
Water Table Prese		No	X	Depth (inche		Hydrology	Yes	No X		
Saturation Present			X	Depth (inche		Present?				
(includes capillary	_				, 					
Describe Recorde	ed Data (stream gaug	je, monitoring	well, aerial photo	os, previous in	spections), if av	ailable:				
Remarks:										
Remarks.										

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Project/Site:	Federal Way City Center A	ccess	1	City/County:	Federal Way/Ki	ing	Sa	mpling Date:	8/19/2020
Applicant/Owner:						State: W			t: W12-SP-19
Investigator(s):	Per Johnson, Aaron Th	nom				ection, Township, Ran	nge:	T21N R04E	S16
_andform (hillslop	e, terrace, etc.):	valley	depression/		Local reli	ief (concave, convex, no	ne): conca	ave Slop	pe (%): <u><3%</u>
• ,	: Northwest Forests and	` ,	Lat:	47.312946	Lon	g: <u>-122.299057</u>		Datum: NA	AD 1983 (HARN)
	ID-Hydric Rating):			-		Not Hydric	NWI classif		None
•	Irologic conditions on the si	• •	•		Ye			no, explain in Rem	
Are Vegetation Are Vegetation	, Soil	, or Hydro , or Hydro		significantly dist		e "Normal Circumstan needed, explain any a	•		XNo
•									
	OF FINDINGS – Atta letation Present?				T locations,	transects, impor	rtant leatur	es, etc.	
Hydric Soil Pres		Yes Yes			Is the Sample	d Area			
Wetland Hydrolo		Yes			within a Wetla	10	х	No	
Precipitation: According to the Remarks:	Seattle Tacoma Airport NC	DAA weather station,	, precipitation		normal range for	<u> </u>			
Between I-5 sout	hbound on-ramp and I-5 m	ain travel lanes, SW	of 320th inte	rsection					
		Abso	olute	Dominant	Indicator	Dominance Test w	vorksheet:		
Free Stratum	(Plot size:	r=3m) % C		Species?	Status	Number of Domina			
I. none	(That Are OBL, FAC		2	(A)
2.	-		 -				,		(1)
3.						Total Number of Do	ominant		
ļ.			 -			Species Across All		2	(B)
			% = Tota	l Cover					`` <i>,</i>
Sapling/Shrub S	Stratum (Plot size:	<u>r=2m)</u>				Percent of Dominar	nt Species		
I. _{none}			_			That Are OBL, FAC	CW, or FAC:	1009	<u>%</u> (A/B)
2.						Prevalence Index			
3.						Total % Cover	r of: <u>Mu</u>	Itiply by:	
ł						OBL species	x 1	=	
j						FACW species	x 2	=	
·		00	% = Tota	l Cover		FAC species	x 3	=	
Herb Stratum	(Plot size:	<u>r=1m)</u>				FACU species	x 4	=	
1. Juncus effus	sus	65	5%	Yes	FACW	UPL species	x 5	=	
Phalaris aru	ndinacea	30	1%	Yes	FACW	Column Totals:	(A)		(B)
3. Agrostis sto	onifera	10	<u>%</u>	No	FAC	Prevale	nce Index = B	/A =	
4						Hydrophytic Vege	tation Indicate	ors:	
5.						1 - Rapid Test	for Hydrophyti	c Vegetation	
5						X 2 - Dominance	e Test is >50%		
7. <u> </u>						3 - Prevalence	e Index is ≤3.0 ¹		
3.								s ¹ (Provide suppo	rting
9.			<u> </u>			data in Ren	narks or on a s	separate sheet)	
10.						5 - Wetland No			
l1			<u> </u>			Problematic H	ydrophytic Veg	etation (Explain) ¹	
Noody Vine Str	atum (Plot size: r=2		5% = Tota	l Cover		¹ Indicators of hydric be present.	soil and wetla	nd hydrology mus	t
1. <u>Hone</u> 2.						Hydrophytic			
		00	 % = Tota	l Cover		Vegetation	Yes	X No	
% Bare Ground	in Herb Stratum	0%				Present?			
Remarks:									
Kemarko.									

Parametrix

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SOIL							Sampling Point:	W12-SP-19			
	ion (Describe to the d	lepth needed to	document the in	dicator or conf	firm the absend	ce of indicators):	- Campinig i Cinti	1112 01 10			
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	С	M	L				
		_									
¹ Type: C=Conce	ntration, D=Depletion, F	RM=Reduced Ma	atrix, CS=Covered	or Coated Sand	d Grains. ² Lo	cation: PL=Pore Lining,	M=Matrix.				
• •	•					fine; + = heavy (more cl					
	cators (Applicable to a				,		olematic Hydric Soils ³ :				
Histosol (A1)			Sandy Redox (St	, 5)		2 cm Muck (A	•				
Histic Epiped			Stripped Matrix (•		Red Parent Ma					
Black Histic			Loamy Mucky Mi	,	ent MI RA 1)		Dark Surface (TF12)				
Hydrogen Su			Loamy Gleyed M		,p: 10121 () (1)	Other (Explain in Remarks)					
	low Dark Surface (A11)	X	Depleted Matrix (
Thick Dark S			Redox Dark Surfa								
	y Mineral (S1)		Depleted Dark St				phytic vegetation and wetlar				
	d Matrix (S4)		Redox Depression			hydrology must be present, unless disturbed or problematic.					
			- '			•					
Restrictive Laye						Hydric Soil					
Ty _l Depth (inches):						Hydric Soil Present?	Yes X	No			
Deptir (iriches).						riesent:	Yes X	<u> </u>			
Remarks:											
	,										
HYDROLOG'											
Wetland Hydrolo	•						(2				
Primary Indicator	s (minimum of one requ	uired; check all th	nat apply)	_		Secondary Indicato	rs (2 or more required)				
Surface Wat	, ,		_Water-Stained Le	, , ,	ept MLRA		Leaves (B9) (MLRA 1, 2,				
High Water	, ,		1, 2, 4A, and 4	IB)		4A, and 4B)					
Saturation (A	,		_Salt Crust (B11)			Drainage Patte					
Water Marks			_Aquatic Invertebr				ater Table (C2)				
Sediment De			_Hydrogen Sulfide	, ,			ble on Aerial Imagery (C9)				
Drift Deposit	` ,	<u>X</u>	_Oxidized Rhizosp	_	ring Roots (C3)	X Geomorphic P					
Algal Mat or			Presence of Red	, ,		Shallow Aquita					
Iron Deposits			_Recent Iron Redu			X FAC-Neutral T	` '				
X Surface Soil			_Stunted or Stress		(LRR A)		ounds (D6) (LRR A)				
	isible on Aerial Imagery		Other (Explain in	Remarks)		Frost-Heave H	lummocks (D7)				
Sparsely Ve	getated Concave Surface	ce (B8)									
Field Observation											
Surface Water P			<u> </u>	Depth (inches		Wetland					
Water Table Pre		No.		Depth (inches		Hydrology	Yes X	No			
Saturation Prese	-	No	<u> </u>	Depth (inches	s):	Present?					
(includes capillar	y tringe)										
Describe Recor	ded Data (stream gau	ge, monitorina	well, aerial photo	s, previous ins	spections). if a	vailable:					
	(2 9	_ , · · · · · · · · · · · · · · · · · ·	,	,,	,,						
Remarks:											
Assumed inundat	ed/saturated for at leas	t 5% of growing	season.								

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Project/Site:	Federal Way City Center	r Access		City/County:	Federal Way	//King	5	Sampling Date:	8/1	9/2020
Applicant/Owner:							Washington			W12-SP-20
Investigator(s):	Per Johnson, Aaron	Thom				Section, Township, I	Range:	T21N R	04E S16	
Landform (hillslop	e, terrace, etc.):		hillslope	1	Local	relief (concave, convex	, none):	one	Slope (%): <u>5-10%</u>
,	: Northwest Forests a	,	,	Lat: 47.312950	_ Lo	ong: -122.298889			NAD 19	83 (HARN)
		Arents, A			AmC	- Not Hydric		sification:	Nor	
•	drologic conditions on the	• • •						If no, explain in		
Are Vegetation Are Vegetation	, Soil _ , Soil					Are "Normal Circums (If needed, explain ar	•		Yes X	No
•	, 50 DF FINDINGS – At		_							
	getation Present?		X X			5, II ali 35013, ii ij	JUITAIIL IGAL	лгеэ, с .с.		
Hydric Soil Prese		_		No X	Is the Samp	pled Area				
Wetland Hydrolo		Yes	_	No X	within a We		es	No	X	
Precipitation:					1					
	Seattle Tacoma Airport	NOAA weather sta	ation, precip	itation was within the	normal range f	for the three months p	orior to the site	visit.		
Remarks:										
Wetland 12 uplar	nd sample plot.									
VEGETATIO	N									
			Absolute	Dominant	Indicator	Dominance Tes	st worksheet:	,		
Tree Stratum	(Plot size:	<u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Dom	inant Species			
1. <u>none</u>						That Are OBL, F	ACW, or FAC:		2	(A)
2.				<u> </u>						_
3.						Total Number of	Dominant			
4.						Species Across	All Strata:		2	(B)
		_	0% =	= Total Cover						
Sapling/Shrub S	Stratum (Plot size:	<u>r=2m)</u>				Percent of Dom	•			
1. <u>none</u> 2.						That Are OBL, F			100%	(A/B)
3.						Prevalence Ind Total % Co		Multiply by:		
4.						OBL species		viuitipiy by. < 1 =		
4. 						FACW species		(2=		
J		 -	0% =	= Total Cover		FAC species		(3=		
Herb Stratum	(Plot size:	r=1m)	U70 -	- Total Covel		FACU species		(4 =		
Holcus lanat	•	<u>1=11111</u>	45%	Yes	FAC	UPL species		(5 =		
Agrostis stol		<u> </u>	45%	Yes	FAC	Column Totals:		(A)		(B)
3. Cirsium arve			5%	No	FAC	Prev	ralence Index =			``
4. Phalaris arui			5%	No	FACW	Hydrophytic Ve	getation Indic	ators:		
5.						1 - Rapid T	est for Hydroph	ytic Vegetation	l	
6.						X 2 - Domina	nce Test is >50	%		
7.						3 - Prevale	nce Index is ≤3.	.01		
8.						4 - Morpho	logical Adaptation	ons ¹ (Provide s	upporting	
9.						data in I	Remarks or on a	a separate she	et)	
10							d Non-Vascular			
11						 	c Hydrophytic V	-		
	(5)		100% =	= Total Cover			dric soil and we	tland hydrology	must	
Woody Vine Stra 1. none	<u>atum</u> (Plot size: <u>r</u>	<u>=2111)</u>				be present.				
2. <u>Hone</u>						Hydrophyt	tic			
			0% =	= Total Cover		Vegetation		X No		
% Bare Ground	in Herb Stratum	0%				Present?				_
Remarks:										
Nema No.										

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SOIL							Sampling Poir	nt: W12-SP-20
Profile Description	n (Describe to the de	pth needed to	document the i	ndicator or confi	rm the absend	ce of indicators):		
Depth	Matrix			Redox F	Features			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ³	Remarks
¹ Type: C=Concentra	ation, D=Depletion, RN	M-Reduced Ma	trix CS=Covered	or Coated Sand	Grains ² Lo	cation: PL=Pore Lining, I	M-Matrix	
_ **	•					fine; + = heavy (more cla		
	ors (Applicable to all				- IIIC, VI — VCI y		plematic Hydric Soils ³ :	
	oro (Apprioudro to un	. =		•			-	
Histosol (A1)	(40)		Sandy Redox (S	•		2 cm Muck (A1		
Histic Epipedon		_	Stripped Matrix		MI DA 4)	Red Parent Ma		
Black Histic (A3		_		lineral (F1) (excep	ot MLRA 1)		eark Surface (TF12)	
Hydrogen Sulfic		_	Loamy Gleyed N			Other (Explain	in Remarks)	
	Dark Surface (A11)		Depleted Matrix	, ,				
Thick Dark Surf			Redox Dark Sur			³ Indicators of hydrop	ohytic vegetation and we	tland
Sandy Mucky M		_	_Depleted Dark S				resent, unless disturbed	or
Sandy Gleyed N	/latrix (S4)	_	_Redox Depressi	ons (F8)		problematic.		
Restrictive Layer (i	f present):							
Type:						Hydric Soil		
Depth (inches):						Present?	Yes	No X
Remarks:								
Located along I-5 ro	ad fill prism							
HYDROLOGY								
Wetland Hydrology	Indicators:							
	minimum of one requir	red: check all th	nat apply)			Secondary Indicator	s (2 or more required)	
Surface Water	•			— .eaves (B9) (exce	nt MI DA	-	Leaves (B9) (MLRA 1, 2	
High Water Tab	,		1, 2, 4A, and	, , ,	pt MEIXA	4A, and 4B)	Leaves (D9) (MLIXA 1, 2	- ,
Saturation (A3)	ile (AZ)		Salt Crust (B11)	ŕ		Drainage Patte	rno (P10)	
Water Marks (B	(1)		_Sail Clust (B11) Aquatic Inverteb				ater Table (C2)	
Sediment Depo			-	, ,				0)
	, ,		_ Hydrogen Sulfid	pheres along Livir	na Booto (C2)		ole on Aerial Imagery (C	9)
Drift Deposits (I			-		ig Roots (C3)	Geomorphic Po		
Algal Mat or Cru			Presence of Re		:1- (00)	Shallow Aquita		
Iron Deposits (E				luction in Tilled Sc		FAC-Neutral To		
Surface Soil Cra				sed Plants (D1) (I	LKK A)		unds (D6) (LRR A)	
	le on Aerial Imagery (Other (Explain in	n Remarks)		Frost-Heave H	ummocks (D7)	
Sparsely Veget	ated Concave Surface	e (B8)				•		
Field Observations	:							
Surface Water Pres	sent? Yes_	No.		Depth (inches)	:	Wetland		
Water Table Preser		No	X	Depth (inches)	:	Hydrology	Yes	No X
Saturation Present?	_	No	X	Depth (inches)	:	Present?		
(includes capillary fr	ringe)							
Describe Because	d Data (atream marr	o monitorio	wall carlet at	oo previews in	nootions\ !f =:	veilebler		
Describe Recorde	d Data (stream gaug	e, monitoring	weii, aeriai phot	os, previous insp	pections), if a	valiable:		
Remarks:								

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Project/Site:	Federal Way City Center	r Access		City/County:	Federal Wa	ay/King		Samp	ing Date:	9/2/20	020
Applicant/Owner						•	ate: Washing		Sampling Poin		
Investigator(s):	Per Johnson					Section, Towns	hip, Range:		T21N R04E	S15	
Landform (hillslop	pe, terrace, etc.):	d	lepression		Loca	l relief (concave, co	onvex, none):	none	Slo	pe (%):	<3%
Subregion (LRR)): Northwest Forests a	nd Coast (LRR A)	Lat:	47.314716		Long: -122.29	0291		Datum: N	AD 1983	(HARN)
	, ,	Alderwood grav		<u>ım</u> -	AgB	- Not Hydr		I classifica		None	
•	drologic conditions on the	• •	•	t merceller aller	- 10	Yes X	No		explain in Ren		
Are Vegetation Are Vegetation	, Soil Soil	or Hydr , or Hydr	· -	significantly distuncturally problem		Are "Normal Circ (If needed, expla				<u>X</u> I	No
_	OF FINDINGS – At						-				
	getation Present?		X No	Inhinia hom		15, 11 01135513,	Important	leatures	, e.c.		
Hydric Soil Pres	=		X No		Is the Sam	npled Area					
Wetland Hydrolo			X No		within a W	-	Yes X		No X		
-	2gy : 1000				<u> </u>						
Precipitation: According to the	Seattle Tacoma Airport N	NOAA weather station	n, precipitation	was lower the r	normal range	e for the three mor	nths prior to the	site visit.			
Remarks:	13 south of 320th										
East buye of vv.	.3 South of 320th										
VEGETATIO	N										
VLOL 171110		Ab.	solute	Dominant	Indicator	Dominanc	e Test worksh	eet.			
Tree Stratum	(Plot size:		Cover	Species?	Status		Dominant Spe				
1. Prunus ema	`		10%	Yes	FACU		BL, FACW, or		4	,	(A)
2.	ii gii isaa		0,0			-	22, , .				(,,
3.			 -			Total Numb	per of Dominan	t			
4.						_	ross All Strata		5	((B)
		1	10% = Tota	al Cover		<u> </u>					` ,
Sapling/Shrub S	Stratum (Plot size:	<u>r=2m)</u>				Percent of	Dominant Spec	cies			
1. Spiraea dou	ıglasii		25%	Yes	FACW	That Are O	BL, FACW, or	FAC:	809	<u>%</u>	(A/B)
2. Salix scoule	eriana	2	25%	Yes	FAC	_	e Index works				
3. Cornus alba	3	<u></u> 1	15%	Yes	FACW	-	% Cover of:		y by:	—	
4. <u>Populus bal</u>	samifera		10%	No	FAC	OBL specie		x 1 =			
5						FACW spe		x 2 =			
U	(5)		75% = Tota	al Cover		FAC specie		x3=			
Herb Stratum	(Plot size:	<u>r=1m)</u>				FACU spec		x 4 =			
Tolmiea me. Juncus effus			10%	Yes	FAC	UPL specie Column To	-	x 5 = (A)			(B)
Carroad Critar			3%	No No	FACW	- Column 10	Prevalence Inc	``	_		— ^(B)
 Carex species 4. 	ies	<u> </u>	3%	No	FAC	Hydrophyt	ic Vegetation				
5.						_ ` ` ` ` ` `	pid Test for Hy				
6.			 -				minance Test		090		
7.							evalence Index				
8.							rphological Ad		Provide suppo	orting	
9.							a in Remarks			ū	
10.						5 - We	etland Non-Vas	cular Plant	s ¹		
11.						Proble	ematic Hydroph	ytic Vegeta	tion (Explain) ¹		
			16% = Tota	al Cover		¹ Indicators	of hydric soil a	nd wetland	hydrology mus	st	
Woody Vine Str	ratum (Plot size: r	<u>=2m)</u>				be present	i.				
1. <u>none</u> 2.						- Hvdro	phytic				
			0% = Tota	al Cover		_ Veget		Yes X	No		
% Bare Ground	I in Herb Stratum	0%	<u> </u>			Prese			<u> </u>		
Remarks:											

Parametrix

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SOIL							Sampling Point	:: W13-SP-21
Profile Description	on (Describe to the dep	th needed to do	cument the in	dicator or conf	irm the absenc	e of indicators):		
Depth	Matrix			Redox	Features			
(inches)	Color (moist)	% C	olor (moist)	%	Type ¹	Loc ²	Texture ³	Remarks
0-7	10YR 3/2	90	10YR 4/6	10	С	PI	SiL	
7+	10YR 4/2	80	2.5Y 5/3	10	D	M	SiL	redox appears stratified
			2.5Y 5/6	10	С	M		
_								
Type: C=Concen	tration, D=Depletion, RM:	=Reduced Matrix	CS=Covered	or Coated Sand	Grains. ² Loc	cation: PL=Pore Lining	, M=Matrix.	
³Texture: Sa = san	nd; Si = silt; C = clay; L =	loam or loamy. T	exture Modifie	r: co = coarse; f :		_		
	ators (Applicable to all I				·		oblematic Hydric Soils ³ :	
Histosol (A1)		Sa	ndy Redox (S	5)		2 cm Muck (A	A10)	
Histic Epipedo	on (A2)		ripped Matrix (•		Red Parent N	,	
Black Histic (A				neral (F1) (excep	ot MLRA 1)		Dark Surface (TF12)	
Hydrogen Sulf			amy Gleyed M		,		n in Remarks)	
	ow Dark Surface (A11)		epleted Matrix				· · · · · · · · · · · · · · · · ·	
Thick Dark Su			dox Dark Surf			2		
Sandy Mucky			pleted Dark S				ophytic vegetation and wetle present, unless disturbed of	
Sandy Gleyed			dox Depression			problematic.	present, unless disturbed t	JI
Restrictive Layer	(if present):							
Туре						Hydric Soil		
Depth (inches):						Present?	Yes X	No
Bopan (monoc).						110001111	<u> </u>	···· <u> </u>
HYDROLOGY Wetland Hydrolog	av Indiastora							
· ·							(0)	
	(minimum of one require			_		•	ors (2 or more required)	
Surface Wate				eaves (B9) (exce	ept MLRA		d Leaves (B9) (MLRA 1, 2,	
High Water Ta			1, 2, 4A, and 4	1B)		4A, and 4E	,	
Saturation (A3	,		It Crust (B11)			Drainage Pat		
Water Marks			uatic Inverteb	, ,			Nater Table (C2)	
X Sediment Dep			drogen Sulfide	` ,			sible on Aerial Imagery (C9)
Drift Deposits	` ,			oheres along Livi	ng Roots (C3)	X Geomorphic		
Algal Mat or C				uced Iron (C4)		Shallow Aqui		
Iron Deposits				uction in Tilled So		FAC-Neutral		
Surface Soil C				sed Plants (D1) (LRR A)		lounds (D6) (LRR A)	
	sible on Aerial Imagery (B		her (Explain in	Remarks)		Frost-Heave	Hummocks (D7)	
	etated Concave Surface	(B8)						
Field Observation								
Surface Water Pro		No	X	Depth (inches)		Wetland		
Water Table Pres	ent? Yes	No	X	Depth (inches)		Hydrology	Yes X	No
Saturation Present (includes capillary		No	X	Depth (inches)):	Present?		
Describe Record	led Data (stream gauge,	, monitoring wel	l, aerial photo	os, previous ins	pections), if av	railable:		
Remarks:								_
	cks abundant herbaceaou	us layer with evide	ence of silt sed	liment deposit inc	dicating seasona	al and periodic flooding		

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Project/Site:	Federal Way City Center	r Access		City/County:	Federal Wa	ay/King		Sampling	Date:	9/2/2020
Applicant/Owner:				<u> </u>			ate: Washingto			W13-SP-22
Investigator(s):	Per Johnson					Section, Townsl	hip, Range:	т	21N R04E S	15
Landform (hillslope	pe, terrace, etc.):		hillslope		Loca	al relief (concave, co	nvex, none):	convex	Slope	e (%): <u>5-10%</u>
Subregion (LRR)): Northwest Forests a	, ,		Lat: 47.314694	_	Long: -122.290	169		atum: NAD	0 1983 (HARN)
		Alderwood g			AgB	- Not Hydri		classification		None
•	drologic conditions on the	• •				Yes X			olain in Rema	
Are Vegetation Are Vegetation	, Soil _ , Soil					Are "Normal Circ (If needed, explain				XNo
_	, SON _ DF FINDINGS – At						-			
	getation Present?		X X	No		15, และเอนเอ,	IIIIportant i	taluito, c	ill.	
Hydric Soil Prese				No X	Is the San	npled Area				
Wetland Hydrolo		Yes		No X	within a V	Vetland?	Yes	N	<u>х</u>	
Precipitation:	Seattle Tacoma Airport	_			normal range	e for the three mon				
D al-a-										
Remarks: Approximately 5 f	ft east of W13 boundary	on gradual slope.								
Approximately 2	it dust of 11 to bearing.	on gradadi sispi.								
VEGETATIO	N									
			Absolute	Dominant	Indicator	Dominance	Test workshe	et:		
Tree Stratum	(Plot size:		% Cover	Species?	Status		Dominant Spec			
1. none	· 						BL, FACW, or F		4	(A)
2.						_				
3.						Total Numb	er of Dominant			
4.						Species Ac	ross All Strata:		6	(B)
		_	0% =	: Total Cover						
Sapling/Shrub S	Stratum (Plot size:	<u>r=2m)</u>				Percent of I	Dominant Speci	es		
1. Acer circinat	tum		25%	Yes	FAC		BL, FACW, or F		<u>67%</u>	(A/B)
2. <u>Oemleria ce</u>		<u> </u>	20%	Yes	FACU		Index worksh			
3. Rubus spect			20%	Yes	FAC	-	% Cover of:	Multiply b	y:	_
4. Rubus arme			20%	Yes	FAC	OBL specie		x1=		
5. <u>Ilex aquifoliu</u>	ım		15%	No No	FACU	FACW specie		x 2 = x 3 =		
Herb Stratum	(Plot size:	- 4	100% =	: Total Cover		FACU specie	-	x3= x4=		
1. Polystichum	•	<u>r=1m)</u>	5%	Yes	FACU	UPL specie		x		
Epilobium cii			5%	Yes	FACW	Column Tot		(A)		(B)
3.	natum		370	103	TAOW	_	Prevalence Inde			(-/
4.							ic Vegetation I			
5.						_ ' ' '	oid Test for Hyd		etation	
6.						X 2 - Dor	minance Test is	>50%		
7.						3 - Pre	valence Index i	s ≤3.0 ¹		
8.						4 - Moi	rphological Ada	ptations ¹ (Pro	vide supporti	ing
9.						data	a in Remarks o	r on a separa	te sheet)	
10						5 - We	tland Non-Vaso	cular Plants ¹		
11						Proble	matic Hydrophy	rtic Vegetation	n (Explain) ¹	
Woody Vine Stra	ratum (Plot size: r	<u>=2m)</u>	10% =	: Total Cover		¹ Indicators of be present.	of hydric soil an	d wetland hyd	Irology must	
1. <u>none</u> 2.						_ Hydro	phytic			
			0% =	: Total Cover		Vegeta		'es X	No	
% Bare Ground	in Herb Stratum	0%				Preser	nt?			
Remarks:										
itemarks.										

Parametrix

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SOIL			Sampling Point:	W13-SP-22			
Profile Description (Describe to the depth nee	eded to document the indicator or confirm the absence	ce of indicators):					
Depth Matrix	Redox Features						
(inches) Color (moist) %	Color (moist) % Type ¹	Loc ²	Texture ³	Remarks			
0-16 10YR 4/3			CbL				
							
			 -				
			-				
							
Type: C-Concentration D-Depletion RM-Redu	iced Matrix, CS=Covered or Coated Sand Grains. ² Loc	cation: PL=Pore Lining, N	M–Matrix				
•	or loamy. Texture Modifier: co = coarse; f = fine; vf = very						
ydric Soil Indicators (Applicable to all LRRs,			lematic Hydric Soils ³ :				
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10	0)				
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)					
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)		ark Surface (TF12)				
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain i	, ,				
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		- · · · ,				
Thick Dark Surface (A12)	Redox Dark Surface (F6)	3					
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		hytic vegetation and wetlan resent, unless disturbed or	d			
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	problematic.	coorn, unicoo diotarbea or				
estrictive Layer (if present):							
Type: _{n/a}		Hydric Soil					
Depth (inches): n/a		Present?	Yes	No X			
temarks:							
HYDROLOGY							
etland Hydrology Indicators:							
rimary Indicators (minimum of one required; che	ck all that apply)	Secondary Indicators	s (2 or more required)				
Surface Water (A1)	Water-Stained Leaves (B9) (except MLRA	Water-Stained I	Leaves (B9) (MLRA 1, 2,				
High Water Table (A2)	1, 2, 4A, and 4B)	4A, and 4B)					
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)					
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Wa	ater Table (C2)				
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visib	le on Aerial Imagery (C9)				
Drift Deposits (B3)	Oxidized Rhizospheres along Living Roots (C3)	Geomorphic Po	sition (D2)				
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitar	d (D3)				
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6)	FAC-Neutral Te	est (D5)				
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)		ınds (D6) (LRR A)				
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Frost-Heave Hu	ımmocks (D7)				
Sparsely Vegetated Concave Surface (B8)							
ield Observations:							
Surface Water Present? Yes	No X Depth (inches):	Wetland					
Water Table Present? Yes	No X Depth (inches):	Hydrology	Yes	No X			
Saturation Present? Yes	No X Depth (inches):	Present?					
includes capillary fringe)							
Describe Recorded Data (stream gauge, mon	itoring well, aerial photos, previous inspections), if a	vailable:					
Remarks:		·					
tomarks.							
Normal No.							

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Project/Site: Federal Way City Center Access		City/County:	Federal Way/	King	Sampling Date	e:1/7/202	21
Applicant/Owner: City of Federal Way				State: Washingto	on Samplin	ng Point: W16	-SP-1
Investigator(s): Trey Parry, Aaron Thom			8	Section, Township, Range:	T21N	R04E S15	
Landform (hillslope, terrace, etc.):	terrace		_ Local re	elief (concave, convex, none):	convex	Slope (%):	<3%
Subregion (LRR): Northwest Forests and Coas	t (LRR A))	Lat: 47.310883	Lo	ng: -122.289017		m: <u>NAD 1983 (</u> I	HARN)
Soil Unit (Name-ID-Hydric Rating): Ald					classification:		
Are climatic / hydrologic conditions on the site typ	•				(If no, explain		
Are Vegetation, Soil Are Vegetation, Soil	, or Hydrology _	significantly dis	sturbed? A	re "Normal Circumstances" pro f needed, explain any answers		Yes X No	٥
SUMMARY OF FINDINGS – Attach si Hydrophytic Vegetation Present?	•		TI IOCALIONS	, transects, important i	eatures, etc.		
Hydric Soil Present?	Yes		Is the Sampl	ed Area			
Wetland Hydrology Present?	Yes	No X	within a Wet		No	Х	
Precipitation: According to the Seattle Tacoma NOAA weather Remarks:			nal range for the				
This is the upland paired soil plot o W16-SP1 loca VEGETATION	ited on a stream ter	race above channeli:	zed section. W1	6 has been incorporated into t	he larger W19.		
VEGETATION	Absolute	Dominant	Indicator	Dominance Test workshop	eet·		
Tree Stratum (Plot size: <u>r=3m)</u>	% Cover	Species?	Status	Number of Dominant Spec			
1. Alnus rubra	70%	Yes	FAC	That Are OBL, FACW, or F		2 (A	4)
2. Pseudotsuga menziesii	30%	Yes	FACU				,
3.				Total Number of Dominant	t		
4.				Species Across All Strata:		(B	3)
	100% =	Total Cover					
Sapling/Shrub Stratum (Plot size: r=2m)				Percent of Dominant Spec	ies		
1. Rubus spectabilis	40%	Yes	FAC	That Are OBL, FACW, or F	FAC:	<u>50%</u> (A	\/B)
2. Rubus ursinus	5%	No	FACU	Prevalence Index worksh	neet:		
3. Acer circinatum	5%	No	FAC	Total % Cover of:	Multiply by:		
4				OBL species	x 1 =		_
5				FACW species	x 2 =		_
	50%=	= Total Cover		FAC species	x 3 =		_
Herb Stratum (Plot size: r=1m)				FACU species	x 4 =		_
1. Polystichum munitum	20%	<u>Yes</u>	FACU	UPL species Column Totals:	x 5 =		— _(D)
2.				Prevalence Inde	(A)		(B)
3. 4.	_			Hydrophytic Vegetation I			
5.				1 - Rapid Test for Hyd		ion	
6.				2 - Dominance Test is	. ,	011	
7.	_			3 - Prevalence Index	_		
8.	<u> </u>			4 - Morphological Ada		e supportina	
9.				data in Remarks o			
10.	_			5 - Wetland Non-Vaso	cular Plants ¹	•	
11.				Problematic Hydrophy	ytic Vegetation (E	xplain) ¹	
Woody Vine Stratum (Plot size: r=2m)	20% =	= Total Cover		¹ Indicators of hydric soil ar be present.	nd wetland hydrolo	ogy must	
1. <u>none</u> 2.	_			Hydrophytic			
% Bare Ground in Herb Stratum 80%	0% =	- Total Cover			/esNo	<u> </u>	
Remarks:							
Nemarks.							

Parametrix

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SOIL									
Profile Descripti	on (Describe to the	depth needed	I to document the i	ndicator or cor	nfirm the absen	ce of indicators):			
Depth	Matrix	[Redox	Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ³	R	emarks
0-16	7.5YR 3/3	80					Cobbly Loam	mix	ed matrix
0-16	10YR 4/6	20					Cobbly Loam	mix	ed matrix
Type: C=Concer	ntration, D=Depletion,	RM=Reduced	Matrix, CS=Covere	d or Coated Sar	nd Grains. ² Lo	ocation: PL=Pore Lin	ing, M=Matrix.		
Texture: Sa = sar	nd; Si = silt; C = clay;	L = loam or loa	amy. Texture Modifie	r: co = coarse; f	f = fine; vf = very	fine; + = heavy (mor	e clay); - = light (less clay)		
Hydric Soil Indica	ators (Applicable to	all LRRs, unle	ess otherwise note	d):		Indicators for Pr	oblematic Hydric Soils ³ :		
Histosol (A1)		_	Sandy Redox (St	5)		2 cm Muck (A10)		
Histic Epipedo	on (A2)		Stripped Matrix (\$	S6)		Red Parent I	Material (TF2)		
Black Histic (A	A3)	_	Loamy Mucky Mi	neral (F1) (exce	ept MLRA 1)	Very Shallov	Dark Surface (TF12)		
Hydrogen Sul		_	Loamy Gleyed M		. ,		in in Remarks)		
	ow Dark Surface (A1	1)	Depleted Matrix (,		
Thick Dark Su	,	_	Redox Dark Surf			3			
—— Sandy Mucky	` ,	_	— Depleted Dark Si	urface (F7)		•	rophytic vegetation and wetla e present, unless disturbed o		
Sandy Gleyed		_	Redox Depression			problematic.	e present, uniess disturbed o	1	
Restrictive Layer			-						
Restrictive Layer	(ii present).					Hydric Soil			
Tuna	0.					myoric son			
	e: none					-	Van	NI.	v
Type Depth (inches): Remarks:	e: <u>none</u> n/a					Present?	Yes	No _	<u> </u>
Depth (inches):	•					-	Yes	No	<u>x</u>
Depth (inches):	n/a					-	Yes	No_	<u>x</u>
Depth (inches):	n/a	·				-	Yes	No	x
Depth (inches): Remarks: HYDROLOGY Wetland Hydrological	n/a	iuired; check a	Il that apply)			Present?	tors (2 or more required)	No_	<u>x</u>
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators	n/a rgy Indicators: s (minimum of one rec	įuired; check a		- - - - -	ent MI RA	Present? Secondary Indica	tors (2 or more required)	No	х
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate	n/a rgy Indicators: s (minimum of one receiver (A1)	quired; check a	Water-Stained Le		ept MLRA	Present? Secondary Indica Water-Staine	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2,	No _	X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water Ta	n/a gy Indicators: s (minimum of one receiver (A1) Table (A2)	auired; check a	Water-Stained Le		ept MLRA	Secondary Indica Water-Staine 4A, and 4B	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B)	No	x
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water Ta	n/a rgy Indicators: s (minimum of one receiver (A1) rable (A2) 3)	quired; check a	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11)	IB)	ept MLRA	Secondary Indica Water-Staine 4A, and 4I Drainage Pa	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10)	No _	х
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators Surface Wate High Water Tail Saturation (Asilographics) Water Marks	n/a regy Indicators: s (minimum of one receiver (A1) reable (A2) 3) (B1)	quired; check a	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr	rates (B13)	ept MLRA	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2)	No _	x
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water Tale Saturation (A: Water Marks Sediment Dep	n/a regy Indicators: s (minimum of one receiver (A1) rable (A2) 3) (B1) posits (B2)	quired; check a	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide	rates (B13) e Odor (C1)		Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9)	No	X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water Tale Saturation (A: Water Marks Sediment Dep	n/a regy Indicators: s (minimum of one receiver (A1) rable (A2) 3) (B1) posits (B2) s (B3)	quired; check a	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp	rates (B13) e Odor (C1) oheres along Liv		Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2)	No _	X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water Ti Saturation (A: Water Marks Sediment Deposits Algal Mat or C	n/a regy Indicators: s (minimum of one receiver (A1) Table (A2) 3) (B1) posits (B2) s (B3) Crust (B4)	quired; check a	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red	rates (B13) e Odor (C1) bheres along Liv	ving Roots (C3)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3)	No _	X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators Surface Wate High Water Tail Saturation (A: Water Marks Sediment Deposits Algal Mat or Colored	n/a regy Indicators: s (minimum of one receiver (A1) rable (A2) 3) (B1) posits (B2) s (B3) Crust (B4)	quired; check a	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu	rates (B13) Prates (B13) Codor (C1) Coheres along Liviluced Iron (C4) Cuction in Tilled S	ving Roots (C3) Soils (C6)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5)	No _	X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C	n/a regy Indicators: s (minimum of one receiver (A1) rable (A2) 3) (B1) posits (B2) s (B3) Crust (B4) c (B5) Cracks (B6)	- - - - - -	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu	rates (B13) e Odor (C1) cheres along Liviluced Iron (C4) uction in Tilled S sed Plants (D1)	ving Roots (C3) Soils (C6)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant M	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No _	X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water T: Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis	n/a regy Indicators: s (minimum of one reder (A1) fable (A2) 3) (B1) posits (B2) s (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Image	- - - - - - - -	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu	rates (B13) e Odor (C1) cheres along Liviluced Iron (C4) uction in Tilled S sed Plants (D1)	ving Roots (C3) Soils (C6)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant M	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5)	No _	X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water T: Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis	n/a regy Indicators: s (minimum of one receiver (A1) rable (A2) 3) (B1) posits (B2) s (B3) Crust (B4) c (B5) Cracks (B6)	- - - - - - - -	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu	rates (B13) e Odor (C1) cheres along Liviluced Iron (C4) uction in Tilled S sed Plants (D1)	ving Roots (C3) Soils (C6)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant M	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No _	X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water T: Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis	n/a regy Indicators: s (minimum of one reder (A1) rable (A2) 3) (B1) posits (B2) s (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Image letated Concave Surfins:		Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu Stunted or Stress Other (Explain in	rates (B13) e Odor (C1) cheres along Liviluced Iron (C4) uction in Tilled S sed Plants (D1)	ving Roots (C3) Soils (C6)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant M	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No _	X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Water High Water T: Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis	n/a regy Indicators: s (minimum of one reder (A1) rable (A2) rable (A2) regy Indicators: rest (B4) rable (B5) racks (B6) racks (B6) racks (B6) racks (B6) racks (B6) restated Concave Surfacts resent? Yes		Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Red Stunted or Stress Other (Explain in	rates (B13) e Odor (C1) pheres along Liv luced Iron (C4) luction in Tilled S sed Plants (D1) Remarks)	ving Roots (C3) Soils (C6) (LRR A)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant M	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No	X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Veg	n/a regy Indicators: s (minimum of one reder (A1) rable (A2) rable (A2) regy Indicators: rest (B4) rable (B5) racks (B6) racks (B6) racks (B6) racks (B6) racks (B6) restated Concave Surfacts resent? Yes		Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu Stunted or Stress Other (Explain in	rates (B13) e Odor (C1) cheres along Liviluced Iron (C4) uction in Tilled S sed Plants (D1)	ving Roots (C3) Soils (C6) (LRR A)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N Frost-Heave	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)		x
Primary Indicators Surface Water High Water Tailor Deposits Algal Mat or Color Deposits Algal Mat or Color Deposits Surface Soil Color Deposits Surface Water Pr	n/a regy Indicators: s (minimum of one recommend) repr (A1) repr (A2) repr (B3) repr (B4) repr (B5) repr (B5) repr (B6) repr		Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu Stunted or Stress Other (Explain in	rates (B13) e Odor (C1) cheres along Liv duced Iron (C4) duction in Tilled Seed Plants (D1) Remarks)	ving Roots (C3) Soils (C6) (LRR A)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N Frost-Heave	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)		
Primary Indicators Surface Water Marks Sediment Deposits Algal Mat or Cloron Deposits Surface Soil Cloron Deposits Sparsely Veg Field Observation Surface Water Pr Water Table Pres	n/a regy Indicators: s (minimum of one reder (A1) reble (A2) 3) (B1) posits (B2) s (B3) Crust (B4) c (B5) Cracks (B6) sible on Aerial Image letated Concave Surfins: resent? resent? Yes sent? Yes sent? Yes	ry (B7)	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu Stunted or Stress Other (Explain in	rates (B13) c Odor (C1) cheres along Liv duced Iron (C4) duction in Tilled S sed Plants (D1) Remarks) Depth (inches)	ving Roots (C3) Soils (C6) (LRR A)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N Frost-Heave Wetland Hydrology	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)		
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Veg Field Observation Surface Water Pr Water Table Pres Saturation Preser (includes capillary	n/a regy Indicators: s (minimum of one reder (A1) reble (A2) 3) (B1) posits (B2) s (B3) Crust (B4) c (B5) Cracks (B6) sible on Aerial Image letated Concave Surfins: resent? resent? Yes sent? Yes sent? Yes	ry (B7)	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Red Stunted or Stress Other (Explain in	rates (B13) c Odor (C1) cheres along Liv luced Iron (C4) luction in Tilled S sed Plants (D1) Remarks) Depth (inches Depth (inches	ving Roots (C3) Soils (C6) (LRR A)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N Frost-Heave Wetland Hydrology Present?	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)		
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Veg Field Observation Surface Water Pr Water Table Pres Saturation Preser (includes capillary	n/a regy Indicators: s (minimum of one red er (A1) rable (A2) 3) (B1) posits (B2) s (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Image retated Concave Surf ns: resent? Yes sent? Yes resent? Yes resent? Yes resent? Yes	ry (B7)	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Red Stunted or Stress Other (Explain in	rates (B13) c Odor (C1) cheres along Liv luced Iron (C4) luction in Tilled S sed Plants (D1) Remarks) Depth (inches Depth (inches	ving Roots (C3) Soils (C6) (LRR A)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N Frost-Heave Wetland Hydrology Present?	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)		

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Project/Site:	Federal Way City Center Acces	s	City/County:	Federal Way	/King	Sampling Date:	1/7/2021
Applicant/Owner:	City of Federal Way			<u>- </u>	State: Washingto	n Sampling	Point: W16-SP-2
Investigator(s):	rey Parry, Aaron Thom			_ ;	Section, Township, Range:	T21N R0	04E S15
Landform (hillslop	e, terrace, etc.):	stream ch	nannel	Local r	elief (concave, convex, none):	concave	Slope (%): <3%
Subregion (LRR)	: Northwest Forests and Coa	st (LRR A))	Lat: 47.310913	Lo	ong: -122.289017	Datum:	NAD 1983 (HARN)
Soil Unit (Name-	ID-Hydric Rating):	Alderwood gravelly	sandy loam -	AgB	- Not Hydric NWI	classification:	None
	Irologic conditions on the site type				/es X No No	(If no, explain in	
Are Vegetation	, Soil				Are "Normal Circumstances" pre		Yes X No
Are Vegetation			naturally proble		If needed, explain any answers	,	
	OF FINDINGS – Attach s	-		nt locations	s, transects, important fo	atures, etc.	
-	getation Present?	Yes X	No	le the Comp	Jad Araa		
Hydric Soil Pres		Yes X	No	Is the Samp	tland?		
Wetland Hydrolo	ogy Present?	Yes X	No	Within a We	tiand? Yes X	No	
Precipitation: According to the	Seattle Tacoma NOAA weather	r station, precipitati	on was within the norn	nal range for th	e three months prior to the site	visit.	
Remarks:	ljecent to channelized area at th	ne tow of a slone th	eat creates a confined o	shannal This is	the paired sample plot to W16-	SD1 W16 has bee	n incorporated into
the larger W19.	njeceni io channenzeo area ai ii	ie tow of a slope ti	iai creates a commed t	manner. mis is	the palled sample plot to w ro-	SF 1. W TO Has been	ii iiicorporated iiito
VEGETATIO	AI						
VEGETATIO	IN	Ali a ali da	Desired	I - P - I	Danis Tarkanalaha		
Troc Stratum	(Dlot oizo: r=3m)	Absolute		Indicator	Dominance Test workshe		
Tree Stratum 1. none	(Plot size: <u>r=3m)</u>	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant Spec		(0)
1. <u>none</u> 2.			_		That Are OBL, FACW, or F	AC:	(A)
3.			_		Total Novel and Charles of		
4.			_		Total Number of Dominant		4 (D)
			Tatal Causes		Species Across All Strata:		(B)
Sapling/Shrub S	Stratum (Plot size: r=2m)	0%	_= Total Cover		Percent of Dominant Speci	00	
4	`	700/	Voo	EAC			100% (A/B)
1 Tubus speci			Yes No	FACU	That Are OBL, FACW, or F Prevalence Index worksh		10070 (A/B)
Rubus ursin3.	us		110	FACO	Total % Cover of:	Multiply by:	
4.			_		OBL species	x 1 =	
5.					FACW species	x 2 =	
			= Total Cover		FAC species	x 3 =	0
Herb Stratum	(Plot size: r=1m)	1070			FACU species	x 4 =	
1. Polystichum	•	3%	No	FACU	UPL species	x 5 =	
2.	mamam				Column Totals:	(A)	(B)
3.		<u> </u>			Prevalence Inde	 ``'	. ,
4.					Hydrophytic Vegetation I	ndicators:	
5.					1 - Rapid Test for Hyd	rophytic Vegetation	ı
6.					X 2 - Dominance Test is		
7.					3 - Prevalence Index is	s ≤3.0 ¹	
8.					4 - Morphological Ada	ptations ¹ (Provide s	supporting
9.					data in Remarks or		
10.					5 - Wetland Non-Vasc	ular Plants ¹	
11.					Problematic Hydrophy	tic Vegetation (Exp	lain) ¹
		3%	= Total Cover		¹ Indicators of hydric soil an	d wetland hydrolog	y must
Woody Vine Str	atum (Plot size: <u>r=2m)</u>		_		be present.		
1. <u>none</u>					16.1		
2			Tatal Occur		Hydrophytic	ne V Na	
% Bare Ground	in Herb Stratum 10%	0%	= Total Cover		Vegetation You	es X No	
,, bale orbaila	10/0				i ieseiit:		
Remarks:							
1							

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Profile Description							Sampling Point:	W16-SP-2
	n (Describe to the de	pth needed	to document the in	dicator or confir	m the absence	of indicators):	· •	
Depth	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ³	Remarks
0-3	10YR 3/3	75	10YR 4/6	15	C		SaL	
3-8	10YR 3/2	75	10YR 4/6	15	C		Cobbly Loam	
8-16	10YR 3/1	80	10YR 3/4	20		M	Cobbly Loam	
0-10	1011(3/1	00	10111 3/4			IVI	CODDIY LOAIII	
								
	tration, D=Depletion, F		•			cation: PL=Pore Lini		
					= fine; vf = very		e clay); - = light (less clay)	
Hydric Soil Indica	tors (Applicable to a	III LRRs, unl	ess otherwise note	d):		Indicators for Pro	oblematic Hydric Soils ³ :	
Histosol (A1)		_	Sandy Redox (S	5)		2 cm Muck (A	(10)	
Histic Epipedo	n (A2)	_	Stripped Matrix (S	S6)		Red Parent M	Material (TF2)	
Black Histic (A	3)	_	Loamy Mucky Mi	ineral (F1) (excep	t MLRA 1)	Very Shallow	Dark Surface (TF12)	
Hydrogen Sulf	ide (A4)		Loamy Gleyed M			Other (Explai	n in Remarks)	
Depleted Belo	w Dark Surface (A11)	_	Depleted Matrix ((F3)				
Thick Dark Su		_	X Redox Dark Surf	, ,		31	and the second s	- 4
Sandy Mucky	, ,	_	Depleted Dark S				ophytic vegetation and wetlar present, unless disturbed or	
Sandy Gleyed		_	Redox Depression			problematic.	present, unless disturbed of	
Restrictive Layer		_	<u> </u>			•		
_						Uvdria Cail		
	none					Hydric Soil	Van V	No
Depth (inches):	n/a					Present?	Yes X	No
	-,·	olied to the to	p 12 inches of the so	oil profile, a positiv	e reaction was	observed indicating t	he presence of reduced iron	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	olied to the to	p 12 inches of the so	oil profile, a positiv	e reaction was	observed indicating t	he presence of reduced iron	
HYDROLOGY	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	blied to the to	p 12 inches of the sc	oil profile, a positiv	e reaction was	observed indicating t	he presence of reduced iron	
		olied to the to	p 12 inches of the so	oil profile, a positiv	e reaction was	observed indicating t	he presence of reduced iron	
Wetland Hydrolog	gy Indicators:			oil profile, a positiv	e reaction was			
Wetland Hydrolog Primary Indicators	gy Indicators: (minimum of one requ		all that apply)			Secondary Indicat	ors (2 or more required)	
Wetland Hydrolog Primary Indicators X Surface Water	gy Indicators: (minimum of one requ		all that apply)Water-Stained Le	- eaves (B9) (exce		Secondary Indicat X Water-Staine	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	
Wetland Hydrolog Primary Indicators X Surface Water X High Water Ta	gy Indicators: (minimum of one requ r (A1) able (A2)		all that apply) Water-Stained Le	- eaves (B9) (exce		Secondary Indicat X Water-Staine 4A, and 4E	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	
Wetland Hydrolog Primary Indicators X Surface Water X High Water Ta X Saturation (A3	gy Indicators: (minimum of one requir (A1) able (A2)		will that apply) Water-Stained Let 1, 2, 4A, and 4 Salt Crust (B11)	- eaves (B9) (exce lB)		Secondary Indicat X Water-Staine 4A, and 4E Drainage Pat	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 3) terns (B10)	
Wetland Hydrolog Primary Indicators X Surface Water X High Water Ta X Saturation (A3 X Water Marks (gy Indicators: (minimum of one requal r (A1) able (A2) B1)		wall that apply) Water-Stained Let 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr	- eaves (B9) (exce B) rates (B13)		Secondary Indicat X Water-Staine 4A, and 4B Drainage Pat Dry-Season V	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 3) terns (B10) Water Table (C2)	
Wetland Hydrolog Primary Indicators X Surface Water X High Water Ta X Saturation (A3 X Water Marks (Sediment Dep	gy Indicators: (minimum of one requar (A1) able (A2) b) B1) cosits (B2)		all that apply) Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide	eaves (B9) (excelle) rates (B13) e Odor (C1)	pt MLRA	Secondary Indicat X Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9)	
Primary Indicators X Surface Water X High Water Ta X Saturation (A3 X Water Marks (Sediment Dep	gy Indicators: (minimum of one require (A1) able (A2) B1) B1) posits (B2) (B3)	uired; check a - - - - -	will that apply) Water-Stained Let 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrous Hydrogen Sulfide Oxidized Rhizosp	eaves (B9) (excel B) rates (B13) e Odor (C1) oheres along Livir	pt MLRA	Secondary Indicat X Water-Staine 4A, and 4E Drainage Pat Dry-Season Vison Saturation Vison	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2)	
Primary Indicators X Surface Water X High Water Ta X Saturation (A3 X Water Marks (Sediment Dep Drift Deposits Algal Mat or C	gy Indicators: (minimum of one require (A1) able (A2) B1) posits (B2) (B3) rust (B4)	uired; check a - - - - -	will that apply) Water-Stained Leter 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebre Hydrogen Sulfider Oxidized Rhizospan Sulfider New Yeresence of Red	eaves (B9) (excells) rates (B13) c Odor (C1) oheres along Livir	ot MLRA	Secondary Indicat X Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis X Geomorphic Shallow Aquit	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3)	
Primary Indicators X Surface Water X High Water Ta X Saturation (A3 X Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits	gy Indicators: (minimum of one requert (A1) able (A2) B1) posits (B2) (B3) rust (B4) (B5)	uired; check a - - - - -	wall that apply) Water-Stained Leter 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrous Hydrogen Sulfider Oxidized Rhizospous X Presence of Reder Recent Iron Reder Presence Reder Presence Reder Recent Presence Reder Recent Reder Red	eaves (B9) (excepte) rates (B13) Odor (C1) cheres along Livir luced Iron (C4) uction in Tilled Sc	opt MLRA ing Roots (C3) iils (C6)	Secondary Indicat X Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis X Geomorphic Shallow Aquit FAC-Neutral	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5)	
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Primary Indicators X Surface Water X High Water Ta X Saturation (A3 X Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits (Surface Soil C Inundation Vis	gy Indicators: (minimum of one require (A1) able (A2) B1) cosits (B2) (B3) rust (B4) (B5) cracks (B6) iible on Aerial Imagery	uired; check a	wall that apply) Water-Stained Leter 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrous Hydrogen Sulfider Oxidized Rhizospous X Presence of Reder Recent Iron Reder Presence Reder Presence Reder Recent Presence Reder Recent Reder Red	eaves (B9) (excelled) rates (B13) e Odor (C1) oheres along Living luced Iron (C4) uction in Tilled So	opt MLRA ing Roots (C3) iils (C6)	Secondary Indicat X Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis X Geomorphic Shallow Aquit FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5)	
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Project/Site:	Federal Way City Center Acces	ss	City/County:	Federal Way/	/King	Sampling Date:	1/7/2021
Applicant/Owner:	City of Federal Way				State: Washington	n Sampling F	Point: W17-SP-1
Investigator(s):	Trey Parry, Aaron Thom				Section, Township, Range:	T21N R0	4E S15
Landform (hillslope	e, terrace, etc.):	stream ter	race	Local re	elief (concave, convex, none):	none	Slope (%): <u>5-10%</u>
Subregion (LRR)	: Northwest Forests and Coa	st (LRR A))	Lat: 47.309956	Lo	ng: -122.290634	Datum:	NAD 1983 (HARN)
Soil Unit (Name-I	ID-Hydric Rating): Al	derwood gravelly sa	indy loam -	AgB		lassification:	None
· ·	Irologic conditions on the site ty	•	•		'es X No No	(If no, explain in	,
Are Vegetation	, Soil	, or Hydrology	significantly dis	sturbed? A	Are "Normal Circumstances" pres		Yes X No
Are Vegetation	, Soil				If needed, explain any answers i		
		site map showi		nt locations	, transects, important fe	atures, etc.	
	getation Present?	Yes		1- 41 0	Lad Amar		
Hydric Soil Prese		Yes		Is the Samp			
Wetland Hydrolo	ogy Present?	Yes X	No	within a Wet	riand? Yes	NoX	<u> </u>
Precipitation:							
According to the	Seattle Tacoma NOAA weathe	r station, precipitatio	n was within the norn	nal range for the	e three months prior to the site v	risit.	
Remarks:							
	ated on a stream terrace of stre	eam S3 a short dista	nce upslope of wetlar	nd W17.			
VEGETATIO	N						
	•	Absolute	Dominant	Indicator	Dominance Test workshe	et·	
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status	Number of Dominant Specie		
1. none	(1 101 0120. <u></u>	<u> 70 00401</u>	ороское.	<u>Otatao</u>	That Are OBL, FACW, or FA		1 (A)
2.					That Ale Obl., I ACW, OI 17		(A)
3.					Total Number of Dominant		
4.					Species Across All Strata:		3 (B)
		0%	= Total Cover		Opecies Across Air Ottata.		<u> </u>
Sapling/Shrub S	Stratum (Plot size: <u>r=2m)</u>	070	- Total Gover		Percent of Dominant Specie	es	
1. Rubus speci	·	35%	Yes	FAC	That Are OBL, FACW, or FA		33% (A/B)
2. Rubus ursin		10%	Yes	FACU	Prevalence Index workshe		(A/B)
3.	<u> </u>	1070	100	17.00	Total % Cover of:	Multiply by:	
4.					OBL species	x 1 =	
5.					FACW species	x 2 =	
		45%	= Total Cover		FAC species	x 3 =	
Herb Stratum	(Plot size: r=1m)		_ 10101 00101		FACU species	x 4 =	
1. Polystichum	•	20%	Yes	FACU	UPL species	x 5 =	
2.					Column Totals:	(A)	(B)
3.					Prevalence Index		```
4.			-	•	Hydrophytic Vegetation In	dicators:	
5.					1 - Rapid Test for Hydr	ophytic Vegetation	
6.					2 - Dominance Test is	>50%	
7.					3 - Prevalence Index is	≤3.0 ¹	
8.					4 - Morphological Adap	otations ¹ (Provide s	upporting
9.					data in Remarks or		
10.					5 - Wetland Non-Vascu	ılar Plants ¹	
11.					Problematic Hydrophyt	ic Vegetation (Expl	ain) ¹
		20%	= Total Cover		¹ Indicators of hydric soil and	wetland hydrology	must
Woody Vine Str	atum (Plot size: r=2m)		•		be present.		
1. <u>none</u>			<u> </u>		Hardnamber 21 -		
2			- Total Cavar		Hydrophytic Vegetation Ye	s No	v
% Bare Ground	in Herb Stratum 0%	0%	= Total Cover		Present?	.sNU	X
					1.300111		
Remarks:							

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						Sampling Point	W17-SP-1
Profile Description	on (Describe to the	depth need	ed to document the i	ndicator or confirm the absen	ce 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	
							
			<u> </u>				
			<u> </u>				
	-						
_						_	
					ocation: PL=Pore Linin		
				er: co = coarse; f = fine; vf = very		_	
-	ators (Applicable to	ali LKKS, ur	nless otherwise note			blematic Hydric Soils ³ :	
Histosol (A1)			Sandy Redox (S	,	2 cm Muck (A	•	
Histic Epipedo	on (A2)		Stripped Matrix (S6)	Red Parent Ma		
Black Histic (A	A3)		Loamy Mucky M	ineral (F1) (except MLRA 1)	Very Shallow I	Dark Surface (TF12)	
Hydrogen Sul			Loamy Gleyed M	latrix (F2)	Other (Explain	in Remarks)	
Depleted Belo	ow Dark Surface (A11)	Depleted Matrix	(F3)			
Thick Dark Su	urface (A12)		Redox Dark Surf	ace (F6)	³ Indicators of hydro	phytic vegetation and wet	land
Sandy Mucky			Depleted Dark S	urface (F7)		present, unless disturbed	
Sandy Gleyed	d Matrix (S4)		Redox Depression	ons (F8)	problematic.		
Restrictive Layer	(if present):						
Туре	e: none				Hydric Soil		
Depth (inches):	n/a				Present?	Yes	No X
Remarks:							
HYDROLOGY							
Wetland Hydrolog							
Primary Indicators	(minimum of one req	uuirod: chock					
Surface Wate	er (A1)	ulleu, check	all that apply)	-	Secondary Indicato	ors (2 or more required)	
X High Water Ta		<u>julieu, crieck</u>	* * * *	- eaves (B9) (except MLRA	-	ors (2 or more required) Leaves (B9) (MLRA 1, 2,	
	able (A2)	<u>laliea, check</u>	* * * *	`	-	Leaves (B9) (MLRA 1, 2,	
X Saturation (A3		ulled, check	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11)	4B)	X Water-Stained	Leaves (B9) (MLRA 1, 2,	
X Saturation (A3 X Water Marks (3)	ulled, check	Water-Stained L 1, 2, 4A, and	4B)	X Water-Stained 4A, and 4B) Drainage Patte	Leaves (B9) (MLRA 1, 2,	
	3) (B1)	uireu, crieck	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11)	4B) rates (B13)	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W	Leaves (B9) (MLRA 1, 2,	
X Water Marks	3) (B1) posits (B2)	uireu, crieck	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide	4B) rates (B13)	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W	erns (B10) Vater Table (C2) Value on Aerial Imagery (C9)	
X Water Marks (X Sediment Dep	3) (B1) posits (B2) (B3)	ulled, check	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide	rates (B13) e Odor (C1) pheres along Living Roots (C3)	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi	Leaves (B9) (MLRA 1, 2, erns (B10) /ater Table (C2) ible on Aerial Imagery (C9 losition (D2)	
X Water Marks (X Sediment Dep Drift Deposits	3) (B1) posits (B2) (B3) Crust (B4)	wieu, crieck	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec	rates (B13) e Odor (C1) pheres along Living Roots (C3)	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Vis X Geomorphic P	Leaves (B9) (MLRA 1, 2, erns (B10) fater Table (C2) ble on Aerial Imagery (C9 rosition (D2) ard (D3)	
X Water Marks (X Sediment Dep Drift Deposits Algal Mat or C	3) (B1) posits (B2) (B3) Crust (B4) (B5)	uileu, check	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4)	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Vis X Geomorphic P Shallow Aquita FAC-Neutral T	Leaves (B9) (MLRA 1, 2, erns (B10) fater Table (C2) ble on Aerial Imagery (C9 rosition (D2) ard (D3)	
X Water Marks (X Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C	3) (B1) posits (B2) (B3) Crust (B4) (B5)		Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A)	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Vis X Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo	erns (B10) Vater Table (C2) Ible on Aerial Imagery (C9 vosition (D2) ard (D3) Vest (D5)	
X Water Marks (X Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis	3) (B1) cosits (B2) (B3) Crust (B4) (B5) Cracks (B6)	y (B7)	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A)	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Vis X Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo	erns (B10) /ater Table (C2) ble on Aerial Imagery (C9 osition (D2) ard (D3) fest (D5) bunds (D6) (LRR A)	
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X Water Marks (X Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege	(B1) cosits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Imager etated Concave Surfa	y (B7)	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A)	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Vis X Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo	erns (B10) /ater Table (C2) ble on Aerial Imagery (C9 osition (D2) ard (D3) fest (D5) bunds (D6) (LRR A)	
X Water Marks (X Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation	(B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Imager etated Concave Surfa	y (B7)	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks)	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi X Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave H	erns (B10) /ater Table (C2) ble on Aerial Imagery (C9 osition (D2) ard (D3) fest (D5) bunds (D6) (LRR A)	
X Water Marks (X Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation Surface Water Pre	(B1) (B1) (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Imager etated Concave Surfa ns: esent? Yes etent? Yes	y (B7)	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches): 7	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Vis X Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave F	erns (B10) Vater Table (C2) Ible on Aerial Imagery (C9 Iosition (D2) Iard (D3) Fest (D5) Founds (D6) (LRR A) Illummocks (D7)	
X Water Marks (X Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation Surface Water Pres	(B1) (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Imager etated Concave Surfa ns: esent? Yes ent? Yes	y (B7) ace (B8) X	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches): 7	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi X Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave P Wetland Hydrology	erns (B10) Vater Table (C2) Ible on Aerial Imagery (C9 Iosition (D2) Iard (D3) Fest (D5) Founds (D6) (LRR A) Illummocks (D7)	
X Water Marks (X Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation Surface Water Pres Saturation Present (includes capillary	(B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Imager etated Concave Surfans: esent? Yesent? Yesent? Yesent? Yesent?	y (B7) ace (B8) X X	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches): The property of the prope	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Vis X Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave P Wetland Hydrology Present?	erns (B10) Vater Table (C2) Ible on Aerial Imagery (C9 Iosition (D2) Iard (D3) Fest (D5) Founds (D6) (LRR A) Illummocks (D7)	
X Water Marks (X Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation Surface Water Pres Water Table Pres Saturation Present (includes capillary	(B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Imager etated Concave Surfans: esent? Yesent? Yesent? Yesent? Yesent?	y (B7) ace (B8) X X	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches): 7	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Vis X Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave P Wetland Hydrology Present?	erns (B10) Vater Table (C2) Ible on Aerial Imagery (C9 Iosition (D2) Iard (D3) Fest (D5) Founds (D6) (LRR A) Illummocks (D7)	
X Water Marks (X Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation Surface Water Pre Water Table Pres Saturation Presen (includes capillary Describe Record	(B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Imager etated Concave Surfans: esent? Yesent? Yesent? Yesent? Yesent?	y (B7) ace (B8) X X	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches): The property of the prope	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Vis X Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave P Wetland Hydrology Present?	erns (B10) Vater Table (C2) Ible on Aerial Imagery (C9 Iosition (D2) Iard (D3) Fest (D5) Founds (D6) (LRR A) Illummocks (D7)	
X Water Marks (X Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation Surface Water Pres Water Table Pres Saturation Present (includes capillary	(B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Imager etated Concave Surfans: esent? Yesent? Yesent? Yesent? Yesent?	y (B7) ace (B8) X X	Water-Stained L 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Stunted or Stres Other (Explain in	rates (B13) e Odor (C1) pheres along Living Roots (C3) duced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches): The property of the prope	X Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Vis X Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave P Wetland Hydrology Present?	erns (B10) Vater Table (C2) Ible on Aerial Imagery (C9 Iosition (D2) Iard (D3) Fest (D5) Founds (D6) (LRR A) Illummocks (D7)	

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Project/Site:	Federal Way City Center Access	S	City/County:	Federal Way/	/King	Sampling Date:	1/7/2021
Applicant/Owner	: City of Federal Way				State: Washington	n_ Sampling	Point: W17-SP-2
Investigator(s):	Trey Parry, Aaron Thom				Section, Township, Range:	T21N R	04E S15
Landform (hillslop	e, terrace, etc.):	hillslop	е	Local re	elief (concave, convex, none):	none	Slope (%): <u>5-10%</u>
Subregion (LRR)	: Northwest Forests and Coas	st (LRR A))	Lat: 47.309910	Lo	ng: -122.290619	Datum:	NAD 1983 (HARN)
Soil Unit (Name-	ID-Hydric Rating): Alc	derwood gravelly sa	indy loam -	AgB		classification:	None
•	drologic conditions on the site type				'es X No No	(If no, explain in	,
Are Vegetation	, Soil	, or Hydrology	significantly dis	sturbed? A	Are "Normal Circumstances" pres		Yes X No
Are Vegetation	, Soil				If needed, explain any answers i		
		ite map showi		nt locations	, transects, important fe	atures, etc.	
Hydrophytic Veg	getation Present?	Yes		1			
Hydric Soil Pres	ent?	Yes	No <u>X</u>	Is the Samp			
Wetland Hydrold	ogy Present?	Yes X	No	within a Wet	tiand? Yes	No	<u>x</u>
Precipitation:							
According to the	Seattle Tacoma NOAA weather	station, precipitation	n was within the norn	nal range for the	e three months prior to the site v	isit.	
Remarks:							
	is located on a steep slope abor	ve strea S3 and we	tland W18. This is the	paired sample	plot to W17-SP3.		
VEGETATIO	N						
		Absolute	Dominant	Indicator	Dominance Test workshe	et·	
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status	Number of Dominant Specie		
1. none	(1 lot 0i20. <u></u>	<u> 70 00 001</u>	ороское.	<u>Otatao</u>	That Are OBL, FACW, or FA		1 (A)
2.					That Ale Obl., I ACW, OI 17		(^)
3.					Total Number of Dominant		
4.					Species Across All Strata:		4 (B)
-			= Total Cover		Opecies Across Air Ottata.		(b)
Sapling/Shrub S	Stratum (Plot size: <u>r=2m)</u>		- Total Gover		Percent of Dominant Specie	es.	
1. Rubus ursin	•	20%	Yes	FACU	That Are OBL, FACW, or FA		<u>25%</u> (A/B)
2. Rubus spec			Yes	FAC	Prevalence Index workshe		<u>==::=</u> (A/D)
3.	tabilio	1070	100	1710	Total % Cover of:	Multiply by:	
4.		<u> </u>			OBL species 0	x 1 =	0
5.		<u> </u>			FACW species 0	x 2 =	0
		35%	= Total Cover		FAC species 15	x 3 =	45
Herb Stratum	(Plot size: r=1m)		_ 10101 00101		FACU species 45	x 4 =	180
1. Polystichum	•	20%	Yes	FACU	UPL species 0	x 5 =	0
Geranium ro		5%	Yes	FACU	Column Totals: 60	(A)	225 (B)
3.					Prevalence Index	x = B/A =	3.75
4.			-		Hydrophytic Vegetation In	dicators:	
5.					1 - Rapid Test for Hydr	ophytic Vegetation	า
6.					2 - Dominance Test is	>50%	
7.					3 - Prevalence Index is	s ≤3.0 ¹	
8.					4 - Morphological Adap	otations ¹ (Provide	supporting
9.					data in Remarks or		· · · -
10.					5 - Wetland Non-Vascu	ular Plants ¹	
11.				<u> </u>	Problematic Hydrophyt	ic Vegetation (Exp	olain) ¹
		25%	= Total Cover	<u> </u>	¹ Indicators of hydric soil and	d wetland hydrolog	jy must
Woody Vine Str	atum (Plot size: <u>r=2m)</u>		•		be present.		
1. <u>none</u>			<u> </u>		Harden of the 2		
2			- Total Cavar		Hydrophytic Vegetation Ye	es No	v
% Bare Ground	in Herb Stratum 0%	0%	= Total Cover		Present?	- NO	<u> </u>
		 -			1.300111		
Remarks:							

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Profile Descriptio Depth (inches) 0-11	n (Describe to the	denth needer					
(inches)	(ոգիու певава	to document the in	ndicator or confirm the absend	ce of indicators):		
	Matrix			Redox Features			
0-11	Color (moist)	%	Color (moist)	% Type ¹	Loc ²	Texture ³	Remark
	10YR 3/2	100				L	
11-16	10YR 4/4	100				GrSaL	
						_	
				<u> </u>			
• •	•				cation: PL=Pore Linir		
				r: co = coarse; f = fine; vf = very			
	ors (Applicable to	ali LKKS, unio	ess otherwise note			blematic Hydric Soils ³ :	
Histosol (A1)		_	Sandy Redox (St	•	2 cm Muck (A	,	
Histic Epipedor	• •	_	Stripped Matrix (S		Red Parent M		
Black Histic (A:	•	_	Loamy Mucky Mi	neral (F1) (except MLRA 1)	Very Shallow	Dark Surface (TF12)	
Hydrogen Sulfi		_	Loamy Gleyed M	atrix (F2)	Other (Explain	in Remarks)	
	w Dark Surface (A11	_	Depleted Matrix (F3)			
Thick Dark Sur	face (A12)	_	Redox Dark Surf	ace (F6)	³ Indicators of hydro	phytic vegetation and wetland	d
Sandy Mucky N	∕lineral (S1)	_	Depleted Dark St	urface (F7)		present, unless disturbed or	-
Sandy Gleyed	Matrix (S4)	_	Redox Depression	ins (F8)	problematic.		
Restrictive Layer (if present):						
Type	none				Hydric Soil		
Depth (inches):	n/a				Present?	Yes	No X
Remarks:							
	_						
HYDROLOGY							
HYDROLOGY Wetland Hydrolog							
HYDROLOGY Wetland Hydrolog	y Indicators: (minimum of one req	uired; check a	all that apply)		Secondary Indicato	ors (2 or more required)	
HYDROLOGY Vetland Hydrolog	minimum of one req	uired; check a		- eaves (B9) (except MLRA		ors (2 or more required) I Leaves (B9) (MLRA 1, 2,	
HYDROLOGY Wetland Hydrolog Primary Indicators (minimum of one req	juired; check a				I Leaves (B9) (MLRA 1, 2,	
HYDROLOGY Vetland Hydrolog Primary Indicators (Surface Water High Water Tal	(Minimum of one req (A1) ble (A2)	juired; check a	Water-Stained Le		Water-Stained	I Leaves (B9) (MLRA 1, 2,	
HYDROLOGY Vetland Hydrolog Primary Indicators (Surface Water High Water Tal	(Minimum of one req (A1) ble (A2)	uired; check a	Water-Stained Le	B)	Water-Stained 4A, and 4B Drainage Patt	I Leaves (B9) (MLRA 1, 2,	
HYDROLOGY Wetland Hydrolog Primary Indicators (Surface Water High Water Tal X Saturation (A3)	(A1) ble (A2))	juired; check a	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11)	rates (B13)	Water-Stained 4A, and 4B Drainage Patt Dry-Season W	I Leaves (B9) (MLRA 1, 2, erns (B10)	
HYDROLOGY Wetland Hydrolog Primary Indicators (Surface Water High Water Tal X Saturation (A3) Water Marks (B	(Minimum of one req (A1) ble (A2)) (B1) posits (B2)	juired; check a	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide	rates (B13)	Water-Stained 4A, and 4B Drainage Patt Dry-Season W	I Leaves (B9) (MLRA 1, 2, erns (B10) /ater Table (C2) ible on Aerial Imagery (C9)	
HYDROLOGY Vetland Hydrolog Primary Indicators (Surface Water High Water Tal X Saturation (A3) Water Marks (E	(Minimum of one req (A1) ble (A2)) (B1) posits (B2) (Minimum of one req (A2)	juired; check a	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide	rates (B13) Prodor (C1) Pheres along Living Roots (C3)	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis	erns (B10) //ater Table (C2) ible on Aerial Imagery (C9) Position (D2)	
HYDROLOGY Wetland Hydrolog Primary Indicators (Surface Water High Water Tal X Saturation (A3) Water Marks (E Sediment Depo	(Minimum of one req (A1) ble (A2)) (B1) posits (B2) (B3) rust (B4)	juired; check a	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red	rates (B13) Prodor (C1) Pheres along Living Roots (C3)	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis Geomorphic F	I Leaves (B9) (MLRA 1, 2, erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3)	
HYDROLOGY Wetland Hydrolog Primary Indicators (Surface Water High Water Tal X Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (Algal Mat or Cr	(Minimum of one req (A1) ble (A2)) B1) posits (B2) B3) rust (B4) B5)	juired; check a	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu	rates (B13) Prodor (C1) Cheres along Living Roots (C3) Uniqued Iron (C4)	Water-Stained 4A, and 4B Drainage Patt Dry-Season W Saturation Vis Geomorphic F Shallow Aquita	I Leaves (B9) (MLRA 1, 2, erns (B10) Vater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3)	
HYDROLOGY Netland Hydrolog Primary Indicators (Surface Water High Water Tal X Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (Algal Mat or Cr Iron Deposits (Surface Soil Cr	(Minimum of one req (A1) ble (A2)) B1) posits (B2) B3) rust (B4) B5)	- - - - - -	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu	rates (B13) Production (C1) Cheres along Living Roots (C3) Cuced Iron (C4) Cuction in Tilled Soils (C6) Code Plants (D1) (LRR A)	Water-Stained 4A, and 4B; Drainage Patt Dry-Season W Saturation Vis Geomorphic F Shallow Aquite FAC-Neutral T Raised Ant Mo	I Leaves (B9) (MLRA 1, 2, erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5)	
HYDROLOGY Vetland Hydrolog Primary Indicators (Surface Water High Water Tal X Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (Algal Mat or Cr Iron Deposits (Surface Soil Cr Inundation Visi	(Minimum of one req (A1) ble (A2)) (B31) posits (B2) (B3) rust (B4) (B5) racks (B6)	- - - - - - - -	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu	rates (B13) Production (C1) Cheres along Living Roots (C3) Cuced Iron (C4) Cuction in Tilled Soils (C6) Code Plants (D1) (LRR A)	Water-Stained 4A, and 4B; Drainage Patt Dry-Season W Saturation Vis Geomorphic F Shallow Aquite FAC-Neutral T Raised Ant Mo	I Leaves (B9) (MLRA 1, 2, 1) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A)	
HYDROLOGY Netland Hydrolog Primary Indicators (Surface Water High Water Tal X Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (Algal Mat or Cr Iron Deposits (Surface Soil Cr Inundation Visi Sparsely Vege	(Minimum of one req (A1) ble (A2) (B31) posits (B2) (B3) rust (B4) (B5) racks (B6) ble on Aerial Imager tated Concave Surfa	- - - - - - - -	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu	rates (B13) Production (C1) Cheres along Living Roots (C3) Cuced Iron (C4) Cuction in Tilled Soils (C6) Code Plants (D1) (LRR A)	Water-Stained 4A, and 4B; Drainage Patt Dry-Season W Saturation Vis Geomorphic F Shallow Aquite FAC-Neutral T Raised Ant Mo	I Leaves (B9) (MLRA 1, 2, 1) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A)	
HYDROLOGY Vetland Hydrolog Primary Indicators (Surface Water High Water Tal X Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (Algal Mat or Cr Iron Deposits (Surface Soil Cr Inundation Visi Sparsely Vege	(Minimum of one req (A1) ble (A2) (B1) cosits (B2) B3) rust (B4) B5) racks (B6) ble on Aerial Imager tated Concave Surfa	- - - - - - - - - - - - - - - - - - -	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu	rates (B13) c Odor (C1) cheres along Living Roots (C3) uced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks)	Water-Stained 4A, and 4B, Drainage Patt Dry-Season W Saturation Vis Geomorphic F Shallow Aquite FAC-Neutral T Raised Ant Mo Frost-Heave F	I Leaves (B9) (MLRA 1, 2, 1) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A)	
HYDROLOGY Netland Hydrolog Primary Indicators (Surface Water High Water Tal X Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (Algal Mat or Cr Iron Deposits (Surface Soil Cr Inundation Visi Sparsely Vege Field Observations Surface Water Pre	(Minimum of one required (A1) ble (A2) B31) cosits (B2) B3) rust (B4) B5) racks (B6) ble on Aerial Imager tated Concave Surfaces: sent? Yes	- - - - - - - - - - - - - - - - - - -	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Red Stunted or Stress Other (Explain in	rates (B13) Prodor (C1) Pheres along Living Roots (C3) Pucced Iron (C4) Puction in Tilled Soils (C6) Posed Plants (D1) (LRR A) Remarks) Depth (inches):	Water-Stained 4A, and 4B; Drainage Patt Dry-Season W Saturation Vis Geomorphic F Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave F	I Leaves (B9) (MLRA 1, 2, 1) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	No
Surface Water High Water Tal X Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (Algal Mat or Cr Iron Deposits (Surface Soil Cr Inundation Visi Sparsely Vege Field Observations Surface Water Pre Water Table Prese	(Minimum of one required (A1) ble (A2)) B31) posits (B2) B3) rust (B4) B5) racks (B6) ble on Aerial Imager tated Concave Surfaces: sent? Yes	ry (B7)	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu Stunted or Stress Other (Explain in	rates (B13) c Odor (C1) cheres along Living Roots (C3) uced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-Stained 4A, and 4B; Drainage Patt Dry-Season W Saturation Vis Geomorphic F Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave H Wetland Hydrology	I Leaves (B9) (MLRA 1, 2, 1) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	No
HYDROLOGY Wetland Hydrolog Primary Indicators (Surface Water High Water Tal X Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (Algal Mat or Cr Iron Deposits (Surface Soil Cr Inundation Visi Sparsely Vege Field Observations Surface Water Pre Water Table Prese Saturation Present	(Minimum of one required (A1) ble (A2)) B31) posits (B2) B3) rust (B4) B5) racks (B6) ble on Aerial Imager tated Concave Surfacted Concav	ry (B7)	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Red Stunted or Stress Other (Explain in	rates (B13) Prodor (C1) Pheres along Living Roots (C3) Pucced Iron (C4) Puction in Tilled Soils (C6) Posed Plants (D1) (LRR A) Remarks) Depth (inches):	Water-Stained 4A, and 4B; Drainage Patt Dry-Season W Saturation Vis Geomorphic F Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave F	I Leaves (B9) (MLRA 1, 2, 1) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	No
HYDROLOGY Wetland Hydrolog Primary Indicators (Surface Water High Water Tal X Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (Algal Mat or Cr Iron Deposits (Surface Soil Cr Inundation Visi Sparsely Vege Field Observations Surface Water Pre	(Minimum of one required (A1) ble (A2)) B31) posits (B2) B3) rust (B4) B5) racks (B6) ble on Aerial Imager tated Concave Surfacted Concav	ry (B7)	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu Stunted or Stress Other (Explain in	rates (B13) c Odor (C1) cheres along Living Roots (C3) uced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-Stained 4A, and 4B; Drainage Patt Dry-Season W Saturation Vis Geomorphic F Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave H Wetland Hydrology	I Leaves (B9) (MLRA 1, 2, 1) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	No
HYDROLOGY Wetland Hydrolog Primary Indicators (Surface Water High Water Tal X Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (Algal Mat or Cr Iron Deposits (Surface Soil Cr Inundation Visi Sparsely Vege Field Observations Surface Water Pre Water Table Prese Saturation Present (includes capillary for	(Minimum of one required (A1) ble (A2)) B31) cosits (B2) B3) rust (B4) B5) racks (B6) ble on Aerial Imager tated Concave Surfacted Concav	ry (B7)	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebr Hydrogen Sulfide Oxidized Rhizosp Presence of Red Recent Iron Redu Stunted or Stress Other (Explain in	rates (B13) c Odor (C1) cheres along Living Roots (C3) uced Iron (C4) uction in Tilled Soils (C6) sed Plants (D1) (LRR A) Remarks) Depth (inches): Depth (inches):	Water-Stained 4A, and 4B; Drainage Patt Dry-Season W Saturation Vis Geomorphic F Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave F Wetland Hydrology Present?	I Leaves (B9) (MLRA 1, 2, 1) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	No

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Project/Site:	Federal Way City Center Access	i	City/County:	Federal Way/	/King	Sampling Dat	te:1/7/2021
Applicant/Owner	: City of Federal Way				State: Washing	gton Samplir	ng Point: W17-SP-3
Investigator(s):	Trey Parry, Aaron Thom			_	Section, Township, Range:	T21N	R04E S15
Landform (hillslop	pe, terrace, etc.):	depress	ion	Local re	elief (concave, convex, none):	concave	Slope (%): <3%
Subregion (LRR)): Northwest Forests and Coas	t (LRR A))	Lat: 47.309860	_ Lo	ong: -122.290634	Datur	m: NAD 1983 (HARN)
Soil Unit (Name-	ID-Hydric Rating): Ald	erwood gravelly sa	indy loam -	AgB		VI classification:	None
•	drologic conditions on the site typ		•		'es X No		n in Remarks)
Are Vegetation	, Soil	, or Hydrology	significantly dis	sturbed? A	re "Normal Circumstances" ۱،	•	Yes <u>X</u> No
Are Vegetation	, Soil				If needed, explain any answe		
	OF FINDINGS – Attach si			nt locations	, transects, important	features, etc.	
	getation Present?	Yes X		le the Samp	lad Araa		
Hydric Soil Pres		Yes X		Is the Samp			
Wetland Hydrol	ogy Present?	Yes X	No	within a wei	tland? Yes X	<u> </u>	
Precipitation:							
According to the	Seattle Tacoma NOAA weather	station, precipitation	n was within the norn	nal range for the	e three months prior to the si	te visit.	
Remarks:							
	ed within wetland W17 where stre	am S3 discharges	to the closed wetland	that has no dire	ect outlet. This is the paired s	sample point to W1	7-SP3
		_			·		
VEGETATIO	N					-	
		Absolute	Dominant	Indicator	Dominance Test works	sheet:	
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status	Number of Dominant Sp		
1. none	(* 1515)	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	<u> </u>		That Are OBL, FACW, o		1 (A)
2.					mat Aic OBE, I AOW, o		(A)
3.					Total Number of Domina	ant	
4.					Species Across All Strate		1 (B)
		0%	= Total Cover		Opedies Across Air Otrati		(D)
Sapling/Shrub	Stratum (Plot size: r=2m)	070	- 10101 00101		Percent of Dominant Spe	ecies	
1. Rubus spec		70%	Yes	FAC	That Are OBL, FACW, o		<u>100%</u> (A/B)
2. Sambucus		10%	No	FACU	Prevalence Index work		(/VD)
3.	doomodd	1070	110	17.00	Total % Cover of:	Multiply by:	
4.					OBL species	x 1 =	
5.					FACW species	x 2 =	
		80%	= Total Cover		FAC species	x 3 =	
Herb Stratum	(Plot size: r=1m)		10101 00101		FACU species	x 4 =	
1. none	(UPL species	x 5 =	
2.					Column Totals:	(A)	(B)
3.					Prevalence In	``´	
4.					Hydrophytic Vegetation	n Indicators:	
5.					1 - Rapid Test for H		ion
6.					X 2 - Dominance Test	, , , ,	
7.					3 - Prevalence Inde	ex is ≤3.0 ¹	
8.					4 - Morphological A		le supportina
9.						or on a separate s	
10.					5 - Wetland Non-Va	· · · · · · · · · · · · · · · · · · ·	,
11.					Problematic Hydrop		Explain) ¹
		0%	= Total Cover		¹ Indicators of hydric soil	-	
Woody Vine Str	ratum (Plot size: r=2m)	070	- 10101 00101		be present.	and modalia myano.	ogyuot
1. <u>none</u>	<u> </u>	<u> </u>			·		
2					Hydrophytic		
0/ D O	to Hard Otractions	0%	= Total Cover		Vegetation	Yes X No	o
% Bare Ground	in Herb Stratum				Present?		
Remarks:							

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Prince Concentration Debetion RM-Reduced Matrix CSS Covered or Castled Sand Grains *Location PL-Pure Lining, Me-Matrix Produce San Sand Size Size CS CS CS CS CS CS CS C	SOIL								
(inches) Color (moist) 5. Color (moist) 15. Type* Loc* Texture* Remaix 0.7 (1978 32 100) 10 YR 416 20 C M Grit 17-16 2.5 YR 412 80 10 YR 416 20 C M Grit 17-16 2.5 YR 412 80 10 YR 416 20 C M Grit 17-16 2.5 YR 412 80 10 YR 416 20 C M Grit 17-16 2.5 YR 412 80 10 YR 416 20 C M Grit 17-16 2.5 YR 412 80 10 YR 416 20 C M Grit 17-16 2.5 YR 412 80 10 YR 416 20 C M Grit 17-16 YR 416 YR 4		on (Describe to the	depth neede	d to document the ir	ndicator or conf	firm the absenc	e of indicators):		
9.7. 10YR 3/2 100	Depth	Matrix			Redox F	- eatures			
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coaled Sand Grains. Totation Set Set Set Coaled Sand Grains. Totation Set S	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ³	Remarks
Type: C-Concentration, D-Depletion, RM-Reduced Matrix, CS=Covered or Coated Sand Grains. *Location: PL=Pere Lining, M-Materix. Texture: Sa = sand: Si = sit: C = cley; L = loam or loamy. Texture Modifier: co = coatse; f = fine; vf = very fine: + = heavy (more clay)* = light (less clay)* Hydros Soil Indicators (Applicable to all LRRs, unless otherwise noted): Historia (A1) Sandy Redox (SS) Historia (A1) Sandy Mater (A1) Loamy Gleyod Matrix (RS) Depletion Gleyob Dark Surface (A12) Loamy Gleyod Matrix (R2) Depletion Gleyob Dark Surface (A13) Thick Dark Surface (A12) Thick Dark Surface (A12) Thick Dark Surface (A12) Thick Dark Surface (A13) Depletion Gleyob Dark Surface (A13) Thick Dark Surface (A12) Thick Dark Surface (A12) Redox Depressions (R3) Thick Dark Surface (A12) Thick Dark Surface (A12) Redox Depressions (R3) Thick Dark Surface (A12) Redox Depressions (R3) Thick Dark Surface (A12) Redox Depressions (R3) Type: Depletion Gleyob (R2) Redox Depressions (R3) Present? Water-Stained Leaves (B9) (except MLRA X Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) X Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) X Water-Stained Leaves (B9) (A12) X Sediment Deposits (B2) Durlange Patterns (B10) Surface Varier (A1) Agail Mor or Crust (B4) Present? Ves	0-7	10YR 3/2	100					GrL	
Type: C-Concentration, D-Depleton, RM-Reduced Matrix, CS-Covered or Coated Sand Grains. Testure: Sa = sand: Si = sit: C = clay; L = loam or barry. Testure Modifier: co = coates; f = fine; vf = very fine; + = heavy (more clay); - = fight (less clay) hydric Sol Indicators (Applicable to all LRRs, unless otherwise notod);	7-16	2.5YR 4/2	80	10YR 4/6	20		M	GrSaL	
Trouture: Sale sand: Sile still. Cale clay. Le loam or bamy. Touture Modifier: cole coarse; fieline: vf = very line; += leavy (more clay); -= light (less clay) very dirtic Soil indicators (Applicable to all LRRs, unless otherwise noted); Histosol (A1) Sandy Redox (85) Histosol (A2) Siripped Matrix (S8) Histosol (A3) Loamy Mukry Mineral (F1) (except MLRA 1) Pydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) Sandy Gleyed Matrix (F2) Pyes Sandy Gleyed Matrix (F3) Surface (A12) Type: Popth (inches): Pyes: Phydric Soil Present? Yes X No Present? Hydric Soil Present? Yes X No No Present (A1) Surface Water (A1) Surface Water (A1) Surface Water (A1) Surface Water (A2) Aquatic Invertebrates (B13) Depleted Gleye Matrix (B2) Aquatic Invertebrates (B13) Depleted Gleye Matrix (B3) Surface Water (A1) Surface Water									
Trouture: Sale sand; Sile still: Cale clay; Le bloam or barmy. Touture Modifier: oo = coanse; file fine: vf = very fine; 4 = heavy (more clay); -= light (less clay)									
Trouture: Sale = sand: Sis = sili. Clic = clay. L. = loam or loamy. Touture Modifier: oo = coarse; f = fine; vf = very fine; 4 = heavy (more clay); -= light (less clay)									
Trouture: Sale = sand: Sis = sili. Clic = clay. L. = loam or loamy. Touture Modifier: oo = coarse; f = fine; vf = very fine; 4 = heavy (more clay); -= light (less clay)									
Trouture: Sale = sand: Sis = sili. Clic = clay. L. = loam or loamy. Touture Modifier: oo = coarse; f = fine; vf = very fine; 4 = heavy (more clay); -= light (less clay)									
Trouture: Sale = sand: Sis = sili. Clic = clay. L. = loam or loamy. Touture Modifier: oo = coarse; f = fine; vf = very fine; 4 = heavy (more clay); -= light (less clay)									
Mydric Soll Indicators (Applicable to all LRRs, unless otherwise noted):									
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Histic Epipedon (A2) Sarped Matrix (S5) Histic (A3) Sitipped Matrix (S6) Hydrogen Sulfide (A4) Loamy Mucley Mineral (F1) (except MLRA 1) Published Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mocky Mineral (F3) Sandy Mocky Mineral (F4) Secondary Indicators (F4) Secon	Type: C=Concer	ntration, D=Depletion,	RM=Reduce	d Matrix, CS=Covered	d or Coated San	d Grains. ² Lo	cation: PL=Pore Lining	ng, M=Matrix.	
Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histos Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histo (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dank Surface (TF12) Depleted Below Dank Surface (A11) Depleted Matrix (F2) Depleted Below Dank Surface (A12) X Redox Dank Surface (F7) Thick Dank Surface (A12) X Redox Dank Surface (F7) Sandy Mucky Mineral (S1) Depleted Dank Surface (F7) Sandy Gleyed Matrix (S4) Redox Dank Surface (F8) Present? Yes X No Pestrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes X No Water-Stained Leaves (B9) (except MLRA X High Water-Stained Leaves (B9) (except MLRA X And 4B) X Surface Water (A1) Water-Stained Leaves (B9) (except MLRA And 4B) X Saturation (A3) Sati Crust (B11) Dank Surface (B13) Aquatic Invertebrates (B13) Drainage Patterns (B10) Dirange Patterns (B10) Dirange Patterns (B10) Dirange Patterns (B10) Dirange Patterns (B10) Dirit Deposits (B2) Hydrogon Sulface Odor (C1) Saturation Visite On Arial Imagery (C9) Diff Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Surface Soil Crust (B4) Presence of Reduced Iron (C4) Saturation Visite on Arial Imagery (B7) Surface Soil Crusts (B6) Surface (B8) Surface (B8) In Remarks) Frost-Heave Hurrimocks (D7) Sprasely Vegetated Concave Surface (B8) Field Observations: Surface Water Fresent? Yes No Depth (inches): Surface (D1) (IRR A) Hydrogony Nick Present? Yes X No Depth (inches): Surface (D1) (Iron Pesent? Yes X No Depth (inches): Surface (D1) (Iron Pesent? Yes X No Depth (inches): Surface (D1) (Iron Pesent? Yes X No Depth (inches): Surface (D1) (Iron Pesent? Yes X No Depth (inches): Surface (D1) (Iron Pesent? Yes X No Depth (inches): Surface (D1) (Iron Pesent? Yes X No Depth (inches): Surface (D1) (Iron Pesent? Yes X No Depth (inches): Surface (D1) (Iron Pesent? Yes X No Depth (inches): Surface						= fine; vf = very f			
Histic Epipedon (A2)	Hydric Soil Indica	ators (Applicable to	all LRRs, unl	less otherwise noted	:(k		Indicators for Pro	blematic Hydric Soils ³ :	
Black Histic (A3)	Histosol (A1)		-	Sandy Redox (S5	;)		2 cm Muck (A	10)	
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Present? Type: Depth (inches): Primary Indicators: Hydric Soil Present? Water Table (A2) X Saturation (A3) Salt Crust (B11) X Sediment Deposits (B2) Hydrogen Matrix (F2) Primary Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes X No Remarks: Hydro Soil Present? Yes X No Remarks: Hydrary Indicators: Primary Indicators (minimum of one required; check all that apply) Saccondary Indicators (2 or more required) X Water-Stained Leaves (B9) (MLRA 1, 2, 44, and 4B) A A, and 4B) A Saturation (A3) Salt Crust (B11) Dange Patterns (B10) Dry-Sasson Water Table (C2) X Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Diff Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Crack (B6) Surface Soil Crack (B6) Surface Soil Cracks (B6) Surface Water Present? Yes X No Depth (inches): Wettand Hydrology Yes X No Present? Wettand Hydrology Yes X No Depth (inches): 1 Hydrology Yes X No Present? Wettand Hydrology Yes X No Present?	Histic Epiped	on (A2)	_	Stripped Matrix (S	36)		Red Parent M	laterial (TF2)	
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) X Redox Dark Surface (F6) Sandy Mucky (Mineral (S1) Depleted Dark Surface (F7) Person (F8) Restrictive Layer (if present): Type:	Black Histic (A	A3)	_	Loamy Mucky Mir	neral (F1) (excer	pt MLRA 1)	Very Shallow	Dark Surface (TF12)	
Thick Dark Surface (A12)	Hydrogen Su	Ifide (A4)	_	Loamy Gleyed Ma	atrix (F2)				
Sandy Mucky Mineral (S1)	Depleted Belo	ow Dark Surface (A11		Depleted Matrix (I	F3)				
Sandy Mucky Mineral (S1)							3		
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Problematic. Type:			-				•		d
No Present Page Present Page Present Prese			-					present, unless disturbed of	
Type:						<u> </u>			
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(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate X High Water T X Saturation (A: X Water Marks X Sediment De Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vi Sparsely Veg Field Observation Surface Water Pr	regy Indicators: s (minimum of one reger (A1) Table (A2) 3) (B1) posits (B2) s (B3) Crust (B4) s (B5) Cracks (B6) sible on Aerial Imager petated Concave Surfares: resent? Yes	- - - - y (B7) - gace (B8)	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	ates (B13) Odor (C1) Theres along Livi Luced Iron (C4) Luction in Tilled So Lied Plants (D1) (Remarks) Depth (inches):	ing Roots (C3) oils (C6) (LRR A)	Secondary Indicate X Water-Stainer 4A, and 4B Drainage Pate Dry-Season V Saturation Vis Geomorphic F Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave I	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, e) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) ounds (D6) (LRR A) Hummocks (D7)	
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	Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate X High Water T X Saturation (A: X Water Marks X Sediment Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vi Sparsely Veg Field Observation Surface Water Pr Water Table Prese Saturation Preser	regy Indicators: s (minimum of one reger (A1) Table (A2) 3) (B1) posits (B2) s (B3) Crust (B4) c (B5) Cracks (B6) sible on Aerial Imager petated Concave Surfains: resent? resent? Yes sent? Yes	- - - - - - - - - - - - - - - - - - -	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	B) ates (B13) Odor (C1) wheres along Living uced Iron (C4) uction in Tilled Soled Plants (D1) (Remarks) Depth (inches):	ing Roots (C3) oils (C6) (LRR A)	Secondary Indicate X Water-Stainer 4A, and 4B Drainage Pate Dry-Season V Saturation Vis Geomorphic F Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave I Wetland Hydrology	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, e) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) ounds (D6) (LRR A) Hummocks (D7)	
	Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Wate X High Water T X Saturation (A: X Water Marks X Sediment Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vi Sparsely Veg Field Observation Surface Water Pr Water Table Prese Saturation Preser	regy Indicators: s (minimum of one reger (A1) Table (A2) 3) (B1) posits (B2) s (B3) Crust (B4) c (B5) Cracks (B6) sible on Aerial Imager petated Concave Surfains: resent? resent? Yes sent? Yes	- - - - - - - - - - - - - - - - - - -	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	B) ates (B13) Odor (C1) wheres along Living uced Iron (C4) uction in Tilled Soled Plants (D1) (Remarks) Depth (inches):	ing Roots (C3) oils (C6) (LRR A)	Secondary Indicate X Water-Stainer 4A, and 4B Drainage Pate Dry-Season V Saturation Vis Geomorphic F Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave I Wetland Hydrology	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, e) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) ounds (D6) (LRR A) Hummocks (D7)	
	Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Water X High Water T X Saturation (A X Water Marks X Sediment Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vi Sparsely Veg Field Observatio Surface Water Pr Water Table Pres Saturation Preser (includes capillary	regy Indicators: s (minimum of one reger (A1) rable (A2) 3) (B1) posits (B2) s (B3) Crust (B4) s (B5) Cracks (B6) sible on Aerial Imager retated Concave Surfares: resent? Yes sent? Yes y fringe)	y (B7) 	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	ates (B13) Odor (C1) Theres along Livi Luced Iron (C4) Luction in Tilled So Led Plants (D1) (Remarks) Depth (inches): Depth (inches):	ing Roots (C3) oils (C6) (LRR A) :	Secondary Indicate X Water-Stainer 4A, and 4B Drainage Patt Dry-Season V Saturation Vis Geomorphic F Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave I Wetland Hydrology Present?	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, e) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) ounds (D6) (LRR A) Hummocks (D7)	
	Depth (inches): Remarks: HYDROLOGY Wetland Hydrolo Primary Indicators Surface Water X High Water T X Saturation (A X Water Marks X Sediment De Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vi Sparsely Veg Field Observatio Surface Water Pr Water Table Pres Saturation Preser (includes capillary	regy Indicators: s (minimum of one reger (A1) rable (A2) 3) (B1) posits (B2) s (B3) Crust (B4) s (B5) Cracks (B6) sible on Aerial Imager retated Concave Surfares: resent? Yes sent? Yes y fringe)	y (B7) 	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	ates (B13) Odor (C1) Theres along Livi Luced Iron (C4) Luction in Tilled So Led Plants (D1) (Remarks) Depth (inches): Depth (inches):	ing Roots (C3) oils (C6) (LRR A) :	Secondary Indicate X Water-Stainer 4A, and 4B Drainage Patt Dry-Season V Saturation Vis Geomorphic F Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave I Wetland Hydrology Present?	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, e) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) ounds (D6) (LRR A) Hummocks (D7)	

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Project/Site:	Federal Way City Center Acces	is	City/County:	Federal Way	y/King	Sampling Da	te:	1/7/2021
Applicant/Owner	: City of Federal Way				State: Washingt	on Sampli	ng Point:	W18-SP-1
Investigator(s):	Trey Parry, Aaron Thom			_	Section, Township, Range:	T21N	I R04E S1	15
Landform (hillslop	pe, terrace, etc.):	hillslop	e	Local	relief (concave, convex, none):	none	Slope	e (%): <u><3%</u>
• , ,): Northwest Forests and Coa	, ,,	Lat: 47.309986	_	.ong: -122.289688			9 1983 (HARN)
	ID-Hydric Rating): Al			- AgB		I classification:		None
•	drologic conditions on the site ty	•	•			(If no, explain		
Are Vegetation Are Vegetation	, Soil , Soil	or Hydrology	significantly dis	Sturbed? ematic?	Are "Normal Circumstances" po (If needed, explain any answer		Yes	XNo
-								
	OF FINDINGS - Attach s			nt location	s, transects, important	eatures, etc.		
Hydric Soil Pres	getation Present?	Yes		Is the Sam	pled Area			
Wetland Hydrold		YesYes	No X	within a We		No	Х	
Precipitation: According to the	Seattle Tacoma NOAA weathe		· · · · · · · · · · · · · · · · · · ·	mal range for th				
	is located upslope and outside	of wetland W18.						
VEGETATIO	N		5		<u> </u>			
T Ot	(Dist size # 2m)	Absolute	Dominant	Indicator	Dominance Test worksh			
Tree Stratum 1. Thuis plicate	(Plot size: <u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Dominant Spe			(4)
 Thuja plicate 2. 	a	50%	Yes	FAC	That Are OBL, FACW, or	FAC:	11	(A)
3.		<u> </u>			. Total Number of Deminer			
4.					Total Number of Dominar		2	(D)
		50%	= Total Cover		Species Across All Strata	·	3	(B)
Sapling/Shrub S	Stratum (Plot size: r=2m)	30%	= Total Cover		Percent of Dominant Spe	ries		
1. Gaultheria s	<u> </u>	25%	Yes	FACU	That Are OBL, FACW, or		<u>33%</u>	(A/B)
2. Rubus ursin		5%	No	FACU	Prevalence Index works			(/ (/ D)
3.					Total % Cover of:	Multiply by:		<u> </u>
4.			-		OBL species	x 1 =		
5.					FACW species	x 2 =	-	
		30%	= Total Cover		FAC species	x 3 =		
Herb Stratum	(Plot size: r=1m)		•		FACU species	x 4 =		
1. Polystichum	n munitum	30%	Yes	FACU	UPL species	x 5 =		
2.					Column Totals:	(A)		(B)
3.					Prevalence Inc	ex = B/A =		
4.					Hydrophytic Vegetation	Indicators:		
5.					1 - Rapid Test for Hy	drophytic Vegetat	tion	
6.					2 - Dominance Test i	s >50%		
7.					3 - Prevalence Index	is ≤3.0 ¹		
8. 9.			<u> </u>		4 - Morphological Ad data in Remarks o			ting
10.					5 - Wetland Non-Vas	cular Plants ¹		
11.					Problematic Hydroph	ytic Vegetation (E	Explain)¹	
		30%	= Total Cover		¹ Indicators of hydric soil a	nd wetland hydro	logy musi	t
Woody Vine Str	ratum (Plot size: <u>r=2m)</u>		•		be present.			
1. <u>none</u> 2.			· —		Hydrophytic			
			= Total Cover			Yes No	о х	·
% Bare Ground	in Herb Stratum 0%		- 10101 00101		Present?			<u></u>
D								
Remarks:								

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SOIL							
Profile Description ((Describe to the	depth needed	to document the	indicator or confirm the absence	ce of indicators):		
Depth	Matrix			Redox Features			
(inches)	Color (moist)	%	Color (moist)	% Type ¹	Loc ²	Texture ³	Remark
0-7	10YR 3/2	100				L	
7-16	7.5YR 5/8	100				GrL	
_							
_							
	•				ocation: PL=Pore Linin		
				er: co = coarse; f = fine; vf = very fi			
lydric Soil Indicator	s (Applicable to	ali LKKS, unie				blematic Hydric Soils ³ :	
Histosol (A1)		_	Sandy Redox (S	•	2 cm Muck (A	•	
Histic Epipedon (/	A2)	_	Stripped Matrix		Red Parent Ma	, ,	
Black Histic (A3)		_	Loamy Mucky M	Mineral (F1) (except MLRA 1)	Very Shallow [Dark Surface (TF12)	
Hydrogen Sulfide		_	Loamy Gleyed N	Matrix (F2)	Other (Explain	in Remarks)	
	Dark Surface (A11		Depleted Matrix	. (F3)			
Thick Dark Surface	ce (A12)	_	Redox Dark Sur	rface (F6)	³ Indicators of hydro	phytic vegetation and wetland	d
Sandy Mucky Min	neral (S1)	_	Depleted Dark S	Surface (F7)		present, unless disturbed or	· ~
Sandy Gleyed Ma	atrix (S4)	_	Redox Depressi	ions (F8)	problematic.		
Restrictive Layer (if p	present):						
Type:					Hydric Soil		
Depth (inches):					Hydric Soil Present?	Yes	No X
Depth (inches):					-	Yes	No X
Depth (inches):					-	Yes	No X
Depth (inches): Remarks:	ndicators:				-	Yes	No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology In		uired; check al	I that apply)		Present?	Yes	No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology In	inimum of one req	uired; check al		 Leaves (B9) (except MLRA	Present? Secondary Indicato		No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Inches Inches Indicators (mi	inimum of one req	uired; check al			Present? Secondary Indicato	ors (2 or more required) I Leaves (B9) (MLRA 1, 2,	No X
Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Inchinary Indicators (mi	inimum of one req	uired; check al	Water-Stained L	4B)	Present? Secondary Indicato Water-Stained	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Inches Indicators (minches) Surface Water (A High Water Table	inimum of one req A1) e (A2)	uired; check al	Water-Stained L	4B)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology In Primary Indicators (mi Surface Water (A High Water Table Saturation (A3)	inimum of one req A1) e (A2))	uired; check al	Water-Stained L 1, 2, 4A, and Salt Crust (B11)	4B)) prates (B13)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Inches In	inimum of one req A1) e (A2)) its (B2)	uired; check al	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid	4B)) brates (B13) de Odor (C1)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9)	No X
Depth (inches): Remarks: HYDROLOGY Vetland Hydrology In Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3)	inimum of one req (A1) e (A2)) its (B2) 3)	uired; check al	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos	4B)) prates (B13) de Odor (C1) spheres along Living Roots (C3)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10) //ater Table (C2) ible on Aerial Imagery (C9) Position (D2)	No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Inches In	inimum of one requal) e (A2) its (B2) st (B4)	uired; check al	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec	4B)) porates (B13) de Odor (C1) spheres along Living Roots (C3) duced Iron (C4)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita	ors (2 or more required) I Leaves (B9) (MLRA 1, 2,) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3)	No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Inches In	inimum of one requal) e (A2) its (B2) st (B4)	uired; check al	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec	4B) brates (B13) de Odor (C1) spheres along Living Roots (C3) duced Iron (C4) duction in Tilled Soils (C6)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5)	No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology In Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3 Algal Mat or Crust Iron Deposits (B5 Surface Soil Crace	inimum of one requal) (A1) (A2) (A2) (B2) (B3) (B4) (B4) (Cks (B6)	 	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres	4B)) prates (B13) de Odor (C1) spheres along Living Roots (C3) duced Iron (C4) duction in Tilled Soils (C6) ssed Plants (D1) (LRR A)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo	ors (2 or more required) I Leaves (B9) (MLRA 1, 2,) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) bunds (D6) (LRR A)	No X
Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Inches In	inimum of one requal) (A1) (A2) (A2) (B2) (B3) (B4) (B4) (Cks (B6) (Ce on Aerial Imager)	y (B7)	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec	4B)) prates (B13) de Odor (C1) spheres along Living Roots (C3) duced Iron (C4) duction in Tilled Soils (C6) ssed Plants (D1) (LRR A)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5)	No X
Depth (inches): Remarks: HYDROLOGY Vetland Hydrology Inches In	inimum of one requal) (A1) (A2) (A2) (B2) (B3) (B4) (B4) (Cks (B6)	y (B7)	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres	4B)) prates (B13) de Odor (C1) spheres along Living Roots (C3) duced Iron (C4) duction in Tilled Soils (C6) ssed Plants (D1) (LRR A)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo	ors (2 or more required) I Leaves (B9) (MLRA 1, 2,) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) bunds (D6) (LRR A)	No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology In Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3 Algal Mat or Crust Iron Deposits (B5 Surface Soil Cract Inundation Visible Sparsely Vegetate Field Observations:	inimum of one requal) (A1) (A2) (A2) (B2) (B3) (B4) (B4) (Cks (B6) (Ce on Aerial Imager) (A2) (A3) (A4) (A4) (A4) (A4) (A4) (A4) (A4) (A4	y (B7)	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres	4B)) prates (B13) de Odor (C1) spheres along Living Roots (C3) duced Iron (C4) duction in Tilled Soils (C6) ssed Plants (D1) (LRR A) n Remarks)	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo	ors (2 or more required) I Leaves (B9) (MLRA 1, 2,) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) bunds (D6) (LRR A)	No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Inches In	inimum of one requal) (A1) (A2) (A2) (A3) (A3) (A4) (A4) (A5) (A5) (A6) (A6) (A6) (A6) (A6) (A6) (A6) (A6	y (B7)	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres Other (Explain in	de Odor (C1) spheres along Living Roots (C3) duced Iron (C4) duction in Tilled Soils (C6) ssed Plants (D1) (LRR A) in Remarks) Depth (inches):	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave H	ors (2 or more required) I Leaves (B9) (MLRA 1, 2,) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Inches In	inimum of one requal) (A1) (A2) (A2) (A2) (A3) (A4) (A4) (A5) (A4) (A5) (A5) (A6) (A6) (A6) (A6) (A6) (A6) (A6) (A6	y (B7) ace (B8)N	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres Other (Explain in	de Odor (C1) spheres along Living Roots (C3) duced Iron (C4) duction in Tilled Soils (C6) ssed Plants (D1) (LRR A) n Remarks) Depth (inches): Depth (inches):	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave H Wetland Hydrology	ors (2 or more required) I Leaves (B9) (MLRA 1, 2,) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) bunds (D6) (LRR A)	No X
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Inches In	inimum of one requal) (A1) (A2) (A2) (A3) (A4) (A4) (A5) (A4) (A5) (A6) (A6) (A6) (A6) (A6) (A6) (A6) (A6	y (B7) ace (B8)N	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres Other (Explain in	de Odor (C1) spheres along Living Roots (C3) duced Iron (C4) duction in Tilled Soils (C6) ssed Plants (D1) (LRR A) in Remarks) Depth (inches):	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave H	ors (2 or more required) I Leaves (B9) (MLRA 1, 2,) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Inches In	inimum of one requal) (A1) (A2) (A2) (A3) (A4) (A4) (A5) (A4) (A5) (A6) (A6) (A6) (A6) (A6) (A6) (A6) (A6	y (B7) ace (B8)N	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres Other (Explain in	de Odor (C1) spheres along Living Roots (C3) duced Iron (C4) duction in Tilled Soils (C6) ssed Plants (D1) (LRR A) n Remarks) Depth (inches): Depth (inches):	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave H Wetland Hydrology	ors (2 or more required) I Leaves (B9) (MLRA 1, 2,) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Inches Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits (B3 Algal Mat or Cruster Iron Deposits (B5 Surface Soil Cracter Inundation Visible Sparsely Vegetate Sparsely Vegetate Staturation Present? Saturation Present? (includes capillary frince)	inimum of one requal) (A1) (A2) (A2) (A2) (A3) (A4) (A5) (A4) (A5) (A5) (A6) (A6) (A6) (A6) (A6) (A6) (A6) (A6	y (B7) ace (B8)	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Red Recent Iron Red Stunted or Stres Other (Explain in	Depth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave H Wetland Hydrology Present?	ors (2 or more required) I Leaves (B9) (MLRA 1, 2,) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Inches Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits (B3 Algal Mat or Cruster Iron Deposits (B5 Surface Soil Cracter Inundation Visible Sparsely Vegetate Sparsely Vegetate Staturation Present? Saturation Present? (includes capillary frince)	inimum of one requal) (A1) (A2) (A2) (A2) (A3) (A4) (A5) (A4) (A5) (A5) (A6) (A6) (A6) (A6) (A6) (A6) (A6) (A6	y (B7) ace (B8)	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Red Recent Iron Red Stunted or Stres Other (Explain in	de Odor (C1) spheres along Living Roots (C3) duced Iron (C4) duction in Tilled Soils (C6) ssed Plants (D1) (LRR A) n Remarks) Depth (inches): Depth (inches):	Secondary Indicato Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave H Wetland Hydrology Present?	ors (2 or more required) I Leaves (B9) (MLRA 1, 2,) erns (B10) /ater Table (C2) ible on Aerial Imagery (C9) Position (D2) ard (D3) Fest (D5) bunds (D6) (LRR A) Hummocks (D7)	

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Project/Site:	Federal Way City Center Access		City/County:	Federal Way/	King	Sampling Date	e: 1/7/2021
Applicant/Owner	: City of Federal Way				State: Washing	iton Samplin	ng Point: W18-SP-2
Investigator(s):	Trey Parry, Aaron Thom			_	Section, Township, Range:	T21N	R04E S15
Landform (hillslop	e, terrace, etc.):	Depress	ion	Local re	elief (concave, convex, none):	concave	Slope (%):<3%
Subregion (LRR)): Northwest Forests and Coas	t (LRR A))	Lat: 47.309940	_ Lo	ng: -122.289696	Datun	n: NAD 1983 (HARN)
	ID-Hydric Rating): Ald			AgB		/I classification:	None
•	drologic conditions on the site type		•		es X No		
Are Vegetation	, Soil	, or Hydrology	significantly dis	sturbed? A	re "Normal Circumstances" p		Yes <u>X</u> No
Are Vegetation	, Soil				If needed, explain any answe	*	
	OF FINDINGS – Attach si	•		nt locations	, transects, important	features, etc.	
	getation Present?	Yes X		Is the Samp	led Area		
Hydric Soil Pres		Yes X		within a Wet	u 10		
Wetland Hydrol	ogy Present?	Yes X	No	within a wet	riand? Yes X	No	
Precipitation:							
According to the	Seattle Tacoma NOAA weather	station, precipitation	on was within the norn	nal range for the	e three months prior to the sit	e visit.	
Remarks:							
	is located within wetland W18 ar	nd is the paired sar	mple plot to W18-SP1.	. This wetland h	as a highly constricted outlet	that discharges do	wnslope during periods
	7/21 oberservation).					_	
VEGETATIO	N						
VEGETATIO		Absolute	Dominant	Indicator	Dominance Test works	heet:	
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status	Number of Dominant Spe		
1	(1 lot 3126. <u>1–6111)</u>	<u> 70 00VCI</u>	Орескоз:	<u>Otatus</u>	That Are OBL, FACW, or		2 (A)
1. <u>none</u> 2.		_			That Are OBL, FACW, or		(A)
3.		<u> </u>	· —		Total Number of Deminer	nt	
4.		<u> </u>	· —		Total Number of Dominal		2 (D)
·· .			= Total Cover		Species Across All Strata	·	(B)
Sapling/Shrub S	Stratum (Plot size: <u>r=2m)</u>	076	= Total Cover		Percent of Dominant Spe	ocios	
1	`	409/	Voo	FAC	That Are OBL, FACW, or		100% (A/B)
Rubus spec	เสมแร		Yes Yes	FAC	Prevalence Index works		<u>100%</u> (A/B)
3.				FAC	Total % Cover of:	Multiply by:	
4.					OBL species	x 1 =	
5.					FACW species	x 2 =	
		60%	= Total Cover		FAC species	x 3 =	
Herb Stratum	(Plot size: r=1m)	00 /8	= Total Cover		FACU species	x 4 =	
1. none	(1 lot 3/20. <u>1</u>)				UPL species	x 5 =	
2.					Column Totals:	(A)	(B)
3.			<u> </u>		Prevalence Inc	``´	(3)
4.					Hydrophytic Vegetation		
5.		_			1 - Rapid Test for Hy		ion
6.		_			X 2 - Dominance Test		•
7.		_			3 - Prevalence Index		
8.		_			4 - Morphological Ac		e supporting
9.		_				or on a separate sh	
10.		_			5 - Wetland Non-Va	· .	
11.		_			Problematic Hydropl		xnlain) ¹
		0%	= Total Cover		¹ Indicators of hydric soil a	-	
Woody Vine Str	atum (Plot size: <u>r=2m)</u>	076	= Total Cover		be present.	ina weliana nyarok	ogy must
1. none	· · · · · · · · · · · · · · · · · · ·	<u></u>					
2.		_			Hydrophytic		
		0%	= Total Cover			Yes X No	·
% Bare Ground	in Herb Stratum 40%				Present?		
Remarks:							
	r estimated from photo.						

Parametrix

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Profile Description (De							Sampling Point:	W18-SP-2
	scribe to the de	pth needed	to document the	indicator or con	firm the absence	e of indicators):		
Depth	Matrix			Redox F	- eatures			
(inches) Col	or (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ³	Remarks
	OYR 3/4	100						
4-12 10	OYR 2/2	87	10YR 4/6	10		M		
4-12				3		M		
12-16 10	0YR 3/3	80	10YR 3/6	20	С	М	L	
	_							
¹ Type: C=Concentration	, D=Depletion, R	M=Reduced	Matrix, CS=Covere	ed or Coated San	d Grains. ² Lo	cation: PL=Pore Lin	ing, M=Matrix.	
³ Texture: Sa = sand; Si =	silt; C = clay; L	= loam or loai	my. Texture Modifi	er: co = coarse; f	= fine; vf = very	fine; + = heavy (more	e clay); - = light (less clay)	
Hydric Soil Indicators (Applicable to al	I LRRs, unle	ss otherwise note	ed):		Indicators for Pro	oblematic Hydric Soils ³ :	
Histosol (A1)			Sandy Redox (S	S5)		2 cm Muck (A	A10)	
Histic Epipedon (A2))		Stripped Matrix	(S6)		Red Parent N	Material (TF2)	
Black Histic (A3)			Loamy Mucky N	/lineral (F1) (exce	pt MLRA 1)	Very Shallow	Dark Surface (TF12)	
Hydrogen Sulfide (A	4)	_	Loamy Gleyed N	Matrix (F2)		Other (Explai	in in Remarks)	
Depleted Below Dar	k Surface (A11)		Depleted Matrix	(F3)				
Thick Dark Surface ((A12)	_	Redox Dark Sur	rface (F6)		³ Indicators of byde	rophytic vegetation and wetlar	nd
Sandy Mucky Minera	al (S1)	_	Depleted Dark S	Surface (F7)			e present, unless disturbed or	
Sandy Gleyed Matrix	k (S4)	_>	Redox Depressi	ions (F8)		problematic.	•	
Restrictive Layer (if pre	esent):							
Type: none						Hydric Soil		
Depth (inches):	n/a					Present?	Yes X	No
HYDROLOGY								
HYDROLOGY Wetland Hydrology Indi	icators:							
		red; check all	that apply)			Secondary Indica	tors (2 or more required)	
Wetland Hydrology Indi Primary Indicators (minim		ired; check all		 _eaves (B9) (exce	ept MLRA	-	· · · · · · · · · · · · · · · · · · ·	
Wetland Hydrology Indi	num of one requi	ired; check all		, , ,	ept MLRA	-	ed Leaves (B9) (MLRA 1, 2,	
Wetland Hydrology Indi Primary Indicators (minin Surface Water (A1)	num of one requi	ired; check all	Water-Stained L	4B)	ept MLRA	Water-Staine	ed Leaves (B9) (MLRA 1, 2,	
Wetland Hydrology Indi Primary Indicators (minin Surface Water (A1) X High Water Table (A	num of one requi	ired; check all	Water-Stained L 1, 2, 4A, and	4B)	ept MLRA	Water-Staine 4A, and 4EDrainage Pare	ed Leaves (B9) (MLRA 1, 2,	
Wetland Hydrology Indi Primary Indicators (minin Surface Water (A1) X High Water Table (A X Saturation (A3)	num of one requi	ired; check all	Water-Stained L 1, 2, 4A, and Salt Crust (B11)	4B) prates (B13)	ept MLRA	Water-Staine 4A, and 4E Drainage Par Dry-Season	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10)	
Wetland Hydrology Indi Primary Indicators (minin Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1)	num of one requi	ired; check all	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid	4B) prates (B13)		Water-Staine 4A, and 4E Drainage Par Dry-Season	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9)	
Wetland Hydrology Indi Primary Indicators (minim Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1) Sediment Deposits (num of one requi	ired; check all	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid	4B) prates (B13) le Odor (C1) spheres along Livi		Water-Staine 4A, and 4E Drainage Pat Dry-Season Saturation Vi	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2)	
Wetland Hydrology Indi Primary Indicators (minim Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1) Sediment Deposits (B3)	num of one requi	ired; check all	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec	4B) prates (B13) le Odor (C1) spheres along Livi	ing Roots (C3)	Water-Staine 4A, and 4B Drainage Par Dry-Season Saturation Vi X Geomorphic	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3)	
Wetland Hydrology Indi Primary Indicators (minin Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E	num of one requi .2) .B2) .34)	ired; check all	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Rec	4B) prates (B13) le Odor (C1) spheres along Livi duced Iron (C4)	ing Roots (C3)	Water-Staine 4A, and 4E Drainage Pai Dry-Season Saturation Vi X Geomorphic Shallow Aqui FAC-Neutral	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3)	
Wetland Hydrology Indi Primary Indicators (minim Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5)	num of one requi 2) (B2) (B6)	 	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Rec	4B) prates (B13) le Odor (C1) spheres along Livi duced Iron (C4) duction in Tilled Sesed Plants (D1) (ing Roots (C3)	Water-Staine 4A, and 4E Drainage Par Dry-Season Saturation Vi X Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) ttard (D3) Test (D5)	
Wetland Hydrology Indi Primary Indicators (minim Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E Iron Deposits (B5) Surface Soil Cracks	num of one requinous. (B2) (B4) (B6) n Aerial Imagery	——————————————————————————————————————	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres	4B) prates (B13) le Odor (C1) spheres along Livi duced Iron (C4) duction in Tilled Sesed Plants (D1) (ing Roots (C3)	Water-Staine 4A, and 4E Drainage Par Dry-Season Saturation Vi X Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	
Wetland Hydrology Indi Primary Indicators (minim Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible or	num of one requinous. (B2) (B4) (B6) n Aerial Imagery	——————————————————————————————————————	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres	4B) prates (B13) le Odor (C1) spheres along Livi duced Iron (C4) duction in Tilled Sesed Plants (D1) (ing Roots (C3)	Water-Staine 4A, and 4E Drainage Par Dry-Season Saturation Vi X Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	
Wetland Hydrology Indi Primary Indicators (minim Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated	num of one requine. (B2) (B6) 1 Aerial Imagery Concave Surface	(B7)	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres Other (Explain in	4B) prates (B13) le Odor (C1) spheres along Livi duced Iron (C4) duction in Tilled Sesed Plants (D1) (ing Roots (C3) oils (C6) (LRR A)	Water-Staine 4A, and 4E Drainage Par Dry-Season Saturation Vi X Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	
Wetland Hydrology Indi Primary Indicators (minim Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated Field Observations:	num of one requine. (B2) (B6) A Aerial Imagery Concave Surface	(B7)	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres	4B) prates (B13) le Odor (C1) spheres along Livi duced Iron (C4) duction in Tilled Si ssed Plants (D1) (in Remarks)	ing Roots (C3) oils (C6) (LRR A)	Water-Staine 4A, and 4E Drainage Par Dry-Season Saturation Vi X Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No
Wetland Hydrology Indi Primary Indicators (minim Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B1) Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated Field Observations: Surface Water Present?	num of one requine. (B2) (B6) Aerial Imagery Concave Surfac	(B7) N N	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres Other (Explain in	de Odor (C1) spheres along Livi duced Iron (C4) duction in Tilled Si ssed Plants (D1) (in Remarks)	ing Roots (C3) oils (C6) (LRR A)	Water-Staine 4A, and 4E Drainage Par Dry-Season V Saturation Vi X Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) stard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	No
Wetland Hydrology Indi Primary Indicators (minim Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B1) Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present?	(B6) A Aerial Imagery Concave Surface Yes Yes Yes Yes	(B7) N N	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres Other (Explain in	de de de la companya	ing Roots (C3) oils (C6) (LRR A)	Water-Staine 4A, and 4E Drainage Par Dry-Season Saturation Vi X Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave Wetland Hydrology	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) stard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	No
Wetland Hydrology Indi Primary Indicators (minim Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B1) Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	num of one requi	(B7) N N N N N N	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Red Recent Iron Red Stunted or Stres Other (Explain in	AB) prates (B13) le Odor (C1) spheres along Livi duced Iron (C4) duction in Tilled Si ssed Plants (D1) (in Remarks) Depth (inches) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : : : surface (0) : surface (0)	Water-Staine 4A, and 4E Drainage Par Dry-Season Saturation Vi X Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave Wetland Hydrology Present?	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) stard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	No
Wetland Hydrology Indi Primary Indicators (minim Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B1) Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present?	num of one requi	(B7) N N N N N N	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Red Recent Iron Red Stunted or Stres Other (Explain in	AB) prates (B13) le Odor (C1) spheres along Livi duced Iron (C4) duction in Tilled Si ssed Plants (D1) (in Remarks) Depth (inches) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : : : surface (0) : surface (0)	Water-Staine 4A, and 4E Drainage Par Dry-Season Saturation Vi X Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave Wetland Hydrology Present?	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) stard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	No
Wetland Hydrology Indi Primary Indicators (minim Surface Water (A1) X High Water Table (A X Saturation (A3) X Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B1) Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	num of one requi	(B7) N N N N N N	Water-Stained L 1, 2, 4A, and Salt Crust (B11) Aquatic Inverted Hydrogen Sulfid Oxidized Rhizos Presence of Red Recent Iron Red Stunted or Stres Other (Explain in	AB) prates (B13) le Odor (C1) spheres along Livi duced Iron (C4) duction in Tilled Si ssed Plants (D1) (in Remarks) Depth (inches) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : : : surface (0) : surface (0)	Water-Staine 4A, and 4E Drainage Par Dry-Season Saturation Vi X Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave Wetland Hydrology Present?	ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) stard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	No

Parametrix

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Project/Site:	Federal Way City Center Acces	SS	City/County:	Federal Way	/King S	Sampling Date:	1/7/2021
Applicant/Owner	City of Federal Way				State: Washington	Sampling Po	oint: W18-SP-3
Investigator(s):	Trey Parry, Aaron Thom			_	Section, Township, Range:	T21N R04	E S15
Landform (hillslop	e, terrace, etc.):	swal	e	Local r	relief (concave, convex, none):	one S	Slope (%): <u>3-5%</u>
Subregion (LRR)	: Northwest Forests and Coa	ast (LRR A))	Lat: 47.309280	Lo	ong: -122.290070	Datum:	NAD 1983 (HARN)
,	ID-Hydric Rating): A			AgB	- Not Hydric NWI clas	sification:	None
	Irologic conditions on the site ty					If no, explain in R	
Are Vegetation	, Soil				Are "Normal Circumstances" presen		es <u>X</u> No
Are Vegetation	, Soil				(If needed, explain any answers in R	•	
				nt locations	s, transects, important feat	ures, etc.	
	getation Present?	Yes X		le the Comm	alad Araa		
Hydric Soil Pres		Yes X	_ No	Is the Samp			
Wetland Hydrolo	ogy Present?	Yes X	No	Within a We	tland? Yes X	No	
Precipitation: According to the	Seattle Tacoma NOAA weathe	er station, precipitati	on was within the norn	nal range for th	e three months prior to the site visit		
Pomorko.							
Remarks: This sample plot	is located in a gentle swale tha	it connects two disti	nct wetlands upslope a	and downslope.	. It is within wetland 18 and is the pa	ired sample plot	to W18-SP4.
Thio sample plot	io located in a gentie swale the	it comicoto two disti	not wettands apolope t	ana aownolopo.	in is within wetteria to and is the pa	area sample plot	10 W 10 O1 4.
VEGETATIO	NI						
VEGETATIO	<u>IN</u>	Absolute	Dominant	Indiantor	Dominance Test worksheet:		
Tree Stratum	(Plot size: <u>r=3m)</u>	% Cover		Indicator	Number of Dominant Species		
4	,	·		<u>Status</u>			2 (4)
 Thuja plicata 2. 	3	100%	Yes	<u>FAC</u>	That Are OBL, FACW, or FAC:		2 (A)
3.		<u> </u>			Total Number of Deminent		
4.		<u> </u>			Total Number of Dominant		2 (B)
		100%	= Total Cover		Species Across All Strata:		2 (B)
Sapling/Shrub S	Stratum (Plot size: <u>r=2m)</u>	100%	_= Total Cover		Percent of Dominant Species		
1. Thuja plicata	`	70%	Yes	FAC	That Are OBL, FACW, or FAC:	1	00% (A/B)
2. Rubus spec			No	FAC	Prevalence Index worksheet:	_	(A/B)
3.	labilis	1376	110	FAC		Multiply by:	
4.					OBL species	< 1 =	
5.					·	<u> </u>	
-			= Total Cover				
Herb Stratum	(Plot size: r=1m)					<u> </u>	
1. none	(·	<u> </u>	
2.		<u> </u>			· —	(A)	(B)
3.					Prevalence Index =	· · · —	``,
4.					Hydrophytic Vegetation Indic	ators:	
5.					1 - Rapid Test for Hydroph	nytic Vegetation	
6.					X 2 - Dominance Test is >50)%	
7.					3 - Prevalence Index is ≤3	3.0 ¹	
8.					4 - Morphological Adaptati	ions¹ (Provide su	pporting
9.					data in Remarks or on	,	
10.					5 - Wetland Non-Vascular	Plants ¹	
11.					Problematic Hydrophytic \	/egetation (Expla	in) ¹
		0%	= Total Cover		¹ Indicators of hydric soil and we	-	
Woody Vine Str	atum (Plot size: <u>r=2m)</u>		_		be present.		
1. <u>none</u>							
2					Hydrophytic Yos	V Na	
% Bare Ground	in Herb Stratum 30%	0%	= Total Cover		Vegetation Yes _ Present?	X No _	
, s Bare Ground		<u>, </u>			i resciit:		
Remarks:							

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SOIL								
Profile Description	on (Describe to the	depth neede	d to document the ir	ndicator or con	firm the absenc	e of indicators):		
Depth	Matrix			Redox F	- eatures			
(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 rhizosphere
								-
_						<u> </u>		
	•		d Matrix, CS=Covered			cation: PL=Pore Lini		
			less otherwise noted		= fine; vf = very f		e clay); - = light (less clay) bblematic Hydric Soils ³ :	
	ators (Applicable to	ali Lixixs, uli					-	
Histosol (A1)	(4.0)	•	Sandy Redox (S5	•		2 cm Muck (A	•	
Histic Epipedo		•	Stripped Matrix (S			Red Parent M		
Black Histic (A	,	•	Loamy Mucky Mir		pt MLRA 1)		Dark Surface (TF12)	
Hydrogen Sul			Loamy Gleyed Ma			Other (Explain	n in Remarks)	
	ow Dark Surface (A11		X Depleted Matrix (I	•				
Thick Dark Su	, ,	•	Redox Dark Surfa			³ Indicators of hydr	ophytic vegetation and wetl	and
Sandy Mucky			Depleted Dark Su				present, unless disturbed	or
Sandy Gleyed	d Matrix (S4)	•	Redox Depressio	ns (F8)		problematic.		
Restrictive Layer	(if present):							
т						Hydric Soil		
Туре	e:					riyane son		
Depth (inches):	e:					Present?	Yes X	No
Depth (inches): Remarks:						-	Yes X	No
Depth (inches): Remarks: HYDROLOGY	,					-	Yes X	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrological	gy Indicators:		all that anniv)			Present?		No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators	gy Indicators:	quired; check		100 (PQ) (over	oot MI DA	Present? Secondary Indicat	ors (2 or more required)	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Wate	gy Indicators: (minimum of one recent (A1)	quired; check	Water-Stained Le	, , ,	ept MLRA	Present? Secondary Indicat Water-Staine	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrologous Indicators X Surface Wate X High Water Tax	gy Indicators: (minimum of one recent (A1) able (A2)	quired; check	Water-Stained Le	, , ,	ept MLRA	Secondary Indicate Water-Staine 4A, and 4E	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators X Surface Wate X High Water Ta X Saturation (AS	gy Indicators: (minimum of one recent (A1) able (A2)	quired; check	Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11)	В)	ept MLRA	Secondary Indicat Water-Staine 4A, and 4E Drainage Pat	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Wate X High Water Ta X Saturation (AS Water Marks	gy Indicators: (minimum of one receiver (A1) able (A2) 3) (B1)	quired; check	Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra	B) ates (B13)	ept MLRA	Secondary Indicat Water-Staine 4A, and 4E Drainage Pat Dry-Season V	ors (2 or more required) d Leaves (B9) (MLRA 1, 2,	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Wate X High Water Ta X Saturation (AS Water Marks Sediment Dep	gy Indicators: 6 (minimum of one recent (A1) able (A2) 3) (B1) posits (B2)	quired; check	Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide	B) ates (B13) Odor (C1)		Secondary Indicat Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, s) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators X Surface Water X High Water Tax X Saturation (AX Water Marks Sediment Deposits	gy Indicators: (minimum of one receiver (A1) able (A2) (B1) posits (B2) (B3)	quired; check	Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp	B) ates (B13) Odor (C1) heres along Livi		Secondary Indicat Water-Staine 4A, and 4E Drainage Pat Dry-Season Value Saturation Vis	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, s) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Wate X High Water Ta X Saturation (Ad Water Marks Sediment Dep Drift Deposits Algal Mat or C	gy Indicators: (minimum of one recent (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4)	quired; check	Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu	B) ates (B13) Odor (C1) heres along Livi	ing Roots (C3)	Secondary Indicat Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic Shallow Aquit	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 4) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Wate X High Water Ta X Saturation (A3 Water Marks Sediment Dep Drift Deposits Algal Mat or Ca Iron Deposits	gy Indicators: (minimum of one receiver (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5)	quired; check	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled So	ing Roots (C3)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate Dry-Season Vision Saturation Vision Geomorphic Shallow Aquite FAC-Neutral	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 4) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Primary Indicators X Surface Water X High Water Ta X Saturation (A3 Water Marks Sediment Deposits Algal Mat or Color Iron Deposits Surface Soil Color	gy Indicators: (minimum of one receiver (A1) able (A2) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6)		Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Se ed Plants (D1) (ing Roots (C3)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic Shallow Aquit FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) dounds (D6) (LRR A)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Water X High Water Ta X Saturation (AS Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis	gy Indicators: (minimum of one receiver (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Image	ry (B7)	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Se ed Plants (D1) (ing Roots (C3)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic Shallow Aquit FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 4) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Wate X High Water Ta X Saturation (A3 Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis	gy Indicators: (minimum of one recent (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Image	ry (B7)	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Se ed Plants (D1) (ing Roots (C3)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic Shallow Aquit FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) dounds (D6) (LRR A)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Water X High Water Ta X Saturation (Ad Water Marks Sediment Dep Drift Deposits Algal Mat or Color Iron Deposits Surface Soil Color Inundation Vistor Sparsely Vegure	gy Indicators: (minimum of one receiver (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Image etated Concave Surfans:	ry (B7) ace (B8)	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Si ed Plants (D1) (Remarks)	ing Roots (C3) oils (C6) (LRR A)	Secondary Indicat Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) dounds (D6) (LRR A)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Water Ta X Saturation (Ad Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation Surface Water Pri	gy Indicators: (minimum of one receiver (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Image etated Concave Surfaces: resent? Yes	ry (B7) ace (B8)	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Si ed Plants (D1) (Remarks) Depth (inches)	ing Roots (C3) oils (C6) (LRR A)	Secondary Indicat Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 4) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Wate X High Water Ta X Saturation (A3 Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vegu Field Observation Surface Water Pres	gy Indicators: (minimum of one receiver (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Image etated Concave Surfaces: esent? Yes	ry (B7) ace (B8) X X	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	ates (B13) Odor (C1) heres along Liviuced Iron (C4) uction in Tilled Seed Plants (D1) (Remarks) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : 0.5 : surface (0)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate Dry-Season V Saturation Vist Geomorphic Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave Wetland Hydrology	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 8) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) dounds (D6) (LRR A)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Wate X High Water Ta X Saturation (A3 Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vegu Field Observation Surface Water Pr Water Table Pres Saturation Preser	gy Indicators: (minimum of one receiver (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Image etated Concave Surfaces: esent? Yes siert? Yes	ry (B7) ace (B8) X X	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Si ed Plants (D1) (Remarks) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : 0.5 : surface (0)	Secondary Indicat Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 4) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Wate X High Water Ta X Saturation (A3 Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vegu Field Observation Surface Water Pres	gy Indicators: (minimum of one receiver (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Image etated Concave Surfaces: esent? Yes siert? Yes	ry (B7) ace (B8) X X	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	ates (B13) Odor (C1) heres along Liviuced Iron (C4) uction in Tilled Seed Plants (D1) (Remarks) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : 0.5 : surface (0)	Secondary Indicate Water-Staine 4A, and 4E Drainage Pate Dry-Season V Saturation Vist Geomorphic Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave Wetland Hydrology	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 4) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Wate X High Water Ta X Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation Surface Water Preser Water Table Preser (includes capillary	gy Indicators: (minimum of one reconstruction (A1) able (A2) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Image etated Concave Surfaction (A2) resent? Yes esent? Yes of fringe)	ry (B7) ace (B8) X X	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	ates (B13) Odor (C1) heres along Livi uced Iron (C4) uction in Tilled Si ed Plants (D1) (Remarks) Depth (inches) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : 0.5 : surface (0) : surface (0)	Secondary Indicat Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave Wetland Hydrology Present?	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 4) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Wate X High Water Ta X Saturation (Ad Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation Surface Water Preser Water Table Preser Saturation Preser (includes capillary Describe Record	gy Indicators: (minimum of one reconstruction (A1) able (A2) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Image etated Concave Surfaction (A2) resent? Yes esent? Yes of fringe)	ry (B7) ace (B8) X X	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	ates (B13) Odor (C1) heres along Livi uced Iron (C4) uction in Tilled Si ed Plants (D1) (Remarks) Depth (inches) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : 0.5 : surface (0) : surface (0)	Secondary Indicat Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave Wetland Hydrology Present?	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 4) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)	
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators X Surface Water Ta X Saturation (A3 Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege Field Observation Surface Water Presser (includes capillary Describe Record Remarks:	gy Indicators: (minimum of one receiver (A1) able (A2) 3) (B1) posits (B2) (B3) Crust (B4) (B5) Cracks (B6) sible on Aerial Image etated Concave Surfaces etated Toncave Surfaces ins: essent? yes etated Yes eta	ry (B7) ace (B8) X X	Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Si ed Plants (D1) (Remarks) Depth (inches) Depth (inches) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : 0.5 : surface (0) : surface (0)	Secondary Indicat Water-Staine 4A, and 4E Drainage Pat Dry-Season V Saturation Vis Geomorphic Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave Wetland Hydrology Present?	ors (2 or more required) d Leaves (B9) (MLRA 1, 2, 4) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) ard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)	No

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Project/Site:	Federal Way City Center Acce	SS	City/County:	Federal Way/	King	Sampling Date	:e:1	1/7/2021
Applicant/Owner	: City of Federal Way				State: Washingto	on Samplir	ng Point:	W18-SP-4
Investigator(s):	Trey Parry, Aaron Thom				Section, Township, Range:	T21N	R04E S15	;
Landform (hillslop	e, terrace, etc.):	hillslope	е	Local re	elief (concave, convex, none):	none	Slope ((%): >10%
Subregion (LRR)	: Northwest Forests and Co	ast (LRR A))	Lat: 47.309300	_ Lo	ng: -122.290054	Datur	n: <u>NAD</u> ′	1983 (HARN)
	ID-Hydric Rating):					classification:		lone
•	Irologic conditions on the site t	• •				(If no, explain		
Are Vegetation	, Soil , Soil	, or Hydrology	significantly dis	sturbed? A	re "Normal Circumstances" pro		Yes _	X No
Are Vegetation					f needed, explain any answers			
				nt locations	, transects, important f	eatures, etc.		
	getation Present?	Yes		Is the Sampl	led Area			
Hydric Soil Pres		Yes		within a Wet		NI-	v	
Wetland Hydrolo	ogy Present?	Yes	No <u>X</u>	Within a wee	land? Yes	No	<u> </u>	
Precipitation:	Coottle Terror NOAA					t. ta		
According to the	Seattle Tacoma NOAA weath	er station, precipitation	n was within the norn	nai range for the	e three months prior to the site	VISIT.		
Remarks:								
This sample plot	is located upslope of W18-SP	3 and wetland W18 a	s a whole.					
VEGETATIO	N							
		Absolute	Dominant	Indicator	Dominance Test worksh	eet:		
Tree Stratum	(Plot size: <u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Dominant Spec	cies		
1. none					That Are OBL, FACW, or F	-AC:	1	(A)
2.								
3.					Total Number of Dominant	t		
4.					Species Across All Strata:	_	2	(B)
		0%	= Total Cover					
Sapling/Shrub S	Stratum (Plot size: <u>r=2m)</u>				Percent of Dominant Spec	ies		
 Thuja plicata 	9	20%	Yes	FAC	That Are OBL, FACW, or F	FAC:	<u>50%</u>	(A/B)
2.					Prevalence Index worksh			
3.					Total % Cover of:	Multiply by:		
4					OBL species	x 1 =		
5					FACW species	x 2 =		
		20%	= Total Cover		FAC species	x 3 =		
Herb Stratum	(Plot size: r=1m)				FACU species	x 4 =		
1. Gaultheria s	hallon	10%	Yes	FACU	UPL species	x 5 =		
2.					Column Totals:	(A)		(B)
3.					Prevalence Inde			
4.					Hydrophytic Vegetation I 1 - Rapid Test for Hyd		ion	
5.						. , .	ion	
6. 7.					2 - Dominance Test is			
8.					3 - Prevalence Index 4 - Morphological Ada			
9.					data in Remarks o			ıg
10.					5 - Wetland Non-Vasi		neer)	
11.					Problematic Hydrophy		(volain) ¹	
l''' 		100/	= Total Cover		¹ Indicators of hydric soil ar	-		
Woody Vine Str	atum (Plot size: <u>r=2m)</u>	10%	= Total Cover		be present.	id Welland Hydroid	ogy musi	
1. none	(*** *				De presenti			
2.					Hydrophytic			
			= Total Cover		"	resNo	<u> </u>	
% Bare Ground	in Herb Stratum 0%	<u> </u>			Present?			
Remarks:								

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2 cm Muck (A Red Parent M. Very Shallow I Other (Explain	clay); - = light (less clay) blematic Hydric Soils ³ : 10) aterial (TF2) Dark Surface (TF12)	
tion: PL=Pore Linir e; + = heavy (more Indicators for Pro 2 cm Muck (A Red Parent M Very Shallow I Other (Explain 3Indicators of hydro hydrology must be problematic.	L CbL ng, M=Matrix. clay); - = light (less clay) blematic Hydric Soils³: 10) aterial (TF2) Dark Surface (TF12) in Remarks)	nd
tion: PL=Pore Linir e; + = heavy (more Indicators for Pro 2 cm Muck (A Red Parent M Very Shallow I Other (Explain 3Indicators of hydro hydrology must be problematic.	L CbL ng, M=Matrix. clay); - = light (less clay) blematic Hydric Soils³: 10) aterial (TF2) Dark Surface (TF12) in Remarks)	nd
e; + = heavy (more Indicators for Pro 2 cm Muck (A Red Parent M Very Shallow I Other (Explain Indicators of hydrohydrology must be problematic.	ng, M=Matrix. clay); - = light (less clay) blematic Hydric Soils³: 10) aterial (TF2) Dark Surface (TF12) in Remarks)	
e; + = heavy (more Indicators for Pro 2 cm Muck (A Red Parent M Very Shallow I Other (Explain Indicators of hydrohydrology must be problematic.	ng, M=Matrix. clay); - = light (less clay) blematic Hydric Soils³: 10) aterial (TF2) Dark Surface (TF12) in Remarks)	
e; + = heavy (more Indicators for Pro 2 cm Muck (A Red Parent M Very Shallow I Other (Explain Indicators of hydrohydrology must be problematic.	clay); - = light (less clay) blematic Hydric Soils ³ : 10) aterial (TF2) Dark Surface (TF12) in Remarks) phytic vegetation and wetlar	
e; + = heavy (more Indicators for Pro 2 cm Muck (A Red Parent M Very Shallow I Other (Explain Indicators of hydrohydrology must be problematic.	clay); - = light (less clay) blematic Hydric Soils ³ : 10) aterial (TF2) Dark Surface (TF12) in Remarks) phytic vegetation and wetlar	
e; + = heavy (more Indicators for Pro 2 cm Muck (A Red Parent M Very Shallow I Other (Explain Indicators of hydrohydrology must be problematic.	clay); - = light (less clay) blematic Hydric Soils ³ : 10) aterial (TF2) Dark Surface (TF12) in Remarks) phytic vegetation and wetlar	
e; + = heavy (more Indicators for Pro 2 cm Muck (A Red Parent M Very Shallow I Other (Explain Indicators of hydrohydrology must be problematic.	clay); - = light (less clay) blematic Hydric Soils ³ : 10) aterial (TF2) Dark Surface (TF12) in Remarks) uphytic vegetation and wetlar	
e; + = heavy (more Indicators for Pro 2 cm Muck (A Red Parent M Very Shallow I Other (Explain Indicators of hydrohydrology must be problematic.	clay); - = light (less clay) blematic Hydric Soils ³ : 10) aterial (TF2) Dark Surface (TF12) in Remarks) uphytic vegetation and wetlar	
e; + = heavy (more Indicators for Pro 2 cm Muck (A Red Parent M Very Shallow I Other (Explain Indicators of hydrohydrology must be problematic.	clay); - = light (less clay) blematic Hydric Soils ³ : 10) aterial (TF2) Dark Surface (TF12) in Remarks) uphytic vegetation and wetlar	
e; + = heavy (more Indicators for Pro 2 cm Muck (A Red Parent M Very Shallow I Other (Explain Indicators of hydrohydrology must be problematic.	clay); - = light (less clay) blematic Hydric Soils ³ : 10) aterial (TF2) Dark Surface (TF12) in Remarks) uphytic vegetation and wetlar	
e; + = heavy (more Indicators for Pro 2 cm Muck (A Red Parent M Very Shallow I Other (Explain Indicators of hydrohydrology must be problematic.	clay); - = light (less clay) blematic Hydric Soils ³ : 10) aterial (TF2) Dark Surface (TF12) in Remarks) uphytic vegetation and wetlar	
2 cm Muck (A Red Parent M. Very Shallow I Other (Explain Indicators of hydrohydrology must be problematic.	blematic Hydric Soils ³ : 10) aterial (TF2) Dark Surface (TF12) in Remarks) ophytic vegetation and wetlar	
2 cm Muck (A Red Parent M Very Shallow I Other (Explain 3Indicators of hydro hydrology must be problematic.	10) aterial (TF2) Dark Surface (TF12) in Remarks) ophytic vegetation and wetlar	
Red Parent M. Very Shallow I Other (Explain Indicators of hydrohydrology must be problematic.	aterial (TF2) Dark Surface (TF12) in Remarks) ophytic vegetation and wetlar	
Very Shallow I Other (Explain 3Indicators of hydro hydrology must be problematic.	Dark Surface (TF12) in Remarks) ophytic vegetation and wetlar	
Other (Explain Indicators of hydro hydrology must be problematic.	in Remarks) phytic vegetation and wetlar	
³ Indicators of hydro hydrology must be problematic.	ophytic vegetation and wetlar	
hydrology must be problematic.		
hydrology must be problematic.		
hydrology must be problematic.		
problematic.	,	
Hydric Soil		
Hydric Soil		
Present?	Yes	No X
Secondary Indicato	ors (2 or more required)	
Water-Stained	II eaves (B9) (MLRA 1. 2.	
	, , ,	
	, ,	
	` ,	
Frost-Heave F	lummocks (D7)	
Wetland		
Hydrology	Yes	No X
Present?		
Present?		
Present?		
	Water-Stained 4A, and 4B) Drainage Patte Dry-Season W Saturation Vis Geomorphic F Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave F	

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Project/Site:	Federal Way City Center Access	3	City/County:	Federal Way/	/King Sampling Date:1/11/	/2021
Applicant/Owner	: City of Federal Way				State: Washington Sampling Point: W	√18-SP-5
Investigator(s):	Trey Parry, Aaron Thom				Section, Township, Range: T21N R04E S15	
Landform (hillslop	pe, terrace, etc.):	depress	ion	Local re	elief (concave, convex, none): concave Slope (%):	:<3%
Subregion (LRR)): Northwest Forests and Coas	st (LRR A))	Lat: 47.309830	_ Lo	ong: -122.289200 Datum: NAD 198	33 (HARN)
		lerwood gravelly sa		AgB	- Not Hydric NWI classification: None	
•	drologic conditions on the site typ		•		/es X No (If no, explain in Remarks)	
Are Vegetation Are Vegetation	, Soil , Soil				Are "Normal Circumstances" present? Yes X If needed, explain any answers in Remarks.)	_No
_						
				nt locations	s, transects, important features, etc.	
' ' ' '	getation Present?	Yes X		Is the Samp	uled Area	
Hydric Soil Pres		Yes X	No	within a Wet		
Wetland Hydrol	ogy Present?	Yes X	No		tland? Yes X No	
Precipitation:	Castila Tanana NOAAathan				a thurs are such a unique to the critical	
According to the	Seattle Tacoma NOAA weather	station, precipitation	on was within the norn	nai range for the	e three months prior to the site visit.	
Remarks:					-	
		in a depression ap	proximately 30ft west	of road. Shallov	w rooted downed trees were observed near and in wetland. It	is the
paired wetland p	lot with W-18-SP6.					
VEGETATIO	N					
		Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum	(Plot size: <u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Dominant Species	
1. none					That Are OBL, FACW, or FAC: 2	(A)
2.						_
3.					Total Number of Dominant	
4.					Species Across All Strata: 2	_(B)
		0%	= Total Cover			
Sapling/Shrub	Stratum (Plot size: r=2m)				Percent of Dominant Species	
1. none					That Are OBL, FACW, or FAC: 100%	(A/B)
2.					Prevalence Index worksheet:	
3.			<u> </u>		Total % Cover of: Multiply by:	
4					OBL species x 1 =	
5.					FACW species x 2 =	
		0%	= Total Cover		FAC species x 3 =	
Herb Stratum	(Plot size: <u>r=1m)</u>				FACU species x 4 =	
1. Poa pratens		20%	Yes	FAC	UPL species x 5 =	
2. Juncus effu		15%	Yes	FACW	Column Totals: (A)	(B)
3. Ranunculus	repens	2%	No	FAC	Prevalence Index = B/A =	
4.		· · ·			Hydrophytic Vegetation Indicators:	
5.		· · ·			1 - Rapid Test for Hydrophytic Vegetation	
6.		· · ·			X 2 - Dominance Test is >50%	
7.			- —		3 - Prevalence Index is ≤3.0¹	
8.			- —		4 - Morphological Adaptations ¹ (Provide supporting	
9.					data in Remarks or on a separate sheet)	
10.					5 - Wetland Non-Vascular Plants ¹	
11.			T : 10		Problematic Hydrophytic Vegetation (Explain) ¹	
Woody Vine Str	ratum (Plot size: <u>r=2m)</u>	37%	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present.	
1. none	(1 lot 0)20. <u></u>				be present.	
2.					Hydrophytic	
		0%	= Total Cover		Vegetation Yes X No	_
% Bare Ground	in Herb Stratum 20%				Present?	
Remarks:						

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SOIL							Sampling Point:	W18-SP-5
	ion (Describe to the	denth need	ed to document the in	ndicator or co	nfirm the absen	ce of indicators):	oumpining i oni	1110 01 0
Depth	Matrix	•			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	romano
2-7	2.5Y 5/1	90	2.5Y 4/2	10		M	SaL	
7-16	5Y 6/1	93	5YR 3/2	5	C	M	SiClay	
7-10	310/1	93	7.5 YR5/6	2		M	Sicialy	
			7.5 113/0			IVI		
			·					
			·					
			· —					
1					2.			
	ntration, D=Depletion,					ocation: PL=Pore Linii	-	
					t = fine; vf = very		clay); - = light (less clay)	
	ators (Applicable to	ali LKKS, ui					blematic Hydric Soils ³ :	
Histosol (A1)			Sandy Redox (St	•		2 cm Muck (A		
Histic Epiped	, ,		Stripped Matrix (S	,		Red Parent M		
Black Histic (Loamy Mucky Mi		ept MLRA 1)		Dark Surface (TF12)	
Hydrogen Su			Loamy Gleyed M			Other (Explain	n in Remarks)	
	ow Dark Surface (A11)	X Depleted Matrix (
Thick Dark S			Redox Dark Surf			³ Indicators of hydro	ophytic vegetation and wetlar	nd
	y Mineral (S1)		Depleted Dark Si			hydrology must be	present, unless disturbed or	
Sandy Gleye	d Matrix (S4)		Redox Depression	ons (F8)		problematic.		
Restrictive Laye	r (if present):							
Тур	e:					Hydric Soil		
Depth (inches):						Present?	Yes X	No
Remarks:								
HYDROLOGY	1							
Wetland Hydrolo	gy Indicators:							
Primary Indicators	s (minimum of one red	uired; check	all that apply)			Secondary Indicate	ors (2 or more required)	
X Surface Wate	-	•	X Water-Stained Le	- eaves (B9) (exc	cent MLRA	-	d Leaves (B9) (MLRA 1, 2,	
X High Water T			1, 2, 4A, and 4		, op (<u>_</u>	4A, and 4B	, , ,	
X Saturation (A			Salt Crust (B11)	٥,		Drainage Patt	,	
X Water Marks			Aquatic Invertebr	rates (B13)			Vater Table (C2)	
Sediment De			Hydrogen Sulfide				sible on Aerial Imagery (C9)	
Drift Deposits			Oxidized Rhizosp		ving Roots (C3)	Geomorphic F		
Algal Mat or 0			Presence of Red	•	vilig (CC)	Shallow Aquit		
Iron Deposits	` '		Recent Iron Redu		Soils (C6)	FAC-Neutral		
Surface Soil			Stunted or Stress				ounds (D6) (LRR A)	
		n/ (P7)			(LKK A)			
	isible on Aerial Imager		Other (Explain in	Remarks)		FIOSI-Fleave i	Hummocks (D7)	
	getated Concave Surfa	ace (bo)						
Field Observation								
Surface Water P			No X	Depth (inches		Wetland		
Water Table Pres	•	X	No	Depth (inches		Hydrology	Yes X	No
Saturation Prese	•	Х	No	Depth (inches	s): surface (0)	Present?		
(includes capillar	y tringe)							
Describe Recor	ded Data (stream ga	uge, monito	ring well, aerial phot	os, previous ir	nspections), if a	ıvailable:		
Remarks:			and in the control of					
Ponded water wa	s observed 3 linear fe	e and 4 verti	cal inches away from s	sample plot.				

Project/Site:	Federal Way City Center Access	3	City/County:	Federal Wa	y/King	Sampling Dat	te:1/	11/2021
Applicant/Owner	: City of Federal Way			Į.	State: Washing	ton Samplir	ng Point:	W18-SP-6
Investigator(s):	Trey Parry, Aaron Thom			<u> </u>	Section, Township, Range:	T21N	R04E S15	
Landform (hillslop	e, terrace, etc.):	depressi	on	Local	relief (concave, convex, none):	convex	Slope (%	%): <3%
Subregion (LRR)	: Northwest Forests and Coas	st (LRR A))	Lat: 47.309815	L	ong: -122.289230			983 (HARN)
	ID-Hydric Rating): Ale			AgB		I classification:	No	one
-	drologic conditions on the site type				Yes X No No			
Are Vegetation	, Soil , Soil	, or Hydrology	significantly dis	sturbed?	Are "Normal Circumstances" p (If needed, explain any answer		Yes	X_No
Are Vegetation								
	OF FINDINGS – Attach s			nt location	s, transects, important	leatures, etc.		
	getation Present?	Yes		Is the Sam	nled Area			
Hydric Soil Pres		Yes		within a W		NI.	v	
Wetland Hydrolo	ogy Present?	Yes	No <u>X</u>	Within a W	etlan Yes	No	<u> </u>	
Precipitation:	0 44 T NOAA 4		10 t a					
According to the	Seattle Tacoma NOAA weather	station, precipitation	n was within the norn	nal range for t	he three months prior to the site	· VISIT.		
Remarks:								
	is located upslope of of W18-SF	P6						
VEGETATIO	N					-		
		Absolute	Dominant	Indicator	Dominance Test worksh	neet:		
Tree Stratum	(Plot size: r=3m)	% Cover	Species?	Status	Number of Dominant Spe	cies		
1. none		100%	Yes	FAC	That Are OBL, FACW, or	FAC:	1	(A)
2.					, ,			`
3.					Total Number of Dominar	nt		
4.		_			Species Across All Strata	:	2	(B)
		100%	= Total Cover		· '			— ` ′
Sapling/Shrub S	Stratum (Plot size: r=2m)				Percent of Dominant Spe	cies		
1. Gaultheria s	hallon	97%	Yes	FACU	That Are OBL, FACW, or	FAC:	<u>50%</u>	(A/B)
2. Rubus ursin	us	3%	No	FACU	Prevalence Index works	heet:		
3.					Total % Cover of:	Multiply by:		
4.					OBL species	x 1 =		
5.				•	FACW species	x 2 =	. <u></u>	
		100%	= Total Cover		FAC species	x 3 =		
Herb Stratum	(Plot size: r=1m)				FACU species	x 4 =		
1. none					UPL species	x 5 =		
2.					Column Totals:	(A)		(B)
3.					Prevalence Inc	lex = B/A =		
4.					Hydrophytic Vegetation	Indicators:		
5.				1	1 - Rapid Test for Hy	drophytic Vegetat	ion	
6.					2 - Dominance Test	s >50%		
7.					3 - Prevalence Index	is ≤3.0 ¹		
8.				1	4 - Morphological Ad	aptations ¹ (Provid	le supportin	ıg
9.					data in Remarks	or on a separate s	heet)	
10					5 - Wetland Non-Vas	cular Plants ¹		
11					Problematic Hydroph	ıytic Vegetation (E	Explain) ¹	
Woody Vine Str	atum (Plot size: <u>r=2m)</u>	0%	= Total Cover		¹ Indicators of hydric soil a be present.	nd wetland hydrol	ogy must	
1. <u>none</u> 2.					Hydrophytic			
Z			= Total Cover		Hydrophytic Vegetation	Yes No	ο χ	
% Bare Ground	in Herb Stratum 0%	076	= Total Cover		Present?		, <u> </u>	_
Remarks:								

Parametrix

ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES

SOIL							
Profile Description (Describe to the o	depth needed t	to document the in	dicator or confirm	the absence	of indicators):		
Depth Matrix			Redox Featu	ires			
(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	С	M	SaL	
							
				. 2.		· · · · · · · · · · · · · · · · · · ·	
Type: C=Concentration, D=Depletion,					ation: PL=Pore Lin		
Texture: Sa = sand; Si = silt; C = clay; L				e; vf = very fir			
lydric Soil Indicators (Applicable to	all LRRS, unles		•			oblematic Hydric Soils ³ :	
Histosol (A1)		_Sandy Redox (S5	5)		2 cm Muck (/	A10)	
Histic Epipedon (A2)		_Stripped Matrix (S	66)		Red Parent I	Material (TF2)	
Black Histic (A3)		_Loamy Mucky Mir	neral (F1) (except MI	-RA 1)	Very Shallow	Dark Surface (TF12)	
Hydrogen Sulfide (A4)		_Loamy Gleyed Ma	atrix (F2)		Other (Expla	in in Remarks)	
Depleted Below Dark Surface (A11)	Depleted Matrix (F	F3)				
Thick Dark Surface (A12)		Redox Dark Surfa	ace (F6)		31		
Sandy Mucky Mineral (S1)		 Depleted Dark Su 	ırface (F7)		•	rophytic vegetation and wetla e present, unless disturbed o	
Sandy Gleyed Matrix (S4)		Redox Depression			problematic.	o present, aniess distarbed e	,ı
		-	. ,		•		
Doctrictive Layer (if precent)							
					Hardela Call		
Type:					Hydric Soil	W	N. V
Type:					Hydric Soil Present?	Yes	No X
Type: Depth (inches): Remarks:					-	Yes	No X
Type: Depth (inches): Remarks: HYDROLOGY					-	Yes	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators:		that are h			Present?		No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requirement)	•				Present? Secondary Indica	tors (2 or more required)	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1)	•		aves (B9) (except M	LRA	Secondary Indica Water-Staine	tors (2 or more required) ad Leaves (B9) (MLRA 1, 2,	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2)	•			LRA	Present? Secondary Indica	tors (2 or more required) ad Leaves (B9) (MLRA 1, 2,	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3)	•	_Water-Stained Le		LRA	Secondary Indica Water-Staine 4A, and 4B Drainage Pa	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10)	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2)	•	Water-Stained Le	В)	LRA	Secondary Indica Water-Staine 4A, and 4B Drainage Pa	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2,	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3)	•	Water-Stained Le 1, 2, 4A, and 4f Salt Crust (B11)	B) ates (B13)	LRA	Secondary Indica Water-Staine 4A, and 4B Drainage Pa Dry-Season	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10)	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	•	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide	B) ates (B13)		Secondary Indica Water-Staine 4A, and 4B Drainage Pa Dry-Season	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9)	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	•	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide	B) ates (B13) Odor (C1) heres along Living R		Secondary Indica Water-Staine 4A, and 4B Drainage Pa Dry-Season Saturation Vi	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, 3) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2)	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	•	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospi Presence of Redu	B) ates (B13) Odor (C1) heres along Living R	oots (C3)	Secondary Indica Water-Staine 4A, and 4f Drainage Pa Dry-Season Saturation Vi Geomorphic	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, 3) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2)	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	•	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospi Presence of Redu	B) ates (B13) Odor (C1) heres along Living R uced Iron (C4)	oots (C3)	Secondary Indica Water-Staine 4A, and 4B Drainage Par Dry-Season Saturation Vi Geomorphic Shallow Aqui FAC-Neutral	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, 3) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2)	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req 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)	<u>x</u>	Water-Stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospi Presence of Redu Recent Iron Redu Stunted or Stress	B) ates (B13) Odor (C1) heres along Living R uced Iron (C4) action in Tilled Soils (ed Plants (D1) (LRR	oots (C3)	Secondary Indica Water-Staine 4A, and 4E Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req 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)	y (B7)	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospi Presence of Redu	B) ates (B13) Odor (C1) heres along Living R uced Iron (C4) action in Tilled Soils (ed Plants (D1) (LRR	oots (C3)	Secondary Indica Water-Staine 4A, and 4E Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) stard (D3) Test (D5)	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req 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 Imager Sparsely Vegetated Concave Surface	y (B7)	Water-Stained Le 1, 2, 4A, and 4B Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospi Presence of Redu Recent Iron Redu Stunted or Stress	B) ates (B13) Odor (C1) heres along Living R uced Iron (C4) action in Tilled Soils (ed Plants (D1) (LRR	oots (C3)	Secondary Indica Water-Staine 4A, and 4E Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req 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 Imager Sparsely Vegetated Concave Surfa	y (B7)	Water-Stained Le 1, 2, 4A, and 4f Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospi Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	B) ates (B13) Odor (C1) heres along Living R uced Iron (C4) action in Tilled Soils (ed Plants (D1) (LRR Remarks)	oots (C3) C6) A)	Secondary Indica Water-Staine 4A, and 4E Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req 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 Imager Sparsely Vegetated Concave Surfa	y (B7)	Water-Stained Le 1, 2, 4A, and 4f Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospi Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	B) ates (B13) Odor (C1) heres along Living R uced Iron (C4) action in Tilled Soils (ed Plants (D1) (LRR Remarks) Depth (inches):	oots (C3) C6) A)	Secondary Indica Water-Staine 4A, and 4B Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, 3) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req 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 Imager Sparsely Vegetated Concave Surfa Field Observations: Surface Water Present? Yes Water Table Present?	y (B7)	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospi Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	ates (B13) Odor (C1) heres along Living R uced Iron (C4) iction in Tilled Soils (ed Plants (D1) (LRR Remarks) Depth (inches):	oots (C3) C6) A)	Secondary Indica Water-Staine 4A, and 4F Drainage Par Dry-Season Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave Wetland Hydrology	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No X
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestriance) 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 Imager Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	y (B7)	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospi Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	B) ates (B13) Odor (C1) heres along Living R uced Iron (C4) action in Tilled Soils (ed Plants (D1) (LRR Remarks) Depth (inches):	oots (C3) C6) A)	Secondary Indica Water-Staine 4A, and 4B Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, 3) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req 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 Imager Sparsely Vegetated Concave Surfa Field Observations: Surface Water Present? Yes Water Table Present?	y (B7)	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospi Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	ates (B13) Odor (C1) heres along Living R uced Iron (C4) iction in Tilled Soils (ed Plants (D1) (LRR Remarks) Depth (inches):	oots (C3) C6) A)	Secondary Indica Water-Staine 4A, and 4F Drainage Par Dry-Season Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave Wetland Hydrology	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, 3) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one req 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 Imager Sparsely Vegetated Concave Surfated Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	y (B7) ace (B8)	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospi Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	ates (B13) Odor (C1) heres along Living R uced Iron (C4) action in Tilled Soils (ed Plants (D1) (LRR Remarks) Depth (inches): Depth (inches):	oots (C3) C6) A)	Secondary Indica Water-Staine 4A, and 4E Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave Wetland Hydrology Present?	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, 3) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requestriance) 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 Imager Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	y (B7) ace (B8)	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospi Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	ates (B13) Odor (C1) heres along Living R uced Iron (C4) action in Tilled Soils (ed Plants (D1) (LRR Remarks) Depth (inches): Depth (inches):	oots (C3) C6) A)	Secondary Indica Water-Staine 4A, and 4E Drainage Pa Dry-Season Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant N Frost-Heave Wetland Hydrology Present?	tors (2 or more required) ed Leaves (B9) (MLRA 1, 2, 3) tterns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	

Project/Site:	Federal Way City Center Access		City/County:	Federal Way/	/King Sampli	ing Date: 1/11/2021
Applicant/Owner	r: City of Federal Way				State: Washington S	Sampling Point: W19-SP-1
Investigator(s):	Trey Parry, Aaron Thom				Section, Township, Range:	T21N R04E S15
Landform (hillslop	pe, terrace, etc.):	depres	sion	Local re	elief (concave, convex, none): concave	Slope (%): <3%
Subregion (LRR): Northwest Forests and Coast	t (LRR A))	Lat: 47.310047	Lo	ong: -122.288963	Datum: NAD 1983 (HARN)
Soil Unit (Name-	-ID-Hydric Rating): Alde	erwood gravelly s	andy loam -	- AgB	- Not Hydric NWI classificati	ion: None
Are climatic / hyd	drologic conditions on the site typi		•		'es X No (If no,	explain in Remarks)
Are Vegetation	, Soil				Are "Normal Circumstances" present?	Yes X No
Are Vegetation	, Soil	, or Hydrology	naturally proble	ematic? (I	If needed, explain any answers in Remark	ks.)
SUMMARY (OF FINDINGS – Attach si	te map show		nt locations	s, transects, important features,	, etc.
	getation Present?	Yes X	No <u>X</u>	1		
Hydric Soil Pres	sent?	Yes X	No	Is the Samp	41	
Wetland Hydrol	ogy Present?	Yes X	No	within a Wet	tlan Yes <u>X</u>	No
Precipitation:						
According to the	Seattle Tacoma NOAA weather	station, precipitat	on was within the norr	mal range for the	e three months prior to the site visit.	
Damanlas						
Remarks: This sample plot	t is located in a ponded area to the	e east of the east	of the fish access road	d. The vegetation	on here is problematic but the soils and hy	vdrology are convincing W19-
	etland 19 and is the paired sample			u. The vegetatio	in here is problematic but the soils and my	diology are convincing. W 19-
\/E						
VEGETATIO	'N					
		Absolute		Indicator	Dominance Test worksheet:	
Tree Stratum	(Plot size: <u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Dominant Species	
1. <u>none</u>					That Are OBL, FACW, or FAC:	(A)
2.						
3.					Total Number of Dominant	
4.					Species Across All Strata:	1 (B)
		0%	= Total Cover			
Sapling/Shrub	Stratum (Plot size: r=2m)				Percent of Dominant Species	
1. Gaultheria s	shallon	80%	Yes	FACU	That Are OBL, FACW, or FAC:	<u>0%</u> (A/B)
2.					Prevalence Index worksheet:	
3.					Total % Cover of: Multiply	<u>y by:</u>
4			_		OBL species 0 x 1 =	0
5			_		FACW species 0 x 2 =	0
		80%	_ = Total Cover		FAC species $0 \times 3 =$	0
Herb Stratum	(Plot size: r=1m)				FACU species x 4 =	
1. <u>none</u>					UPL species 0 x 5 =	0
2.					Column Totals: (A)	(B)
3.					Prevalence Index = B/A =	•
4.					Hydrophytic Vegetation Indicators	;
5.					1 - Rapid Test for Hydrophytic V	'egetation
6.					2 - Dominance Test is >50%	
7.					3 - Prevalence Index is ≤3.0 ¹	
8.					4 - Morphological Adaptations ¹ ((Provide supporting
9.					data in Remarks or on a sepa	arate sheet)
10.					5 - Wetland Non-Vascular Plant	s ¹
11.					X Problematic Hydrophytic Vegeta	ation (Explain) ¹
		0%	= Total Cover		¹ Indicators of hydric soil and wetland	hydrology must
Woody Vine St	ratum (Plot size: <u>r=2m)</u>		_		be present.	
1. <u>none</u>						
2					Hydrophytic	No. v
% Baro Ground	I in Herb Stratum 0%	0%	_ = Total Cover		Vegetation Yes X Present?	Noχ
76 Bare Ground	1 III Herb Stratum				Fresent?	
Remarks:						
					o., and Athyrium cyclosorum. Despite the	nearby vegetation this plot is
only containen (<i>Gaultheria shallon</i> due to large an	nounts of downed	I wood from logging pra	actices.		

Parametrix

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SOIL						Sampling Point:	
Profile Description (Describe to the	depth neede	d to document the in	ndicator or con	firm the absenc	e of indicators):		_
Depth Matrix			Redox F	- eatures			
(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		M	SiL	
							
							
1				2.		· · · · · · · · · · · · · · · · · · ·	
Type: C=Concentration, D=Depletion,					cation: PL=Pore Lir		
Texture: Sa = sand; Si = silt; C = clay;				= fine; vf = very f			
Hydric Soil Indicators (Applicable to	all LRRs, un	less otherwise noted	i):		Indicators for Pr	oblematic Hydric Soils ³ :	
X Histosol (A1)	_	Sandy Redox (S5	5)		2 cm Muck (A10)	
Histic Epipedon (A2)	_	Stripped Matrix (S	66)		Red Parent I	Material (TF2)	
Black Histic (A3)	_	Loamy Mucky Mir	neral (F1) (exce	pt MLRA 1)	Very Shallov	v Dark Surface (TF12)	
Hydrogen Sulfide (A4)	-	Loamy Gleyed Ma		,		in in Remarks)	
Depleted Below Dark Surface (A11)	Depleted Matrix (F				•	
Thick Dark Surface (A12)	-	Redox Dark Surfa			3		
Sandy Mucky Mineral (S1)	-	— Depleted Dark Su	, ,		•	rophytic vegetation and wetlan	d
Sandy Gleyed Matrix (S4)	=	Redox Depression			problematic.	e present, unless disturbed or	
	-		- (- /	<u> </u>	,		
Restrictive Layer (if present):							
T							
Type: none					Hydric Soil	V V	NI.
Depth (inches): n/a					Hydric Soil Present?	Yes X	No
Depth (inches): n/a Remarks:					-	Yes X	No
Depth (inches): n/a Remarks: HYDROLOGY					-	Yes X	No
Depth (inches): n/a Remarks: HYDROLOGY Wetland Hydrology Indicators:					Present?		No
Depth (inches): n/a Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recommend)					Present? Secondary Indica	utors (2 or more required)	No
Depth (inches): n/a Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recommend) X Surface Water (A1)		X Water-Stained Le		ept MLRA	Present? Secondary Indica Water-Staine	ntors (2 or more required) ed Leaves (B9) (MLRA 1, 2,	No
Depth (inches): n/a Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recomposite of the composite of th		X Water-Stained Le		ept MLRA	Secondary Indica Water-Staine 4A, and 4	utors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B)	No
Depth (inches): n/a Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recompleted in the primary indicators) X Surface Water (A1) X High Water Table (A2) X Saturation (A3)		X Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11)	В)	ept MLRA	Secondary Indica Water-Staine 4A, and 4 Drainage Pa	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10)	No
Depth (inches): n/a Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recompleted in the primary Indicators) X Surface Water (A1) X High Water Table (A2) X Saturation (A3) X Water Marks (B1)		X Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra	B) ates (B13)	ept MLRA	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2)	No
Depth (inches): n/a Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recompleted in the primary indicators) X Surface Water (A1) X High Water Table (A2) X Saturation (A3)		X Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11)	B) ates (B13)	ept MLRA	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10)	No
Depth (inches): n/a Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recompleted in the primary Indicators) X Surface Water (A1) X High Water Table (A2) X Saturation (A3) X Water Marks (B1)		X Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp	B) ates (B13) Odor (C1) heres along Livi		Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2)	No
Primary Indicators (minimum of one recomplete (A2) X Surface Water (A1) X High Water Table (A2) X Saturation (A3) X Water Marks (B1) Sediment Deposits (B2)		X Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide	B) ates (B13) Odor (C1) heres along Livi		Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2)	No
Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recompleted in the property of the prop		X Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4)	ing Roots (C3)	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2)	No
Primary Indicators (minimum of one recomplete (A2) 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)		X Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled So	ing Roots (C3) oils (C6)	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2)	No
Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recompleted in the primary Indicators (minimum of one recompleted in	- - - - - -	X Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Se ed Plants (D1) (ing Roots (C3) oils (C6)	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5)	No
Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reconstruction of the primary Indicators (minimum of the primary Indicators (Mal) X	- - - - - y (B7)	X Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Se ed Plants (D1) (ing Roots (C3) oils (C6)	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No
Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reconstruction of the primary Indicators (Mala) X	- - - - - y (B7)	X Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Se ed Plants (D1) (ing Roots (C3) oils (C6)	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No
Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recompleted in the primary Indicators (Malana Indicator	- - - - y (B7) - ace (B8)	X Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Si ed Plants (D1) (Remarks)	ing Roots (C3) oils (C6) (LRR A)	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N Frost-Heave	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No
Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recompleted in the primary Indicators (Malana Indicator	- - - y (B7) - ace (B8)	X Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Si ed Plants (D1) (Remarks) Depth (inches)	ing Roots (C3) oils (C6) (LRR A)	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N Frost-Heave	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	
Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recompleted in the primary Indicators (Malay Indica	y (B7) ace (B8)	X Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Si ed Plants (D1) (Remarks) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : 1 : surface (0)	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N Frost-Heave Wetland Hydrology	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No
Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recomplete in the property of the prope	y (B7) ace (B8)	X Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Si ed Plants (D1) (Remarks) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : 1 : surface (0)	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N Frost-Heave	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	
Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reconstruction of the property of the p	y (B7) 	X Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Si ed Plants (D1) (Remarks) Depth (inches) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : 1 : surface (0) : surface (0)	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N Frost-Heave Wetland Hydrology Present?	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	
Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recomplete in the property of the prope	y (B7)	X Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Si ed Plants (D1) (Remarks) Depth (inches) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : 1 : surface (0) : surface (0)	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N Frost-Heave Wetland Hydrology Present?	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	
Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reconstruction of the property of the p	y (B7)	X Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress Other (Explain in I	ates (B13) Odor (C1) heres along Livi uced Iron (C4) action in Tilled Si ed Plants (D1) (Remarks) Depth (inches) Depth (inches)	ing Roots (C3) oils (C6) (LRR A) : 1 : surface (0) : surface (0)	Secondary Indica Water-Staine 4A, and 4 Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N Frost-Heave Wetland Hydrology Present?	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A) Hummocks (D7)	

Project/Site:	Federal Way City Center Access	S	City/County:	Federal Way	y/King	Sampling Date	:1/11/2021
Applicant/Owner	: City of Federal Way				State: Washing	ton Sampling	Point: W19-SP-2
Investigator(s):	Trey Parry, Aaron Thom			_	Section, Township, Range:	T21N F	R04E S15
Landform (hillslop	e, terrace, etc.):	hillslope	e	Local	relief (concave, convex, none):	concave	Slope (%): <3%
Subregion (LRR)): Northwest Forests and Coas	st (LRR A))	Lat: 47.310085	_ L	.ong: -122.288979	Datum	: NAD 1983 (HARN)
	ID-Hydric Rating): Ale			AgB		I classification:	None
•	drologic conditions on the site type	•			Yes X No		
Are Vegetation	, Soil , Soil	, or Hydrology	significantly dis	sturbed?	Are "Normal Circumstances" p		Yes X No
Are Vegetation					(If needed, explain any answer		
	OF FINDINGS – Attach s			nt location:	s, transects, important	teatures, etc.	
	getation Present?	Yes		Is the Sam	nlad Araa		
Hydric Soil Pres		Yes		within a We			
Wetland Hydrolo	ogy Present?	Yes	No <u>X</u>	Within a W	etlan Yes	No	<u>X</u>
Precipitation:	0 41 T NOAA 41		20.2				
According to the	Seattle Tacoma NOAA weather	station, precipitation	n was within the norn	nal range for th	ne three months prior to the site	e visit.	
Remarks:							
This sample plot	is upslope and north of W19-SF	P1.					
VEGETATIO	N						
		Absolute	Dominant	Indicator	Dominance Test worksh	neet:	
Tree Stratum	(Plot size: <u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Dominant Spe	ecies	
1. <u>none</u>		90%	Yes	FACU	That Are OBL, FACW, or	FAC:	0 (A)
2.		<u> </u>					
3.					Total Number of Dominar	nt	
4.					Species Across All Strata	:	2 (B)
		90%	= Total Cover				
Sapling/Shrub S	Stratum (Plot size: r=2m)				Percent of Dominant Spe	cies	
1. Gaultheria s	hallon	90%	Yes	FACU	That Are OBL, FACW, or	FAC:	<u>0%</u> (A/B)
2. Rubus ursin	us	2%	No	FACU	Prevalence Index works		
3.					Total % Cover of:	Multiply by:	
4.					OBL species	x 1 =	
5					FACW species	x 2 =	
		92%	= Total Cover		FAC species	x 3 =	
Herb Stratum	(Plot size: r=1m)				FACU species	x 4 =	
1. <u>none</u>					UPL species	x 5 =	
2					Column Totals:	(A)	(B)
3.					Prevalence Inc		
4.					Hydrophytic Vegetation		
5.					1 - Rapid Test for Hy	. , .	n
6.					2 - Dominance Test		
7.					3 - Prevalence Index		
8.					4 - Morphological Ad		
9.					•	or on a separate sh	eet)
10.					5 - Wetland Non-Vas		
11.					Problematic Hydroph	-	
Woody Vine Str	atum (Plot size: <u>r=2m)</u>	0%	= Total Cover		¹ Indicators of hydric soil a be present.	ind wetland hydrolog	Jy must
1. <u>none</u> 2.					Hydrophytic		
		0%	= Total Cover			Yes No	X
% Bare Ground	in Herb Stratum 10%		- Total Cover		Present?		
_							
Remarks:							

Parametrix

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0-4 10YR 2/2 100 4-16 10YR 3/2 100 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Cexture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + very	Loc² Texture³ L L L PL=Pore Lining, M=Matrix.	Remark
(inches) Color (moist) % Color (moist) % Type¹ 0-4 10YR 2/2 100 4-16 10YR 3/2 100 ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: exture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + : ydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Indic Histosol (A1) 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 Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Pepleted Dark Surface (F5) Redox Dark Surface (F7) Redox Depressions (F8) Probestrictive Layer (if present): Type: none Hydrogen (Inches): n/a	L L L : PL=Pore Lining, M=Matrix. = heavy (more clay); - = light (less clay) icators for Problematic Hydric Soils³: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	Remark
0-4 10YR 2/2 100 4-16 10YR 3/2 100 ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2-Location: exture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + : ydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Indicato	L L L : PL=Pore Lining, M=Matrix. = heavy (more clay); - = light (less clay) icators for Problematic Hydric Soils³: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	Remark
4-16	= heavy (more clay); - = light (less clay) icators for Problematic Hydric Soils ³ : _2 cm Muck (A10) _Red Parent Material (TF2) _Very Shallow Dark Surface (TF12) _Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: 2 Location: Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + sydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Probestrictive Layer (if present): Type: none Hydric Soil Matrix, CS=Covered or Coated Sand Grains. 2 Location: 2 Location: 2 Location: 4 Loamy Modifier: co = coarse; f = fine; vf = very fine; + set in the coarse; f = fine; vf = very fine; + set in th	= heavy (more clay); - = light (less clay) icators for Problematic Hydric Soils ³ : _2 cm Muck (A10) _Red Parent Material (TF2) _Very Shallow Dark Surface (TF12) _Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
rexture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = vdric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Histosol (A1) Histosol (A2) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Prob estrictive Layer (if present): Type: none Depth (inches): n/a	= heavy (more clay); - = light (less clay) icators for Problematic Hydric Soils ³ : _2 cm Muck (A10) _Red Parent Material (TF2) _Very Shallow Dark Surface (TF12) _Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + very fine; + = very fine; + very fin	= heavy (more clay); - = light (less clay) icators for Problematic Hydric Soils ³ : _2 cm Muck (A10) _Red Parent Material (TF2) _Very Shallow Dark Surface (TF12) _Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + very fine; + = very fine; + very fin	= heavy (more clay); - = light (less clay) icators for Problematic Hydric Soils ³ : _2 cm Muck (A10) _Red Parent Material (TF2) _Very Shallow Dark Surface (TF12) _Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = ydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Histosol (A1) Histosol (A2) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Prob estrictive Layer (if present): Type: none Depth (inches): n/a	= heavy (more clay); - = light (less clay) icators for Problematic Hydric Soils ³ : _2 cm Muck (A10) _Red Parent Material (TF2) _Very Shallow Dark Surface (TF12) _Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = ydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Histosol (A1) Histosol (A2) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Prob estrictive Layer (if present): Type: none Depth (inches): n/a	= heavy (more clay); - = light (less clay) icators for Problematic Hydric Soils ³ : _2 cm Muck (A10) _Red Parent Material (TF2) _Very Shallow Dark Surface (TF12) _Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = ydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Histosol (A1) Histosol (A2) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Prob estrictive Layer (if present): Type: none Depth (inches): n/a	= heavy (more clay); - = light (less clay) icators for Problematic Hydric Soils ³ : _2 cm Muck (A10) _Red Parent Material (TF2) _Very Shallow Dark Surface (TF12) _Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
Texture: Sa = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = lydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): Histosol (A1)	= heavy (more clay); - = light (less clay) icators for Problematic Hydric Soils ³ : _2 cm Muck (A10) _Red Parent Material (TF2) _Very Shallow Dark Surface (TF12) _Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
Indicators Ind	icators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F6) 3Indi hydr Sandy Gleyed Matrix (S4) Redox Depressions (F8) Prob estrictive Layer (if present): Type: none Hydi Depth (inches): n/a	2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
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) Peptered Dark Surface (F7) Redox Depressions (F8) Pressure India Pression (P8) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) 3India Pression (F8) Pressure India Pression (F8) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Salvation (F7) Redox Depressions (F8) Pression (F8) Pression (F8) Pression (F8)	Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (F3) Pepleted Dark Surface (F6) Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) hydrogen Sulfide (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Pepleted Dark Surface (F7) Redox Depressions (F8) Prob Redox Depressions (F8) Prob Hydi Depth (inches): n/a	Very Shallow Dark Surface (TF12) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F6) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Prob estrictive Layer (if present): Type: none Hydi Depth (inches): n/a	Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Pestrictive Layer (if present): Type: none Depleted Matrix (F3) Redox Dark Surface (F6) Pepleted Dark Surface (F7) Redox Depressions (F8) Presentitive Layer (if present): Type: none Hyding Presentity Presentit	dicators of hydrophytic vegetation and wetland rology must be present, unless disturbed or blematic.	
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) estrictive Layer (if present): Type: none Depth (inches): n/a Redox Dark Surface (F6) Pepth Surface (F7) Nedox Depressions (F8) Presented Redox Depressions (F8) Presented Redox Depressions (F8) Presented Presente	rology must be present, unless disturbed or blematic.	
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Prob Restrictive Layer (if present): Type: none Depth (inches): n/a Depth (symbol suppression of the sup	rology must be present, unless disturbed or blematic.	
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Pepleted Dark Surface (F7) Nydro Redox Depressions (F8) Prob Pestrictive Layer (if present): Type: none Depth (inches): n/a Pres	rology must be present, unless disturbed or blematic.	
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Prob Restrictive Layer (if present): Type: none Depth (inches): n/a Pres	blematic.	
Type: none Hyde Depth (inches): n/a Pres	dric Soil	
Depth (inches): n/a Pres	dric Soil	
Depth (inches): n/a Pres Remarks:		
lemarks:	sent? Yes No	lo X
IYDROLOGY		
Vetland Hydrology Indicators:		
	condary Indicators (2 or more required)	
-		
	_ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	
High Water Table (A2) Saturation (A3) 1, 2, 4A, and 4B) Salt Crust (B11)	Drainage Patterns (B10)	
	Dry-Season Water Table (C2)	
_ · · · · · · · · · · · · · · · · · · ·	Saturation Visible on Aerial Imagery (C9)	
<u> </u>	Geomorphic Position (D2)	
_	Shallow Aquitard (D3)	
-	FAC-Neutral Test (D5)	
-	Raised Ant Mounds (D6) (LRR A)	
_	Frost-Heave Hummocks (D7)	
Sparsely Vegetated Concave Surface (B8)	_ 1 Tost-fleave Huminocks (DT)	
ield Observations:		
	Wetlend	
Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches):	Wetland	10 ¥
		lo <u>X</u>
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	Present?	
1 , 0 ,		
Describe Described Date (stream regime monitoring will excise the first stream in the control of		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available	e:	

Project/Site: C	ity Center Access		City/County:	Federal Way	/ King	Sampling Dat	e: 5/0	3/2021
Applicant/Owner:	WSDOT			·	State: WA	Samplin	ng Point:	W20-SP-1
Investigator(s):	Josh Wozniak, Amanda Wo	eiss			Section, Township, Range:	T21N	R04E S16	
Landform (hillslope	, terrace, etc.):	Swale		Local re	elief (concave, convex, none):	concave	Slope (%	o): <u><3%</u>
Subregion (LRR):	Northwest Forests and Coa	ast (LRR A))	Lat: 47.302948	Lo	ng: -122.301559	Datur	n: NAD 19	83 (HARN)
Soil Unit (Name-ID	D-Hydric Rating): A	lderwood gravelly sa	ndy loam -	AgB	- Not Hydric NV	/I classification:	Nor	ne
· · · · · · · · · · · · · · · · · · ·	ologic conditions on the site ty					(If no, explain		•
Are Vegetation	, Soil	, or Hydrology	significantly dis	sturbed? A	re "Normal Circumstances" p		Yes X	No
Are Vegetation	, Soil				f needed, explain any answe			
	F FINDINGS – Attach	-		nt locations	, transects, important	features, etc.		
Hydrophytic Vege		Yes X	No	Is the Sampl	lad Araa			
Hydric Soil Prese		Yes X	No	within a Wet	land?			
Wetland Hydrolog	gy Present?	Yes X	No	within a wet	Yes X	No		
Precipitation:	N #1 T A: #NOAA							
According to the S	Seattle Tacoma Airport NOAA	weather station, pred	cipitation was below tr	ne normal range	e for the three months prior to	the site visit.		
Remarks:								
This is the wetland	d sample point for Wetland 20	. It occurs within a gr	assy slope alongside	15 N.				
VEGETATION								
		Absolute	Dominant	Indicator	Dominance Test works	heet:		
Tree Stratum	(Plot size: <u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Dominant Spo	ecies		
1. <u>none</u>					That Are OBL, FACW, or	FAC:	2	(A)
2.								
3.					Total Number of Domina	nt		
4.					Species Across All Strata	a:	2	(B)
		0%	= Total Cover					
Sapling/Shrub St	<u>ratum</u> (Plot size: <u>r=2m)</u>				Percent of Dominant Spe			
1. <u>none</u>					That Are OBL, FACW, or		<u>100%</u>	(A/B)
2. 3.					Prevalence Index works Total % Cover of:	sheet: Multiply by:		
4. 5.				-	OBL species	x1=		
o			T-1-1-0		FACW species FAC species	x 2 = x 3 =		
Herb Stratum	(Plot size: r=1m)	0%	= Total Cover		FACU species	x3= x4=		
1. Holcus lanatu	•	409/	Voo	FAC	UPL species	x 5 =	-	
Poa pratensis		40% 40%	Yes Yes	FAC	Column Totals:	——(A)	-	(B)
3. Phalaris arun		10%	No	FACW	Prevalence In	``	-	(-/
4.	amaooa	1070			Hydrophytic Vegetation			
5.					1 - Rapid Test for H		ion	
6.					X 2 - Dominance Test	is >50%		
7.					3 - Prevalence Inde	x is ≤3.0 ¹		
8.					4 - Morphological Ad	daptations ¹ (Provide	e supporting	J
9.					data in Remarks	or on a separate s	heet)	
10.					5 - Wetland Non-Va	scular Plants ¹		
11.					Problematic Hydrop	hytic Vegetation (E	xplain) ¹	
		90%	= Total Cover		¹ Indicators of hydric soil a	and wetland hydrol	ogy must	
Woody Vine Stra	tum (Plot size: <u>r=2m)</u>				be present.			
1. 2.					Hydrophytic			
			= Total Cover		Vegetation	Yes X No)	
% Bare Ground i	n Herb Stratum 10%				Present?		1	_
Domentos								
Remarks:								
Ī								

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SOIL							Sampling Point:	
Profile Description	on (Describe to the	depth needed	to document the ir	ndicator or con	firm the absence	e of indicators):		
Depth	Matrix			Redox F	eatures			
(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		M	GrL	
			10YR 6/6	15				
10-16	5Y 5/1	80	10YR 5/6	20		M	GrL	
10 10	01 0/1		10111 0/0					
1								
	tration, D=Depletion,					cation: PL=Pore Lin		
					= fine; vf = very f		e clay); - = light (less clay)	
Hydric Soil Indica	ators (Applicable to	all LRRs, unle	ess otherwise noted	d):		Indicators for Pr	oblematic Hydric Soils ³ :	
Histosol (A1)		_	Sandy Redox (S5	5)		2 cm Muck (A10)	
Histic Epipedo	on (A2)	_	Stripped Matrix (S	36)		Red Parent I	Material (TF2)	
Black Histic (A	1 3)	_	Loamy Mucky Mir	neral (F1) (exce	ot MLRA 1)	Very Shallow	v Dark Surface (TF12)	
Hydrogen Sul	fide (A4)	_	Loamy Gleyed Ma	atrix (F2)		Other (Expla	in in Remarks)	
Depleted Belo	ow Dark Surface (A11	_	X Depleted Matrix (I	F3)				
Thick Dark Su	urface (A12)	_	Redox Dark Surfa	ace (F6)		3Indicators of hyd	rophytic vegetation and wetlar	ad
Sandy Mucky	Mineral (S1)	_	Depleted Dark Su	urface (F7)		•	e present, unless disturbed or	
Sandy Gleyed	d Matrix (S4)	_	Redox Depressio	ns (F8)		problematic.	,	
Restrictive Layer	(if present):							
	(Uvdria Cail		
Type	e:					mvaric aoii		
Type Depth (inches):	e:					Hydric Soil Present?	Yes X	No
Depth (inches):	ə: 					-	Yes X	No
Depth (inches):	Đ: 					-	Yes X	No
Depth (inches): Remarks:		·				-	Yes X	No
Depth (inches): Remarks: HYDROLOGY	,					-	Yes X	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog	gy Indicators:	united: check a	ull that anniv)			Present?		No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators	gy Indicators:	juired; check a			DOLANI DA	Present? Secondary Indica	utors (2 or more required)	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators Surface Wate	gy Indicators: (minimum of one rec	juired; check a	Water-Stained Le		ept MLRA	Present? Secondary Indica Water-Staine	ators (2 or more required) ed Leaves (B9) (MLRA 1, 2,	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators Surface Wate X High Water Ta	gy Indicators: (minimum of one record (A1) able (A2)	ıuired; check a	Water-Stained Le		ept MLRA	Secondary Indica Water-Staine 4A, and 4	utors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B)	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators Surface Wate X High Water Ta X Saturation (A3)	gy Indicators: (minimum of one record (A1) able (A2) 3)	juired; check a	Water-Stained Le 1, 2, 4A, and 4 Salt Crust (B11)	В)	ept MLRA	Secondary Indica Water-Staine 4A, and 4l Drainage Pa	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10)	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators Surface Wate X High Water Ta X Saturation (A3 Water Marks (gy Indicators: (minimum of one record (A1) able (A2) 3) (B1)	juired; check a	Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra	B) ates (B13)	ept MLRA	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2)	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators Surface Wate X High Water Ta X Saturation (A3 Water Marks (Sediment Dep	gy Indicators: (minimum of one reconstruction (A1) able (A2) 3) (B1) coosits (B2)	- - -	Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide	B) ates (B13) Odor (C1)		Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9)	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators Surface Wate X High Water Ta X Saturation (A3 Water Marks (Sediment Dep	gy Indicators: (minimum of one record (A1) able (A2) 3) (B1) posits (B2) (B3)	- - -	Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide X Oxidized Rhizosp	B) ates (B13) Odor (C1) heres along Livi		Secondary Indica Water-Staine 4A, and 4l Drainage Pa Dry-Season Saturation V Geomorphic	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2)	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators Surface Wate X High Water Ta X Saturation (A3 Water Marks (Sediment Dep Drift Deposits X Algal Mat or C	gy Indicators: (minimum of one record (A1) able (A2) 3) (B1) cosits (B2) (B3) Crust (B4)	- - -	Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide X Oxidized Rhizosp Presence of Redu	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4)	ng Roots (C3)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2)	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators Surface Wate X High Water Ta X Saturation (A3 Water Marks (Sediment Deporits X Algal Mat or C Iron Deposits	gy Indicators: (minimum of one reconstruction) (B1) (B1) (B3) (B3) (B3) (Crust (B4) (B5)	- - -	Water-Stained Le 1, 2, 4A, and 4l Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide X Oxidized Rhizosp Presence of Redu Recent Iron Redu	B) ates (B13) Odor (C1) wheres along Livi uced Iron (C4) uction in Tilled So	ng Roots (C3) pils (C6)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5)	No
Depth (inches): Remarks: HYDROLOGY Wetland Hydrolog Primary Indicators Surface Wate X High Water Ta X Saturation (A3 Water Marks (Sediment Deposits X Algal Mat or C Iron Deposits Surface Soil C	gy Indicators: (minimum of one record (A1) able (A2) 3) (B1) cosits (B2) (B3) crust (B4) (B5) Cracks (B6)	- - - - - -	Water-Stained Le 1, 2, 4A, and 4I Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide X Oxidized Rhizosp Presence of Redu Recent Iron Redu Stunted or Stress	B) ates (B13) Odor (C1) wheres along Livituced Iron (C4) auction in Tilled Solved Plants (D1) (ng Roots (C3) pils (C6)	Secondary Indica Water-Staine 4A, and 4I Drainage Pa Dry-Season Saturation V Geomorphic Shallow Aqu FAC-Neutral Raised Ant N	etors (2 or more required) ed Leaves (B9) (MLRA 1, 2, B) tterns (B10) Water Table (C2) isible on Aerial Imagery (C9) Position (D2) itard (D3) Test (D5) Mounds (D6) (LRR A)	No
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Parametrix

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Project/Site: 0	City Center Access		City/County:	Federal Way	/ King	Sampling	g Date:	5/03/2021
Applicant/Owner:	WSDOT				State:	WA Sa	mpling Point	: W20-SP-2
Investigator(s):	Josh Wozniak, Amanda W	eiss		_	Section, Township, Ran	ge:T	721N R04E S	316
Landform (hillslope	e, terrace, etc.):	Hillslop	е	Local re	elief (concave, convex, nor	ne): none	Slop	e (%): <u><3%</u>
• ,	: Northwest Forests and Co	, ,,	Lat: 47.302868		ng: -122.301422			D 1983 (HARN)
•		Alderwood gravelly s			- Not Hydric	NWI classification		None
· · · · · · · · · · · · · · · · · · ·	rologic conditions on the site t					X (If no, ex		
Are Vegetation Are Vegetation	, Soil , Soil	or Hydrology	significantly dis	ematic? (I	re "Normal Circumstan f needed, explain any a	•		XNo
_								
Hydrophytic Veg	OF FINDINGS – Attach	Yes X			, transects, impor	tant reatures, e	:10.	
Hydric Soil Prese		Yes		Is the Sampl	led Area			
Wetland Hydrolo		Yes	No X	within a Wet	land? Yes	N	lo <u>X</u>	
Precipitation: According to the	Seattle Tacoma Airport NOAA			he normal range	_	<u> </u>		<u> </u>
Remarks: This sample point	t is located approximately 30 f	t upslope and to the	east of SP-1.					
	,							
VEGETATIO	N							
		Absolute	Dominant	Indicator	Dominance Test w	vorksheet:		
Tree Stratum	(Plot size: <u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Domina	nt Species		
1. <u>none</u>					That Are OBL, FAC	CW, or FAC:	3	(A)
2.								
3.					Total Number of Do	ominant		
4					Species Across All	Strata:	4	(B)
		0%	= Total Cover					
Sapling/Shrub S	Stratum (Plot size: r=2m)				Percent of Dominar	nt Species		
1. <u>none</u>					That Are OBL, FAC	· ·	<u>75%</u>	(A/B)
2.					Prevalence Index		L	
3.					Total % Cover		<u>5ÿ:</u>	
4					OBL species	x 1 =		
5		<u> </u>			FACW species	x 2 =		
Hank Ctuatum	(District # 4m)	0%	= Total Cover		FAC species	x 3 =		
Herb Stratum	(Plot size: <u>r=1m)</u>	4007		540	FACU species UPL species	x 4 =		
Poa pratensi Holcus lanat		40%	Yes	FAC	Column Totals:	x 5 = (A)		(B)
 Holcus lanat Anthoxanthu 		20%	Yes	FAC	<u>-</u>	nce Index = B/A =		(b)
		20%	Yes Yes	<u>FACU</u> FAC	Hydrophytic Vege			
5.	s arundinaceus	20%	163	PAC		for Hydrophytic Ve	netation	
6.					X 2 - Dominance	, , ,	jotano	
7.					3 - Prevalence			
8.						cal Adaptations ¹ (P	rovide suppc	orting
9.						narks or on a separ		n ung
10.						on-Vascular Plants ¹		
11.						ydrophytic Vegetation		
		100%	= Total Cover			soil and wetland h		
Woody Vine Stra	atum (Plot size: <u>r=2m)</u>				be present.		, 0,	
1								
2.			T . 10		Hydrophytic	Vac V	Na	
% Bare Ground	in Herb Stratum 0%		= Total Cover		Vegetation Present?	Yes X	No	
Remarks:								

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OIL	m /Deacrilles (- ()	TARTE BASS						
•	n (Describe to the o	•	to document the in			e of indicators).		
Depth	Matrix				Features		2	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ³	Remark
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						
<u> </u>								1
ype: C=Concentr	ration, D=Depletion,	RM=Reduced	d Matrix, CS=Covered	l or Coated San	nd Grains. ² Lo	cation: PL=Pore Linii	ng, M=Matrix.	
exture: Sa = sand	d; Si = silt; C = clay; I	L = loam or lo	amy. Texture Modifier	r: co = coarse; f	= fine; vf = very f	iine; + = heavy (more	clay); - = light (less clay)	
ydric Soil Indicat	ors (Applicable to a	all LRRs, unl	ess otherwise noted	i):		Indicators for Pro	blematic Hydric Soils ³ :	
Histosol (A1)			Sandy Redox (S5	5)		2 cm Muck (A	.10)	
— Histic Epipedor	n (A2)	_	Stripped Matrix (S	36)		Red Parent M	laterial (TF2)	
Black Histic (A3	3)	_	Loamy Mucky Min	neral (F1) (exce	pt MLRA 1)	Very Shallow	Dark Surface (TF12)	
Hydrogen Sulfic		_	Loamy Gleyed Ma		,	Other (Explain	, ,	
	w Dark Surface (A11))	X Depleted Matrix (F				,	
Thick Dark Sur	,	_	Redox Dark Surfa			3		
Sandy Mucky N	vlineral (S1)	_	Depleted Dark Su			•	ophytic vegetation and we present, unless disturbed	
Sandy Gleyed I		_	Redox Depression			problematic.	present, unless disturbed	101
estrictive Layer (<u> </u>		<u> </u>	<u> </u>		
estrictive Layer (ii present).							
Type:						Hydric Soil		
Type:						Hydric Soil	Vos	No
Type: Depth (inches): emarks:						Hydric Soil Present?	Yes	No
Depth (inches):						-	Yes	No
Depth (inches):						-	Yes	No
Depth (inches): emarks:						-	Yes	No
Depth (inches): emarks: IYDROLOGY /etland Hydrology		uired; check a	all that apply)			Present?	Yes	No
Depth (inches): emarks: IYDROLOGY /etland Hydrology	y Indicators: (minimum of one req	uired; check a	all that apply)Water-Stained Le	aves (B9) (exce	ept MLRA	Present? Secondary Indicate		
Depth (inches): emarks: YDROLOGY /etland Hydrology rimary Indicators (y Indicators: (minimum of one req (A1)	uired; check a			ept MLRA	Present? Secondary Indicate	ors (2 or more required) d Leaves (B9) (MLRA 1, 2	
Depth (inches): emarks: IYDROLOGY /etland Hydrology rimary Indicators (Surface Water	y Indicators: (minimum of one req (A1) ble (A2)	uired; check a	Water-Stained Le		ept MLRA	Present? Secondary Indicate Water-Stained	ors (2 or more required) d Leaves (B9) (MLRA 1, 2	
Depth (inches): emarks: IYDROLOGY /etland Hydrology rimary Indicators (Surface Water High Water Tab	y Indicators: (minimum of one req (A1) ble (A2)	uired; check a	Water-Stained Lea	В)	ept MLRA	Secondary Indicate Water-Stained 4A, and 4B Drainage Patt	ors (2 or more required) d Leaves (B9) (MLRA 1, 2	
Depth (inches): emarks: IYDROLOGY /etland Hydrology rimary Indicators (Surface Water	y Indicators: (minimum of one req (A1) ble (A2)) 31)	uired; check a	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11)	B) ates (B13)	ept MLRA	Secondary Indicate Water-Stained 4A, and 4B Drainage Patt Dry-Season V	ors (2 or more required) d Leaves (B9) (MLRA 1, 2	2,
Depth (inches): emarks: IYDROLOGY /etland Hydrology rimary Indicators (y Indicators: (minimum of one req (A1) ble (A2)) 31) osits (B2)	uired; check a	Water-Stained Leads 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra	B) ates (B13) Odor (C1)		Secondary Indicate Water-Stained 4A, and 4B Drainage Patt Dry-Season V	ors (2 or more required) d Leaves (B9) (MLRA 1, 2 c) terns (B10) Vater Table (C2) sible on Aerial Imagery (Cs	2,
Depth (inches): emarks: IYDROLOGY /etland Hydrology rimary Indicators (Surface Water High Water Tab Saturation (A3) Water Marks (E Sediment Depo	y Indicators: (minimum of one req (A1) ble (A2)) B1) osits (B2)	uired; check a	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide	B) ates (B13) Odor (C1) heres along Livi		Secondary Indicate Water-Stainer 4A, and 4B Drainage Patt Dry-Season V Saturation Vis	ors (2 or more required) d Leaves (B9) (MLRA 1, 2 b) terns (B10) Vater Table (C2) sible on Aerial Imagery (Cs	2,
Pepth (inches): emarks: IYDROLOGY /etland Hydrology rimary Indicators (Surface Water High Water Tat Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Cri	y Indicators: (minimum of one req (A1) ble (A2)) (B1) osits (B2) (B3) rust (B4)	uired; check a	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospl Presence of Redu	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4)	ing Roots (C3)	Secondary Indicate Water-Stainee 4A, and 4B Drainage Patt Dry-Season V Saturation Vis Geomorphic F Shallow Aquit	ors (2 or more required) d Leaves (B9) (MLRA 1, 2 e) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9 Position (D2) ard (D3)	2,
Pepth (inches): emarks: EYDROLOGY Vetland Hydrology rimary Indicators (Surface Water High Water Tak Saturation (A3) Water Marks (E Sediment Depo	y Indicators: (minimum of one req (A1) ble (A2)) B1) osits (B2) (B3) rust (B4)	uired; check a	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospl Presence of Redu Recent Iron Redu	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4) uction in Tilled So	ing Roots (C3) oils (C6)	Secondary Indicate Water-Stained 4A, and 4B Drainage Patt Dry-Season V Saturation Vis Geomorphic F Shallow Aquit FAC-Neutral	ors (2 or more required) d Leaves (B9) (MLRA 1, 2 c) terns (B10) Vater Table (C2) sible on Aerial Imagery (Cs Position (D2) ard (D3) Test (D5)	2,
Depth (inches): emarks: IYDROLOGY /etland Hydrology rimary Indicators (Surface Water High Water Tak Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Cri Iron Deposits (I Surface Soil Cr	y Indicators: (minimum of one req. (A1) ble (A2)) B1) osits (B2) B3) rust (B4) B5) racks (B6)	- - - - -	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospl Presence of Redu Recent Iron Redu Stunted or Stresse	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4) uction in Tilled So ed Plants (D1) (ing Roots (C3) oils (C6)	Secondary Indicate Water-Stainer 4A, and 4B Drainage Patt Dry-Season V Saturation Vis Geomorphic F Shallow Aquit FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2 e) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9 Position (D2) ard (D3)	2,
Pepth (inches): Pemarks: Pydrology Petland Hydrology Petland Hydro	y Indicators: (minimum of one req (A1) ble (A2)) B1) osits (B2) B3) rust (B4) B5) racks (B6) ble on Aerial Imager	- - - - - - y (B7)	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospl Presence of Redu Recent Iron Redu	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4) uction in Tilled So ed Plants (D1) (ing Roots (C3) oils (C6)	Secondary Indicate Water-Stainer 4A, and 4B Drainage Patt Dry-Season V Saturation Vis Geomorphic F Shallow Aquit FAC-Neutral Raised Ant M	ors (2 or more required) d Leaves (B9) (MLRA 1, 2 c) terns (B10) Vater Table (C2) sible on Aerial Imagery (Cs Position (D2) ard (D3) Test (D5) ounds (D6) (LRR A)	2,
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Depth (inches): emarks: IYDROLOGY /etland Hydrology rimary Indicators (y Indicators: (minimum of one req (A1) ble (A2)) B1) osits (B2) B3) rust (B4) B5) racks (B6) ble on Aerial Imager tated Concave Surfa s: sent? Yes ent? Yes	- - - - - - - - - - - - - - - - - - -	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospl Presence of Redu Recent Iron Redu Stunted or Stresse Other (Explain in F	B) ates (B13) Odor (C1) heres along Livi uced Iron (C4) uction in Tilled So ed Plants (D1) (Remarks) Depth (inches)	ing Roots (C3) oils (C6) (LRR A)	Secondary Indicate Water-Stainer 4A, and 4B Drainage Patt Dry-Season V Saturation Vis Geomorphic F Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave B	ors (2 or more required) d Leaves (B9) (MLRA 1, 2 c) terns (B10) Vater Table (C2) sible on Aerial Imagery (Cs Position (D2) ard (D3) Test (D5) ounds (D6) (LRR A) Hummocks (D7)	9)
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Depth (inches): emarks: IYDROLOGY /etland Hydrology rimary Indicators (Surface Water High Water Tata Saturation (A3) Water Marks (E Sediment Depo Drift Deposits (I Algal Mat or Cri Iron Deposits (I Surface Soil Cr Inundation Visil Sparsely Veget ield Observations Surface Water Prese Vater Table Prese Saturation Present includes capillary f	y Indicators: (minimum of one req (A1) ble (A2)) B1) osits (B2) B3) rust (B4) B5) racks (B6) ble on Aerial Imagen tated Concave Surfa s: sent? Yes ent? Yes ent? Yes fringe)	y (B7)ace (B8)	Water-Stained Lea 1, 2, 4A, and 4E Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizospl Presence of Redu Recent Iron Redu Stunted or Stresse Other (Explain in F	ates (B13) Odor (C1) heres along Livi uced Iron (C4) uction in Tilled So ed Plants (D1) (Remarks) Depth (inches) Depth (inches)	ing Roots (C3) oils (C6) (LRR A)	Secondary Indicate Water-Stainer 4A, and 4B Drainage Patt Dry-Season V Saturation Vis Geomorphic F Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave B Wetland Hydrology Present?	ors (2 or more required) d Leaves (B9) (MLRA 1, 2 c) terns (B10) Vater Table (C2) sible on Aerial Imagery (Cs Position (D2) ard (D3) Test (D5) ounds (D6) (LRR A) Hummocks (D7)	9)

Parametrix

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Project/Site:	City Center Access		City/County:	Federal Way	/ King	Sampling I	Date:	5/03/2021
Applicant/Owner	: WSDOT				State: V	VA Sam	pling Point:	W20-SP-3
Investigator(s):	Josh Wozniak, Amanda We	eiss			Section, Township, Range	: <u>T2</u>	1N R04E S1	6
Landform (hillslop	e, terrace, etc.):	hillslop	e	Local r	elief (concave, convex, none)	: none	Slope	(%): <3%
Subregion (LRR)	: Northwest Forests and Coa	ast (LRR A))	Lat: 47.304916	Lo	ong: -122.300903	Da	atum: NAD	1983 (HARN)
	ID-Hydric Rating): A			- AgB		NWI classification:		None
	drologic conditions on the site ty				/es No			
Are Vegetation	, Soil				Are "Normal Circumstance	•	-	No
Are Vegetation	, Soil				If needed, explain any ans	,		
	OF FINDINGS - Attach			nt locations	s, transects, importa	int features, et	C.	
	getation Present?	Yes		Is the Samp	alad Araa			
Hydric Soil Pres		Yes X		within a We		NI-	v	
Wetland Hydrolo	ogy Present?	Yes	No <u>X</u>	Within a We	tland? Yes	NO	X	
Precipitation:	On although the control of NOAA		eta tra Cara coma a la alacca (i		. Conthol there was the way	and a side of the collection		
According to the	Seattle Tacoma Airport NOAA	weather station, pre-	cipitation was below t	ne normal range	e for the three months pric	r to the site visit.		
Remarks:								
This sample poin	nt is located further upslope and	l east of SP-2.						
VEGETATIO	N							
		Absolute	Dominant	Indicator	Dominance Test wo	rksheet:		
Tree Stratum	(Plot size: <u>r=3m)</u>	% Cover	Species?	<u>Status</u>	Number of Dominant	Species		
1. <u>none</u>					That Are OBL, FACW	, or FAC:	1	(A)
2.								
3.					Total Number of Dom	inant		
4.					Species Across All St	rata:	2	(B)
		0%	= Total Cover					
Sapling/Shrub S	Stratum (Plot size: <u>r=2m)</u>				Percent of Dominant	Species		
1. <u>none</u>					That Are OBL, FACW	, or FAC:	<u>50%</u>	(A/B)
2.					Prevalence Index wo			
3.			. <u>———</u>		Total % Cover of	f: Multiply by	<u>r:</u>	_
4					OBL species	x 1 =		
5					FACW species	x 2 =		
		0%	= Total Cover		FAC species	x 3 =		
Herb Stratum	(Plot size: <u>r=1m)</u>				FACU species	x 4 =		
	um odoratum	47%	Yes	FACU	UPL species	x 5 =		
2. Poa pratens		47%	Yes	FAC	Column Totals:	(A)		(B)
3. <u>Holcus lana</u>	tus	2%	No	FAC		e Index = B/A =		
4. 					Hydrophytic Vegeta		.4.4:	
5.			· -		2 - Dominance T	r Hydrophytic Vege	Hallon	
6. 7.			· -		3 - Prevalence Ir			
7. 8.			· -				:-	··
o. 9.			· -			ll Adaptations ¹ (Pro rks or on a separat		ang
9. 10.					5 - Wetland Non-		e sileet)	
11.			<u> </u>			rophytic Vegetation	(Evolain) ¹	
			Total Cayor		¹ Indicators of hydric s	· · ·		
Woody Vine Str	atum (Plot size: <u>r=2m)</u>	96%	= Total Cover		be present.	oli and welland nyc	irology must	
1.	(1. 101 0.201 <u></u>				be present.			
2.					Hydrophytic			
		0%	= Total Cover		Vegetation	Yes	No X	
% Bare Ground	in Herb Stratum 0%				Present?			
Remarks:								

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SOIL							Sampling Point:	W20-SP-3
	ion (Describe to the o	lepth needed t	to document the	indicator or co	onfirm the abser	nce of indicators):	Gampinig i Ginti	
Depth	Matrix				Features			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ³	Remarks
0-7	10YR 4/2	100	Color (moist)	70	.,,,,		CoL	Remarks
7-15	2.5Y 5/1	80	10YR 5/6	10			GrL	
7-13	2.31 3/1	00	7.5YR 5/8	10		M	GIL _	
15.	2 5V 5/1		7.51K 3/6			IVI	GrL —	
15+	2.5Y 5/1						GIL	
						 -		
_ * '	ntration, D=Depletion,					ocation: PL=Pore Linin	=	
					t = fine; vt = ver		clay); - = light (less clay)	
-	ators (Applicable to a	III LRRS, unles	ss otherwise note	ed):		Indicators for Pro	blematic Hydric Soils ³ :	
Histosol (A1)		_	_Sandy Redox (S	55)		2 cm Muck (A	10)	
Histic Epiped	on (A2)		_Stripped Matrix ((S6)		Red Parent Ma	aterial (TF2)	
Black Histic (A3)		Loamy Mucky M	lineral (F1) (exc	ept MLRA 1)	Very Shallow I	Dark Surface (TF12)	
Hydrogen Su	Ilfide (A4)		_Loamy Gleyed N	Matrix (F2)		Other (Explain	in Remarks)	
Depleted Belo	ow Dark Surface (A11)	<u> </u>	_ Depleted Matrix	(F3)				
Thick Dark S	urface (A12)		Redox Dark Sur	face (F6)		3Indicators of hydro	ophytic vegetation and wetlar	nd.
Sandy Mucky	/ Mineral (S1)		_Depleted Dark S	Surface (F7)		•	present, unless disturbed or	iu
Sandy Gleye	d Matrix (S4)		Redox Depressi	ons (F8)		problematic.	,	
Restrictive Layer	r (if present):							
Тур						Hydric Soil		
Depth (inches):						Present?	Yes X	No
2004 ().							<u></u>	
								_
HYDROLOGY	1							
Wetland Hydrolo	gy Indicators:							
Primary Indicators	s (minimum of one req	uired: check all	that apply)			Secondary Indicato	ors (2 or more required)	
Surface Water	•	an out on out an	Water-Stained L	- eaves (B0) (ev	cent MI PA	-	I Leaves (B9) (MLRA 1, 2,	
High Water T	` '	_	1, 2, 4A, and		CEPTIVILITY	4A, and 4B)	, , ,	
Saturation (A			Salt Crust (B11)	•		,		
Water Marks	,	_	_			Drainage Patte		
		_	_ Aquatic Inverteb				/ater Table (C2)	
Sediment De		_	_ Hydrogen Sulfid		ining Deets (CO)		ible on Aerial Imagery (C9)	
Drift Deposits		_	Oxidized Rhizos		• , ,			
Algal Mat or 0		_	Presence of Red			Shallow Aquita	, ,	
Iron Deposits			_Recent Iron Rec		` ,	FAC-Neutral T		
Surface Soil (_	_Stunted or Stres) (LRR A)		ounds (D6) (LRR A)	
	isible on Aerial Imager		_Other (Explain ir	Remarks)		Frost-Heave H	łummocks (D7)	
Sparsely Veg	getated Concave Surfa	ce (B8)						
Field Observatio	ns:							
Surface Water Pr		No	oX	Depth (inches	s):	Wetland		
Water Table Pres	sent? Yes	No.	X		s):	Hydrology	Yes	No X
Saturation Preser		No		Depth (inches		Present?		
(includes capillary	y fringe)							
Describe Peacer	ded Data (stream gau	igo monitoria	a well sorial abs	toe provious!	nenactions) if	available:		
Describe Record	ueu pata (stream gat	ige, monitorin	y wen, aenai pho	ios, previous l	nspections), if a	avaliabi e :		
Remarks:								

Appendix D

Wetland Rating Forms

RATING SUMMARY – Western Washington

Name of wetland (or ID #):	W1				Date of site visit:	8/18/2024
Rated by Per Johnson, Aaro	on Thom	Trained by Ecolog	gy?⊡ Y	′es □ No	Date of training	2014, 2018
HGM Class used for rating	Depressional & Flats	W	etland l	has multip	le HGM classes? ☑	Yes □ No
	ot complete with out to of base aerial photo/m	•	sted (fig	ures can l	be combined).	
OVERALL WETLAND CA	TEGORYIV	(based on funct	ions 🗵	or special	characteristics □)	
1. Category of wetland	based on FUNCTIO	NS		_		
	Category I - Total sco	ore = 23 - 27			Score for each	
	Category II - Total sc	ore = 20 - 22			function based	
	_Category III - Total so	core = 16 - 19			on three	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	propriate rating	g (H, M, L)	
Site Potential	M	L	L	
Landscape Potential	L	L	L	
Value	M	Н	М	Total
Score Based on Ratings	5	5	4	14

X Category IV - Total score = 9 - 15

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	Х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are the water levels in the entire unit usually controlled by tides except during floods?				
✓	NO - go to 2	□ YES - the wetla	nd class is Tidal Fringe - go to 1.1	
1.1	Is the salinity of the water during per	iods of annual low flo	ow below 0.5 ppt (parts per thousand)?	
		a Freshwater Tidal F stuarine wetland an	□ YES - Freshwater Tidal Fringe iringe use the forms for <i>Riverine</i> wetlands. If d is not scored. This method <i>cannot</i> be used	
	ntire wetland unit is flat and precipitation vater and surface water runoff are NO			
V	NO - go to 3 If your wetland can be classified as a	a Flats wetland, use	☐ YES - The wetland class is Flats the form for Depressional wetlands.	
	the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of the At least 30% of the open water area	on the shores of a b the year) at least 20		
V	NO - go to 4	□ YES - The wetla	and class is Lake Fringe (Lacustrine Fringe)	
	the entire wetland unit meet all of the The wetland is on a slope (<i>slope car</i> The water flows through the wetland may flow subsurface, as sheetflow, or The water leaves the wetland witho	n be very gradual), I in one direction (unior in a swale without		
V	NO - go to 5		☐ YES - The wetland class is Slope	
NOTE : Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).				
 5. Does the entire wetland unit meet all of the following criteria? The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river, The overbank flooding occurs at least once every 2 years. 				
V	NO - go to 6		□ YES - The wetland class is Riverine	
NOTE: T	he Riverine unit can contain denressi	ons that are filled wit	h water when the river is not flooding	

Wetland i	name or	number	\/\/1	

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? This means that any outlet, if present, is higher than the interior of the wetland.		
□ NO - go to 7	☑ YES - The wetland class is Depressional	
	very flat area with no obvious depression and no overbank flooding? The han a few inches. The unit seems to be maintained by high groundwater I, but has no obvious natural outlet.	
□ NO - go to 8	☐ YES - The wetland class is Depressional	

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

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

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

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

NOTES and FIELD OBSERVATIONS:

A portion of the wetland is sloped and a portion is depressional, therefore a Depressional HGM class was used for this rating. W1 receives overland flow and seasonal groundwater. Its outlet is a French drain east of the wetland.

D2.2 and D5.2: pollution generating areas and excess runoff are downslope of the wetland.

DEPRESSIONAL AND FLATS WETLA	NDS		
Water Quality Functions - Indicators that the site functions to improve water quality			
D 1.0. Does the site have the potential to improve water quality?			
D 1.1. Characteristics of surface water outflows from the wetland:			
Wetland is a depression or flat depression (QUESTION 7 on key) with			
no surface water leaving it (no outlet).	points = 3		
Wetland has an intermittently flowing stream or ditch, OR highly	nointo 2	2	
constricted permanently flowing outlet. Uetland has an unconstricted, or slightly constricted, surface outlet	points = 2	2	
that is permanently flowing	points = 1		
☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is a	•		
permanently flowing ditch.	points = 1		
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic		0	
(use NRCS definitions).	Yes = 4 No = 0		
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shru	b, and/or Forested		
Cowardin classes):	points - F		
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	. 5	
Wetland has persistent, ungrazed, plants > $\frac{1}{2}$ of area Wetland has persistent, ungrazed plants > $\frac{1}{10}$ of area	points = 3 points = 1		
Wetland has persistent, ungrazed plants > 7 ₁₀ of area Wetland has persistent, ungrazed plants < 1/ ₁₀ of area	points = 1		
D 1.4. Characteristics of seasonal ponding or inundation:	points = 0		
This is the area that is ponded for at least 2 months. See description in	n manual		
Area seasonally ponded is > ½ total area of wetland	points = 4	0	
Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is > ¼ total area of wetland	points = 2	_	
Area seasonally ponded is < 1/4 total area of wetland	points = 2 points = 0		
	in the boxes above		
Rating of Site Potential If score is:	Record the rating or		
		, ,	
D 2.0. Does the landscape have the potential to support the water quality function	n of the site?	l	
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	0	
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that		0	
generate pollutants?	Yes = 1 No = 0	-	
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0	
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 3.1. D 3.33		0	
listed in questions D 2.1 - D 2.3? Source	Yes = 1 No = 0	0	
	in the boxes above		
Rating of Landscape Potential If score is: 3 or 4 = H 1 or 2 = M 0 = L		_	
D 3.0. Is the water quality improvement provided by the site valuable to society?		T	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,		0	
lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0		
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the		1	
DOO Hay the site has a identified in a content of colored at a set of the	Yes = 1 No = 0		
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which		0	
the unit is found)?	Yes = 2 No = 0	_	
· · · · · · · · · · · · · · · · · · ·	in the boxes above		
Rating of Value If score is: \square 2 - 4 = H \square 1 = M \square 0 = L	Record the rating or		
-	3 -	, 5	

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

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 1 ☑ Emergent 3 structures: points = 2 ☑ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☐ Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). □ Permanently flooded or inundated 4 or more types present: points = 3 ☐ Seasonally flooded or inundated 3 types present: points = 2 0 □ Occasionally flooded or inundated 2 types present: points = 1 ☑ Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are HIGH = 3 points

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of	
points.	
☑ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)	
☑ Standing snags (dbh > 4 in) within the wetland	
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at	
least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least	
33 ft (10 m)	2
☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning	
(> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees	
that have not yet weathered where wood is exposed)	
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas	
that are permanently or seasonally inundated (structures for egg-laying by amphibians)	
☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H	
1.1 for list of strata)	
Total for H 1 Add the points in the boxes above	
Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 - 6 = L Record the rating or	the first page
H 2.0. Does the landscape have the notantial to connect the hebitat function of the cite?	
H 2.0. Does the landscape have the potential to support the habitat function of the site? H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).	1
Calculate: 3% % undisturbed habitat + (2% % moderate & low intensity land uses / 2) = 0.04%	
3% % undisturbed habitat + (% moderate & low intensity land uses / 2) = 0.04%	
Martin accessible heldford's	0
If total accessible habitat is:	0
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20 - 33% of 1 km Polygon points = 2	
10 - 19% of 1 km Polygon points = 1	
< 10 % of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate:	
19 % undisturbed habitat + (25 % moderate & low intensity land uses / 2) = 31.5%	
	1
Undisturbed habitat > 50% of Polygon points = 3	
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2	
Undisturbed habitat 10 - 50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3 Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-2)	
≤ 50% of 1km Polygon is high intensity points = 0	•
Total for H 2 Add the points in the boxes above	
Rating of Landscape Potential If Score is: 4-6=H 1-3=M <	the first page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose</i>	
only the highest score that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
☐ It has 3 or more priority habitats within 100 m (see next page)	
☐ It provides habitat for Threatened or Endangered species (any plant	
or animal on the state or federal lists)	1
☐ It is mapped as a location for an individual WDFW priority species	1
☐ It is a Wetland of High Conservation Value as determined by the	1
Department of Natural Resources	
☐ It has been categorized as an important habitat site in a local or	
regional comprehensive plan, in a Shoreline Master Plan, or in a	1
watershed plan	
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1	1
Site does not meet any of the criteria above points = 0 Rating of Value If Score is:	the first page
	, we wisi Dade

Wetland Rating System for Western WA: 2014 Update Rating Form - Effective January 1, 2015

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: NOTE: This question is independent of the land use between the wetland unit and the priority habitat. Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha). Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlife (full descriptions in WDFW PHS report). **Herbaceous Balds**: Variable size patches of grass and forbs on shallow soils over bedrock. Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests - Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest. Oregon White Oak: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (full descriptions in WDFW PHS report p. 158 - see web link above). Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. □ Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161 - see web link above). **Instream**: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page). Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. **Cliffs**: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation. Talus: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12

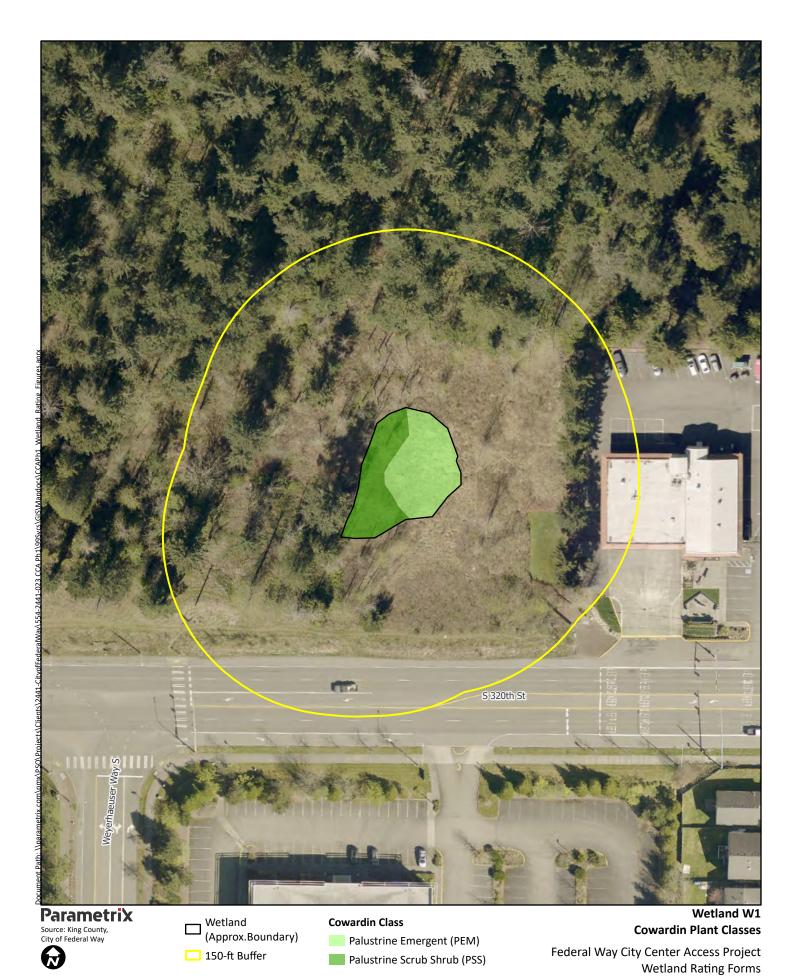
Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
Check off	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☐ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve,	
	Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve	
	designated under WAC 332-30-151?	
SC 1.2.	□ Yes = Category I □ No - Go to SC 1.2 Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
GC 1.2.	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
	☐ Yes = Category I ☐ No = Category II	
	Netlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list of	
	Wetlands of High Conservation Value? ☑ Yes - Go to SC 2.2 ☐ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
00 2.2.	☐ Yes = Category I ☐ No = Not WHCV	
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
	Value and listed it on their website?	
	□ Yes = Category I □ No = Not WHCV	1
SC 3.0. E		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in	
	bogs? Use the key below. If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
00 0.1.	that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	□ Yes - Go to SC 3.3	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground level,	
	AND at least a 30% cover of plant species listed in Table 4?	
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4	
	NOTE: If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
	the wetland is a bog.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,	
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce,	
	or western white pine, AND any of the species (or combination of species) listed in Table	
	4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria	
	for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer</i>	
	YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming	
	a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20	
	trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of	
	32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200	
	years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to	
	be measured near the bottom)	
	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon	
SC 5.1.	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing),	
	and has less than 20% cover of aggressive, opportunistic plant species (see list of	
	species on p. 100).	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
	☐ Yes = Category I ☐ No = Category II	
SC 6.0.	Interdunal Wetlands	
	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland	
	based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating	
SC 6.1.	· · · · · · · · · · · · · · · · · · ·	
	(rates H,H,H or H,H,M for the three aspects of function)?	
00.00	☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.2.	3 ,	
00.00	☐ Yes = Category II ☐ No - Go to SC 6.3	
SC 6.3.		
	ac?	
Catogo	☐ Yes = Category III ☐ No = Category IV	
_	ry of wetland based on Special Characteristics	
ni you a	nswered No for all types, enter "Not Applicable" on Summary Form	

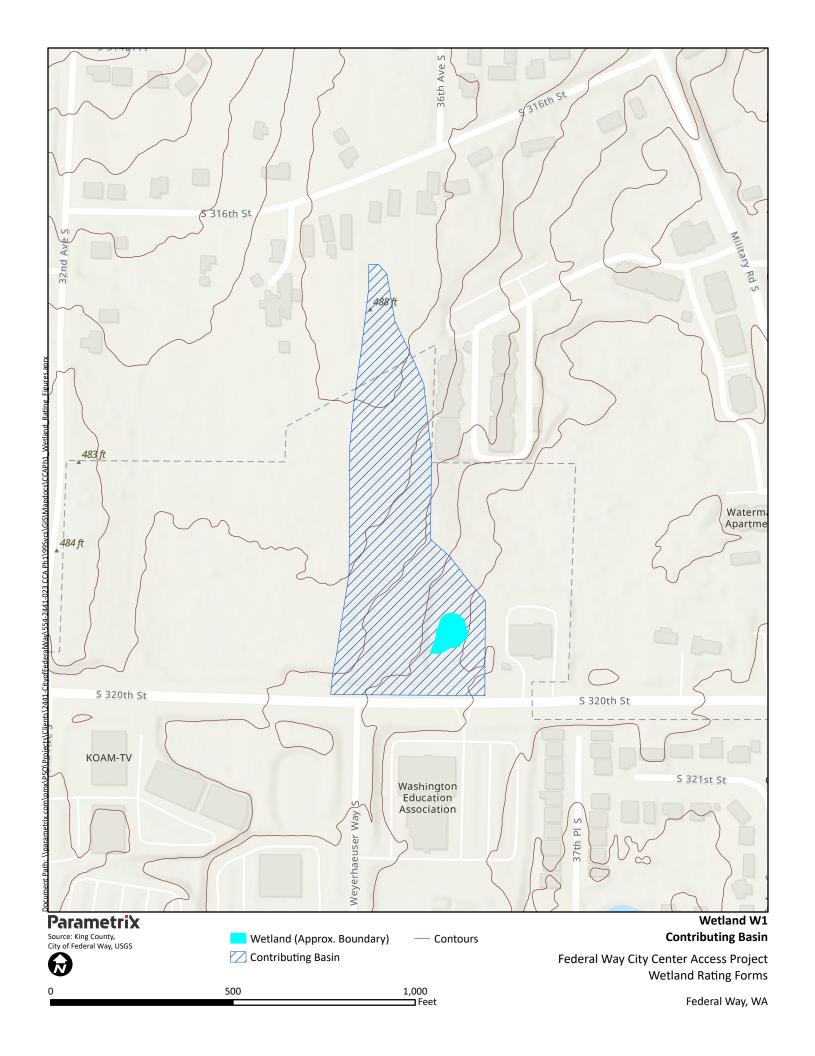


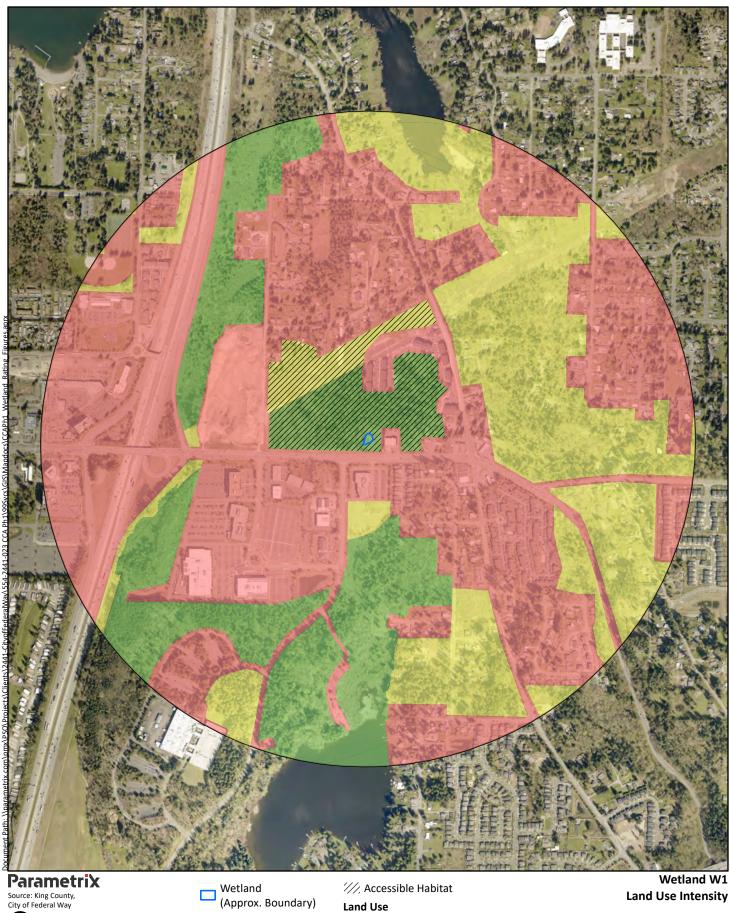
0 50 100 Feet



0 50 100 Feet

Federal Way, WA





1,000 Feet 500

☐ 1-km Polygon

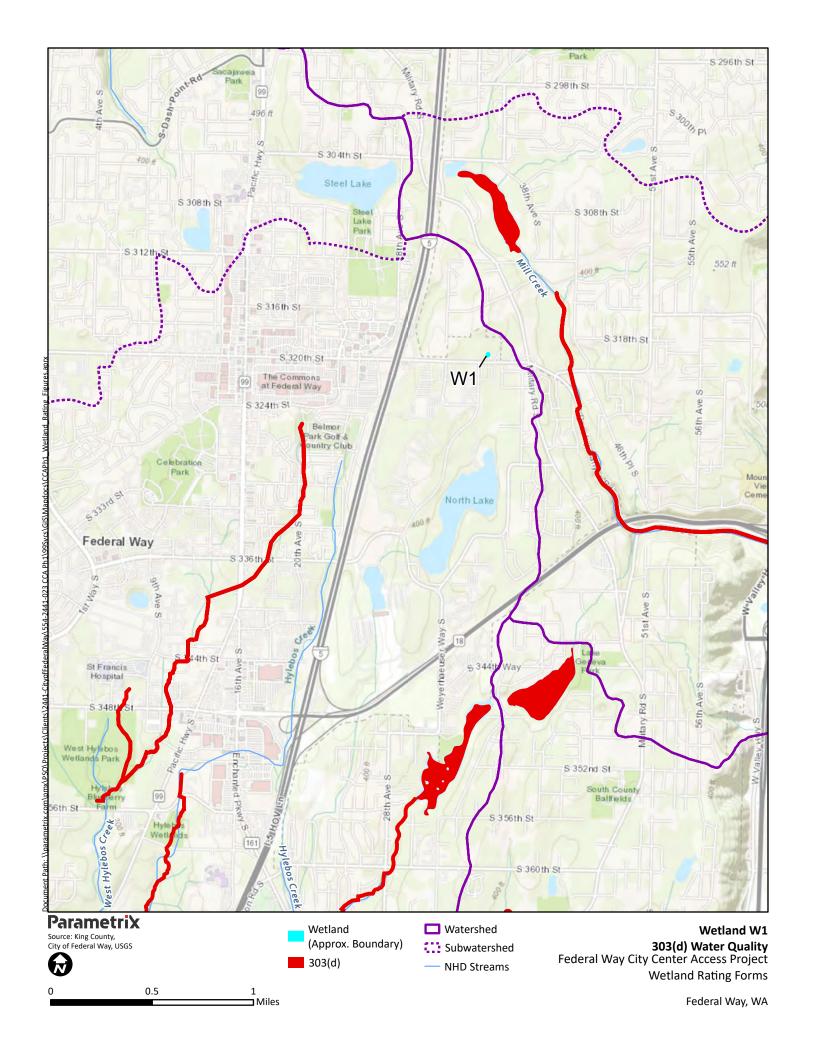
High

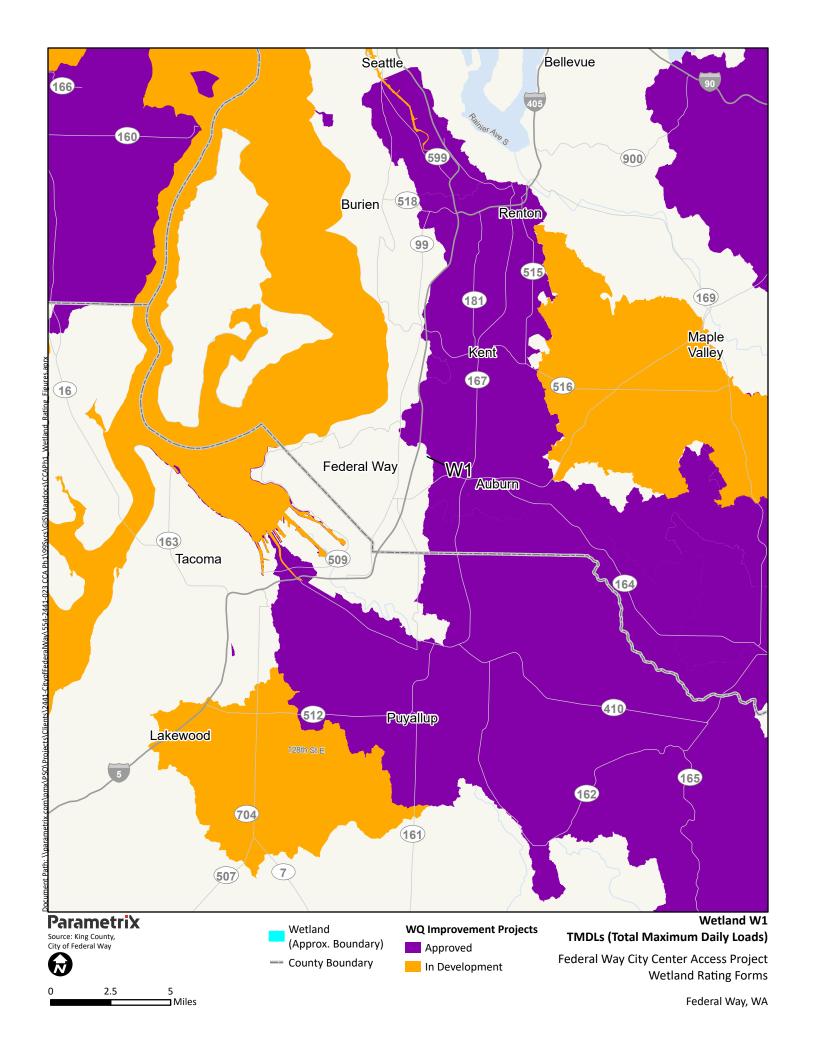
Low/moderate

Undisturbed

Federal Way City Center Access Project **Wetland Rating Forms**

Federal Way, WA





RATING SUMMARY – Western Washington

Name of wetland (or ID #):	W2			Date of site visit:	7/18/2020
Rated by P. Johnson, A. Th	om	Trained by Ecology?	☑ Yes ☐ No	Date of training	2014, 2018
HGM Class used for rating	Depressional & Flats	Wetla	and has multipl	e HGM classes? □	Yes ☑ No
	ot complete with out of base aerial photo/m		d (figures can	be combined).	
OVERALL WETLAND CA	TEGORY III	(based on function	s	characteristics \square)	
1. Category of wetland	l based on FUNCTIO	ONS			
	Category I - Total sc	ore = 23 - 27		Score for each	
	Category II - Total so	core = 20 - 22		function based	
X	Category III - Total s	score = 16 - 19		on three	
	Category IV - Total s	score = 9 - 15		ratings	
				order of ratings	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	ropriate rating	g (H, M, L)	
Site Potential	M	L	L	
Landscape Potential	Н	Н	L	
Value	M	Н	М	Total
Score Based on Ratings	7	7	4	18

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are th	ne water levels in the entire unit usua	ly controlled by tides except during floods?
V	NO - go to 2	☐ YES - the wetland class is Tidal Fringe - go to 1.1
1.1	Is the salinity of the water during pe	riods of annual low flow below 0.5 ppt (parts per thousand)?
		a Freshwater Tidal Fringe use the forms for Riverine wetlands. Estuarine wetland and is not scored. This method cannot be
	ntire wetland unit is flat and precipitat vater and surface water runoff are NC	on is the only source (>90%) of water to it. T sources of water to the unit.
V	NO - go to 3 If your wetland can be classified as	☐ YES - The wetland class is Flats a <i>Flats</i> wetland, use the form for Depressional wetlands.
		on the shores of a body of permanent open water (without any the year) at least 20 ac (8 ha) in size;
V	NO - go to 4	□ YES - The wetland class is Lake Fringe (Lacustrine Fringe)
		n be very gradual), in one direction (unidirectional) and usually comes from seeps. or, or in a swale without distinct banks.
Ø	NO - go to 5	☐ YES - The wetland class is Slope
		type of wetlands except occasionally in very small and shallow as are usually <3 ft diameter and less than 1 ft deep).
	the entire wetland unit meet all of the The unit is in a valley, or stream cha from that stream or river, The overbank flooding occurs at lea	nnel, where it gets inundated by overbank flooding
v	NO - go to 6	☐ YES - The wetland class is Riverine
NOTE: T	he Riverine unit can contain depress	ons that are filled with water when the river is not flooding.

Motlond	nama	or number	W2	
vvetland	name	or number	VVZ	

1 9	aphic depression in which water ponds, or is saturated to the surface, at so that any outlet, if present, is higher than the interior of the wetland.
□ NO - go to 7	☑ YES - The wetland class is Depressional
The unit does not pond surface water r	a very flat area with no obvious depression and no overbank flooding? more than a few inches. The unit seems to be maintained by high may be ditched, but has no obvious natural outlet.
□ NO - go to 8	☐ YES - The wetland class is Depressional

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

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

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

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

NOTES and FIELD OBSERVATIONS:

Wetland receives water from overland flow which infiltrates into soil. No outlet was observed.

DEPRESSIONAL AND FLATS WETLA	ANDS	
Water Quality Functions - Indicators that the site functions to in	mprove water quality	
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key)		
with no surface water leaving it (no outlet). Wetland has an intermittently flowing stream or ditch, OR highly	points = 3	
constricted permanently flowing outlet. Use Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 2	3
 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. 	points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions).	•	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-s		
Forested Cowardin classes):	,	
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > $\frac{1}{2}$ of area	points = 3	3
Wetland has persistent, ungrazed plants > 1/10 of area	points = 1	
Wetland has persistent, ungrazed plants < 1/10 of area	points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:		
This is the area that is ponded for at least 2 months. See description	n in manual.	
Area seasonally ponded is > 1/2 total area of wetland	points = 4	2
Area seasonally ponded is > 1/4 total area of wetland	points = 2	
Area seasonally ponded is < 1/4 total area of wetland	points = 0	
Total for D 1 Add the points	s in the boxes above	8
Rating of Site Potential If score is: ☐ 12 - 16 = H ☐ 6 - 11 = M ☐ 0 - 5 = L	Record the rating on	the first page
D 2.0. Does the landscape have the potential to support the water quality fund	tion of the site?	
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3?		1
Source <u>Human waste, trash</u>	Yes = 1 No = 0	
·	s in the boxes above	3
Rating of Landscape Potential If score is: ☑ 3 or 4 = H ☐ 1 or 2 = M ☐ 0 = L		the first page
D 3.0. Is the water quality improvement provided by the site valuable to societ	y?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on	the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)?	Voc. 2. No. 2	0
·	Yes = 2 No = 0	4
·	s in the boxes above Record the rating on	1
Rating of Value If score is: \square 2 - 4 = H \square 1 = M \square 0 = L		

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

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 ☑ Emergent 3 structures: points = 2 ☑ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☐ Forested (areas where trees have > 30% cover) 1 structure: points = 0If the unit has a Forested class, check if: ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 3 types present: points = 2 ☑ Seasonally flooded or inundated 1 □ Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 1 **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 1.5. Special habitat features:		
Check the habitat features that are present in the wetland. The number of check	s is the number	
of points.		
☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6	6 ft long)	
☐ Standing snags (dbh > 4 in) within the wetland		
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhangin		
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the v	vetland, for at	
least 33 ft (10 m)		1
☐ Stable steep banks of fine material that might be used by beaver or migh		
(> 30 degree slope) OR signs of recent beaver activity are present (cu	t shrubs or trees	
that have not yet weathered where wood is exposed)	nrecent in areas	
At least ¼ ac of thin-stemmed persistent plants or woody branches are that are permanently or seasonally inundated (structures for egg-laying		
☐ Invasive plants cover less than 25% of the wetland area in every stratu		
H 1.1 for list of strata)	iiii di piants (see	
·	the boxes above	5
Rating of Site Potential If Score is: ☐ 15 - 18 = H ☐ 7 - 14 = M ☑ 0 - 6 = L		-
Training of Otter Otterficial in Occoloris.	tecord the rating on	ine mai page
H 2.0. Does the landscape have the potential to support the habitat function of the	ne site?	
H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).		
Calculate:		
3 % undisturbed habitat + (2 % moderate & low intensity land u	ıses / 2) = 4%	
(, ,, ,, ,, ,, ,, ,,	, , , , , , ,	
If total accessible habitat is:		0
> ¹ / ₃ (33.3%) of 1 km Polygon	points = 3	-
20 - 33% of 1 km Polygon	points = 2	
10 - 19% of 1 km Polygon	points = 1	
< 10 % of 1 km Polygon	points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	points = c	
Calculate:		
20 % undisturbed habitat + (21 % moderate & low intensity land u	ıses / 2) = 30.5%	
\ <u></u>	,	4
Undisturbed habitat > 50% of Polygon	points = 3	1
Undisturbed habitat 10 - 50% and in 1-3 patches	points = 2	
Undisturbed habitat 10 - 50% and > 3 patches	points = 1	
Undisturbed habitat < 10% of 1 km Polygon	points = 0	
H 2.3 Land use intensity in 1 km Polygon: If		
> 50% of 1 km Polygon is high intensity land use	points = (-2)	-2
≤ 50% of 1km Polygon is high intensity	points = 0	
	the boxes above	-1
Rating of Landscape Potential If Score is: 4-6=H 1-3=M < < 1 = L	Record the rating on	the first page
U.O.O. In the habitat granidad houte aits unlockle to assist O		
H 3.0. Is the habitat provided by the site valuable to society?	1:-:0 0/	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or po	olicies? Choose	
only the highest score that applies to the wetland being rated. Site meets ANY of the following criteria:	points = 2	
☐ It has 3 or more priority habitats within 100 m (see next page	•	
☐ It provides habitat for Threatened or Endangered species (at		
or animal on the state or federal lists)	ly plant	
☐ It is mapped as a location for an individual WDFW priority sp	ecies	
☐ It is a Wetland of High Conservation Value as determined by		1
Department of Natural Resources		
☐ It has been categorized as an important habitat site in a loca	l or	
regional comprehensive plan, in a Shoreline Master Plan, or		
watershed plan		
Site has 1 or 2 priority habitats (listed on next page) with in 100m	points = 1	
Site does not meet any of the criteria above	points = 0	
Rating of Value If Score is: \square 2 = H \square 1 = M \square 0 = L	Record the rating on	the first page

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
V	Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158</i> – see web link above).
	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page</i>).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
V	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

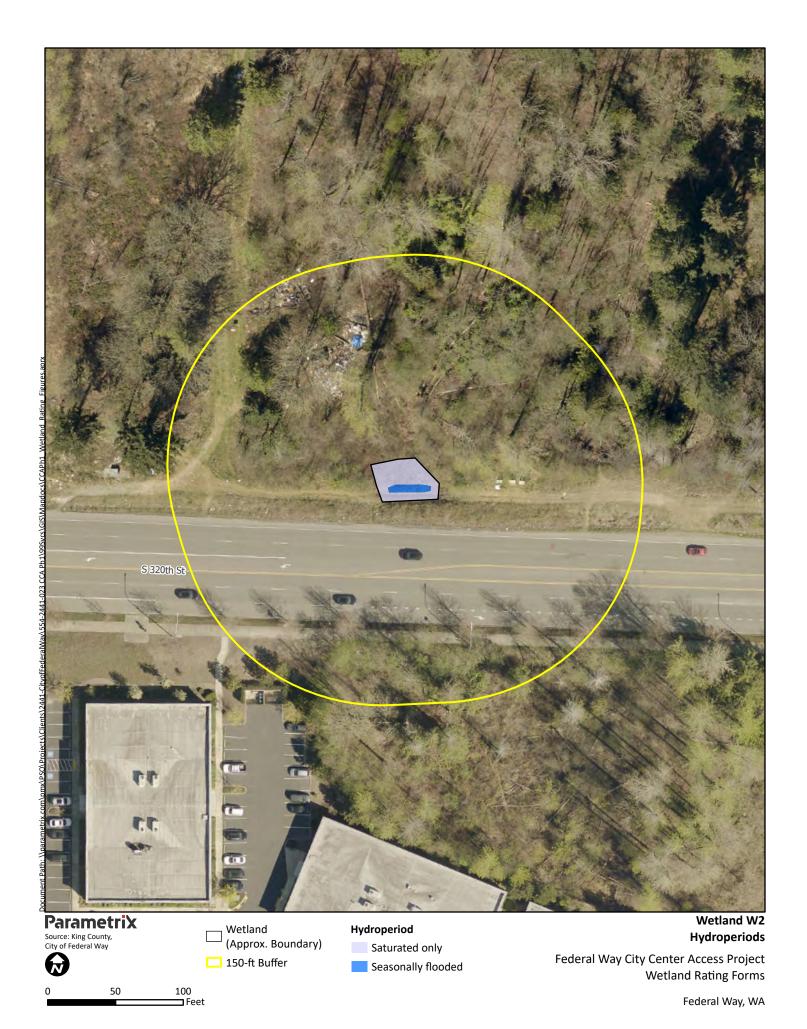
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

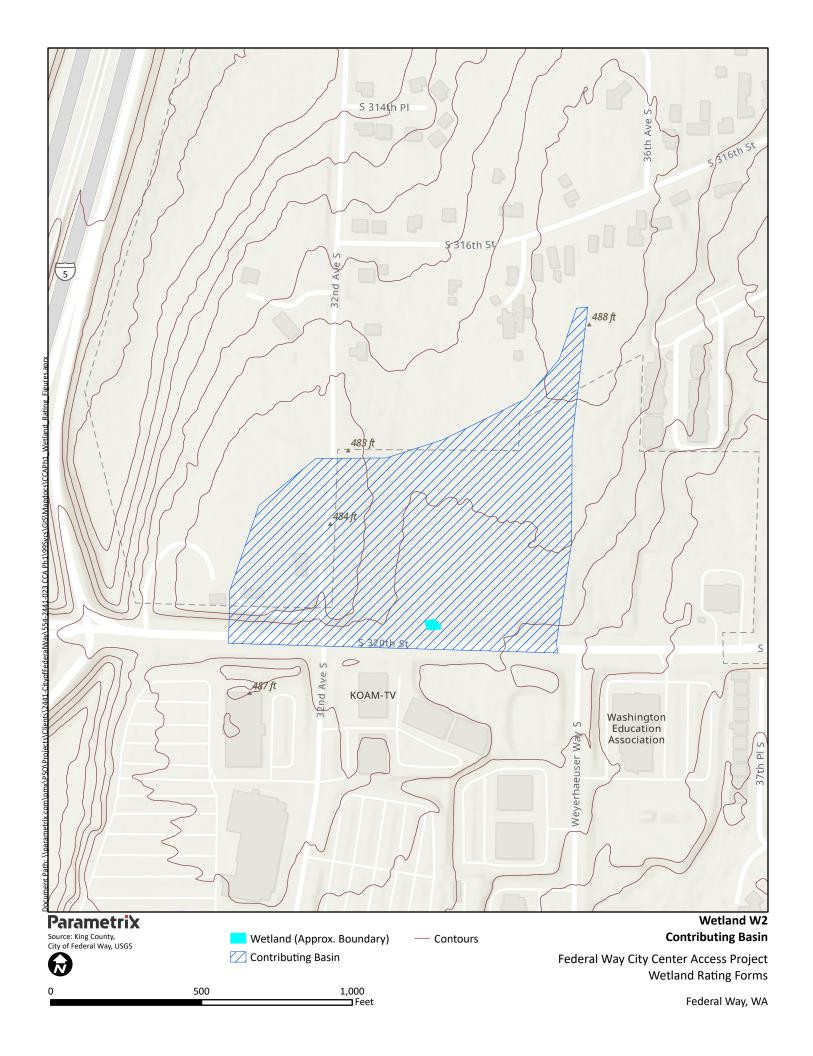
Wetland	Туре	Category
Check off	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
SC 1.0. E	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☐ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
	□ Yes = Category I □ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
	☐ Yes = Category I ☐ No = Category II	
	Vetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?	
	✓ Yes - Go to SC 2.2 □ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
30 2.2.	☐ Yes = Category I ☐ No = Not WHCV	
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
00 2.5.	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
00 2	Value and listed it on their website?	
	☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. E		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation	
	in bogs? Use the key below. If you answer YES you will still need to rate the	
	wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
	that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	□ Yes - Go to SC 3.3	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4?	
	□ Yes = Is a Category I bog □ No - Go to SC 3.4	
	NOTE : If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
00 0 4	the wetland is a bog.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,	
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann	
	spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

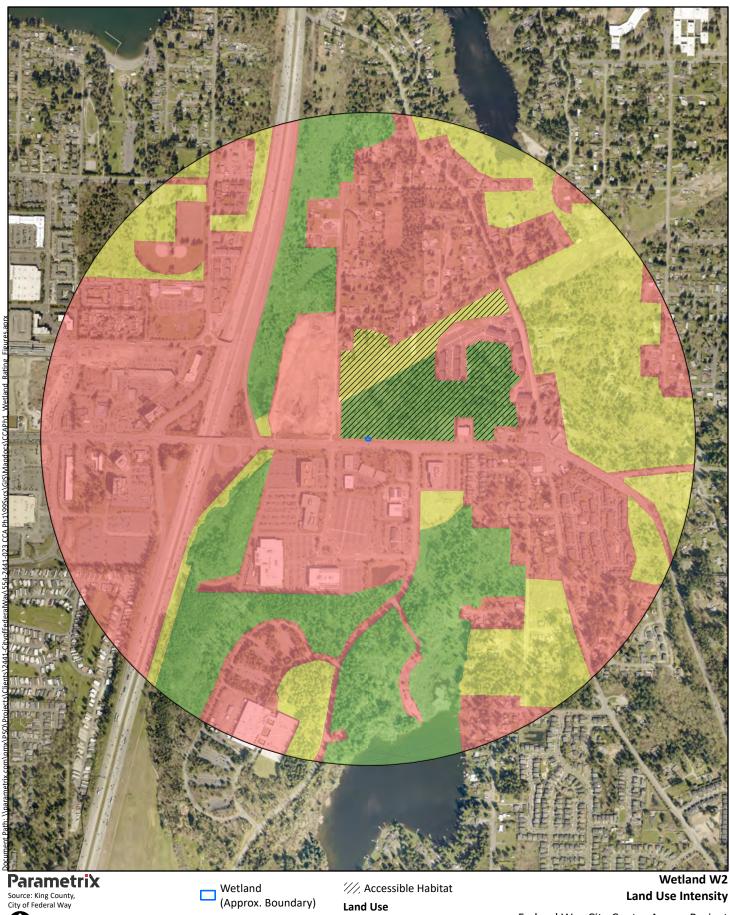
SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
	200 years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	•	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
_	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to	
	be measured near the bottom)	
00.54	☐ Yes - Go to SC 5.1 ☑ No = Not a wetland in a coastal lagoon	
	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,	
	grazing), and has less than 20% cover of aggressive, opportunistic plant species (see	
	list of species on p. 100). At least 3/ of the landword edge of the wotland has a 100 ft buffer of shrub, forest, or up.	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland.	
-	The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
SC 6.0	☐ Yes = Category I☐ No = Category II Interdunal Wetlands	
30 0.0.	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland	
	based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
-	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating	
SC 6.1.		
	(rates H,H,H or H,H,M for the three aspects of function)?	
	☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.2.	• • • • • • • • • • • • • • • • • • • •	
	☐ Yes = Category II ☐ No - Go to SC 6.3	
SC 6.3.		
	1 ac?	
	☐ Yes = Category III ☐ No = Category IV	
Catego	ry of wetland based on Special Characteristics	
If you a	nswered No for all types, enter "Not Applicable" on Summary Form	



0 50 100 Feet









1,000 Feet 500

Wetland (Approx. Boundary)

☐ 1-km Polygon

Land Use

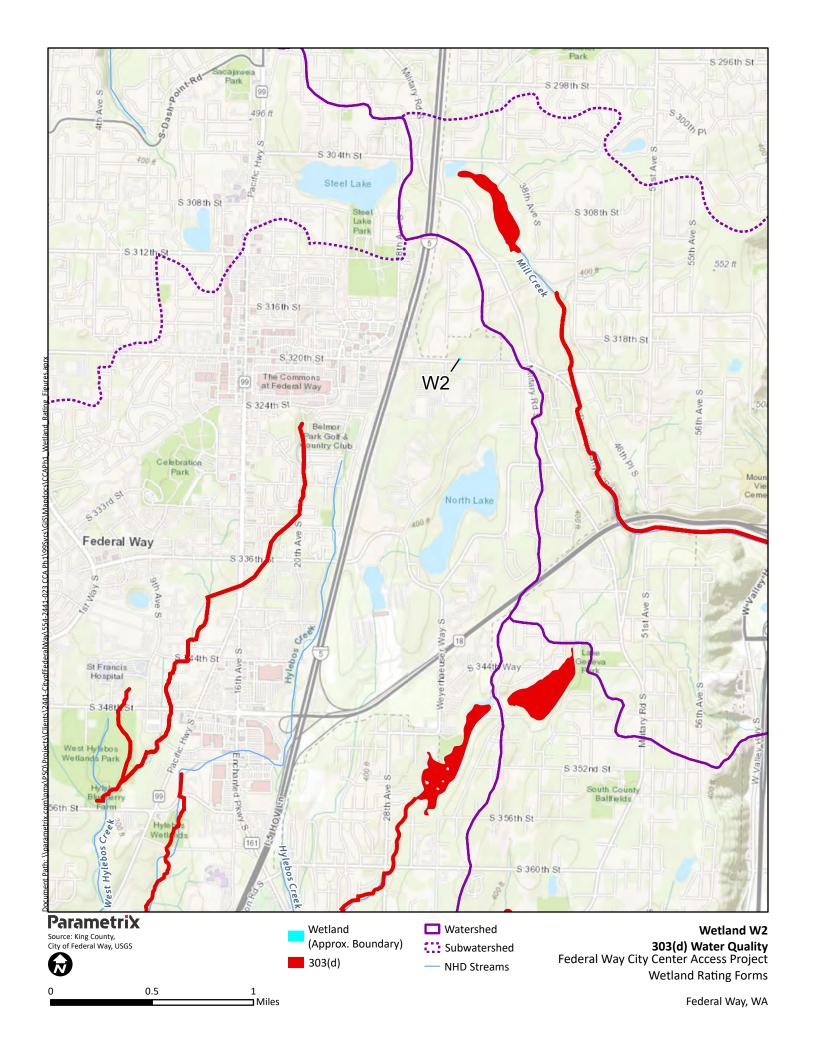
High

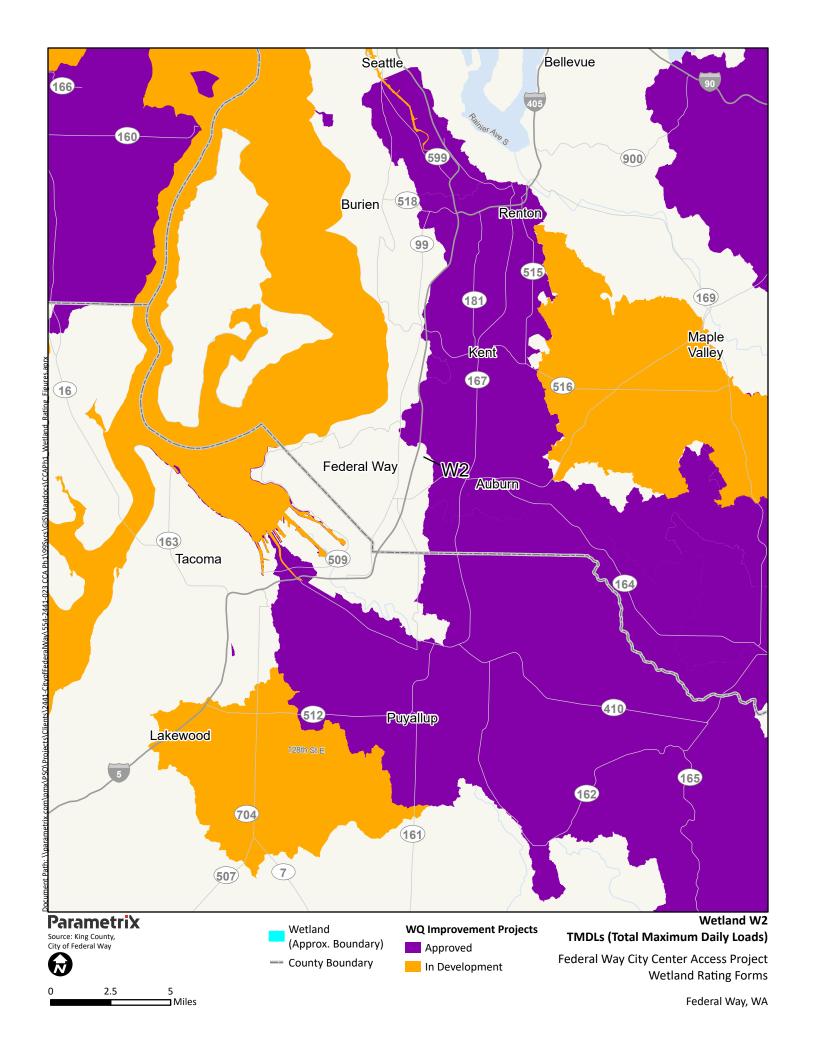
Low/moderate

Undisturbed

Federal Way City Center Access Project **Wetland Rating Forms**

Federal Way, WA





RATING SUMMARY – Western Washington

Name of wetland (or II	D #): <u>W3</u>					Date of site visit:	7/18/2020
Rated by Per Johnson	n	_ Tr	rained by Ed	cology?☑	Yes □ No	Date of training	Yr 2014
HGM Class used for	rating Depressio	nal & Flats		Wetland	d has multip	le HGM classes? □	Yes ☑ No
	rm is not complet Source of base ae			equested ((figures can	be combined).	
OVERALL WETLA	ND CATEGORY	III	(based on	functions	☑ or specia	I characteristics □)	
1. Category of w	etland based or	FUNCTION	ıs				
	Category	I - Total score	= 23 - 27			Score for each	
-		II - Total score				function based	
=		III - Total sco				on three	
-		IV - Total sco				ratings	
_						(order of ratings	
FUNCTION	Improving	Hydrologic	Habitat			is not	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	ropriate rating	g (H, M, L)	
Site Potential	M	L	L	
Landscape Potential	Н	Н	L	
Value	M	Н	L	Total
Score Based on Ratings	7	7	3	17

Score for each function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are th	the water levels in the entire unit usually controlled by tides except during floods?				
V	NO - go to 2	☐ YES - the wetland	class is Tidal Fringe -	go to 1.1	
1.1	Is the salinity of the water during per	riods of annual low flo	w below 0.5 ppt (parts p	er thousand)?	
	NO - Saltwater Tidal Fringe (Estua If your wetland can be classified as If it is Saltwater Tidal Fringe it is an used to score functions for estuaring	a Freshwater Tidal Fr Estuarine wetland al		Riverine wetlands.	
	ntire wetland unit is flat and precipitativater and surface water runoff are NO				
4	NO - go to 3 If your wetland can be classified as		YES - The wetland cland cland form for Depression		
	the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of At least 30% of the open water area	on the shores of a bo the year) at least 20 a	c (8 ha) in size;	water (without any	
V	NO - go to 4	☐ YES - The wetland	d class is Lake Fringe ((Lacustrine Fringe)	
	the entire wetland unit meet all of the The wetland is on a slope (<i>slope call</i>). The water flows through the wetland It may flow subsurface, as sheetflow The water leaves the wetland witho .	n be very gradual), in one direction (unid , or in a swale withou	distinct banks.	comes from seeps.	
V	NO - go to 5		YES - The wetland cla	ass is Slope	
	surface water does not pond in these sons or behind hummocks (depression				
	the entire wetland unit meet all of the The unit is in a valley, or stream cha from that stream or river, The overbank flooding occurs at lea	nnel, where it gets inc	•	oding	
V	NO - go to 6		YES - The wetland cla	ass is Riverine	
NOTE: T	he Riverine unit can contain depressi	ons that are filled with	water when the river is	not flooding.	

Motland	nama	or number	W3	
vvetiana	name	or number	VV.3	

1 9 1	nic depression in which water ponds, or is saturated to the surface, at that any outlet, if present, is higher than the interior of the wetland.
□ NO - go to 7	☑ YES - The wetland class is Depressional
The unit does not pond surface water more	ery flat area with no obvious depression and no overbank flooding? re than a few inches. The unit seems to be maintained by high y be ditched, but has no obvious natural outlet.
□ NO go to 8	☐ VES. The wetland class is Depressional

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

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

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

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

NOTES and FIELD OBSERVATIONS:

Wetland receives water from overland flow which infiltrates into so. No outlet was observed.

DEPRESSIONAL AND FLATS WETLA	<u>ANDS</u>	
Water Quality Functions - Indicators that the site functions to in	prove water quality	
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key)		
with no surface water leaving it (no outlet). Wetland has an intermittently flowing stream or ditch, OR highly	points = 3	
constricted permanently flowing outlet. Wetland has an unconstricted, or slightly constricted, surface outlet	points = 2	3
that is permanently flowing	points = 1	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.	points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions).	Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-sl	rub, and/or	
Forested Cowardin classes):		
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	5
Wetland has persistent, ungrazed, plants > ½ of area	points = 3	
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area	points = 1	
Wetland has persistent, ungrazed plants < 1/10 of area	points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:		
This is the area that is ponded for at least 2 months. See description		
Area seasonally ponded is > ½ total area of wetland	points = 4	0
Area seasonally ponded is $> \frac{1}{4}$ total area of wetland	points = 2	
Area seasonally ponded is $< \frac{1}{4}$ total area of wetland	points = 0	
Total for D 1 Add the points	in the boxes above	8
Rating of Site Potential If score is: ☐ 12 - 16 = H ☐ 6 - 11 = M ☐ 0 - 5 = L	Record the rating or	the first page
D 2.0. Does the landscape have the potential to support the water quality func	tion of the site?	
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3?		1
·		
Source <u>Fiuman waste, roauside debris</u>	Yes = 1 No = 0	
Source <u>Human waste, roadside debris</u> Total for D 2 Add the points		
	in the boxes above	3
Total for D 2 Add the points	in the boxes above Record the rating or	3
Total for D 2 Add the points Rating of Landscape Potential If score is: ☑ 3 or 4 = H □ 1 or 2 = M □ 0 = L	in the boxes above Record the rating or	3
Total for D 2 Rating of Landscape Potential If score is: ☑ 3 or 4 = H □ 1 or 2 = M □ 0 = L D 3.0. Is the water quality improvement provided by the site valuable to society D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,	in the boxes above Record the rating or /? Yes = 1 No = 0	3 the first page
Total for D 2 Rating of Landscape Potential If score is: ☑ 3 or 4 = H □ 1 or 2 = M □ 0 = L D 3.0. Is the water quality improvement provided by the site valuable to society D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on t	in the boxes above Record the rating on /? Yes = 1 No = 0 the 303(d) list?	3 the first page
Total for D 2 Rating of Landscape Potential If score is: ☑ 3 or 4 = H □ 1 or 2 = M □ 0 = L D 3.0. Is the water quality improvement provided by the site valuable to society D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on t D 3.3. Has the site been identified in a watershed or local plan as important	in the boxes above Record the rating on /? Yes = 1 No = 0 the 303(d) list?	3 the first page
Total for D 2 Rating of Landscape Potential If score is: ☑ 3 or 4 = H □ 1 or 2 = M □ 0 = L D 3.0. Is the water quality improvement provided by the site valuable to society D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on t	in the boxes above Record the rating on /? Yes = 1 No = 0 the 303(d) list?	3 the first page 0
Total for D 2 Rating of Landscape Potential If score is: ☑ 3 or 4 = H □ 1 or 2 = M □ 0 = L D 3.0. Is the water quality improvement provided by the site valuable to society D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on t D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)?	in the boxes above Record the rating on /? Yes = 1 No = 0 he 303(d) list? Yes = 1 No = 0	3 the first page 0

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

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 n ☑ Emergent 3 structures: points = 2 ☐ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☐ Forested (areas where trees have > 30% cover) 1 structure: points = 0If the unit has a Forested class, check if: ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 3 types present: points = 2 ☐ Seasonally flooded or inundated 0 ☑ Occasionally flooded or inundated 2 types present: points = 1 □ Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 0 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 0 **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 1.5. Special habitat features:				
Check the habitat features that are present in the wetland. The number of checks is the number				
of points.				
☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)				
☐ Standing snags (dbh > 4 in) within the wetland				
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends	3			
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at	_			
least 33 ft (10 m)	0			
☐ Stable steep banks of fine material that might be used by beaver or muskrat for dennir				
(> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees</i>	3			
that have not yet weathered where wood is exposed) At least ¼ ac of thin-stemmed persistent plants or woody branches are present in area				
that are permanently or seasonally inundated (structures for egg-laying by amphibians				
☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see				
H 1.1 for list of strata)				
Total for H 1 Add the points in the boxes above	/e 0			
Rating of Site Potential If Score is: ☐ 15 - 18 = H ☐ 7 - 14 = M ☑ 0 - 6 = L Record the rating				
Training of other occitation in cooled to.	on the met page			
H 2.0. Does the landscape have the potential to support the habitat function of the site?				
H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).				
Calculate:				
5 % undisturbed habitat + (0 % moderate & low intensity land uses / 2) = 5%				
(<u> </u>				
If total accessible habitat is:	0			
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points =	3			
20 - 33% of 1 km Polygon points =				
10 - 19% of 1 km Polygon points =				
< 10 % of 1 km Polygon points =				
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.				
Calculate:				
20 % undisturbed habitat + (17 % moderate & low intensity land uses / 2) = 28.5%				
	1			
Undisturbed habitat > 50% of Polygon points =	3			
Undisturbed habitat 10 - 50% and in 1-3 patches points =				
Undisturbed habitat 10 - 50% and > 3 patches points = 1				
Undisturbed habitat < 10% of 1 km Polygon points =	0			
H 2.3 Land use intensity in 1 km Polygon: If	-			
> 50% of 1 km Polygon is high intensity land use points = (-				
≤ 50% of 1km Polygon is high intensity points =				
Total for H 2 Add the points in the boxes about the points about the points are points are points about the points are points about the points are points are points about the points are points are points about the points are points about the points are points are points about the points are points about the points are points are points about the points are points about the points ar				
Rating of Landscape Potential If Score is: ☐ 4-6 = H ☐ 1-3 = M ☑ <1 = L Record the rating	on the first page			
H 3.0. Is the habitat provided by the site valuable to society?				
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose</i>				
only the highest score that applies to the wetland being rated.				
Site meets ANY of the following criteria: points =	2			
☐ It has 3 or more priority habitats within 100 m (see next page)				
☐ It provides habitat for Threatened or Endangered species (any plant				
or animal on the state or federal lists)				
☐ It is mapped as a location for an individual WDFW priority species	0			
It is a Wetland of High Conservation Value as determined by the	U			
Department of Natural Resources				
☐ It has been categorized as an important habitat site in a local or				
regional comprehensive plan, in a Shoreline Master Plan, or in a				
watershed plan				
Site has 1 or 2 priority habitats (listed on next page) with in 100m points =				
Site does not meet any of the criteria above points =				
Rating of Value If Score is: \square 2 = H \square 1 = M \square 0 = L Record the rating	on the illst page			

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

Ц	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	Old-growth/Mature forests: Old-growth west of Cascade crest — Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests — Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158</i> – see web link above).
	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page</i>).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	l Type	Category
Check off	f any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	· · · · · · · · · · · · · · · · · · ·	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25)	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	
	☐ Yes = Category I ☐ No = Category II	
	Wetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list	
	of Wetlands of High Conservation Value?	
CC 2.2	✓ Yes - Go to SC 2.2 □ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? \[\subseteq \text{Yes} = \text{Category I} \text{Vo} \text{No} = \text{Not WHCV} \]	
SC 2.3.	☐ Yes = Category I ☐ No = Not WHCV Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
00 2.0.	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
	Value and listed it on their website? ☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. I		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below. If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
00 0.1.	that compose 16 in or more of the first 32 in of the soil profile?	
CC 2.2	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?	
	☐ Yes - Go to SC 3.3 ☐ No = Is not a bog	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?	
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4	
	NOTE : If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
000	the wetland is a bog.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species)	
	listed in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
	200 years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
_	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to	
	be measured near the bottom)	
00.54	☐ Yes - Go to SC 5.1 ☑ No = Not a wetland in a coastal lagoon	
	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,	
	grazing), and has less than 20% cover of aggressive, opportunistic plant species (see	
	list of species on p. 100). At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
-	The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
SC 6.0	☐ Yes = Category I☐ No = Category II Interdunal Wetlands	
SC 0.0.	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland</i>	
	based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
-	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating	
SC 6.1.		
	(rates H,H,H or H,H,M for the three aspects of function)?	
	☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.2.		
	☐ Yes = Category II ☐ No - Go to SC 6.3	
SC 6.3.		
	1 ac?	
	☐ Yes = Category III ☐ No = Category IV	
Catego	ry of wetland based on Special Characteristics	
If you a	nswered No for all types, enter "Not Applicable" on Summary Form	



Parametrix
Source: King County,
City of Federal Way

Wetland (Approx.Boundary) 150-ft Buffer

Palustrine Emergent (PEM)

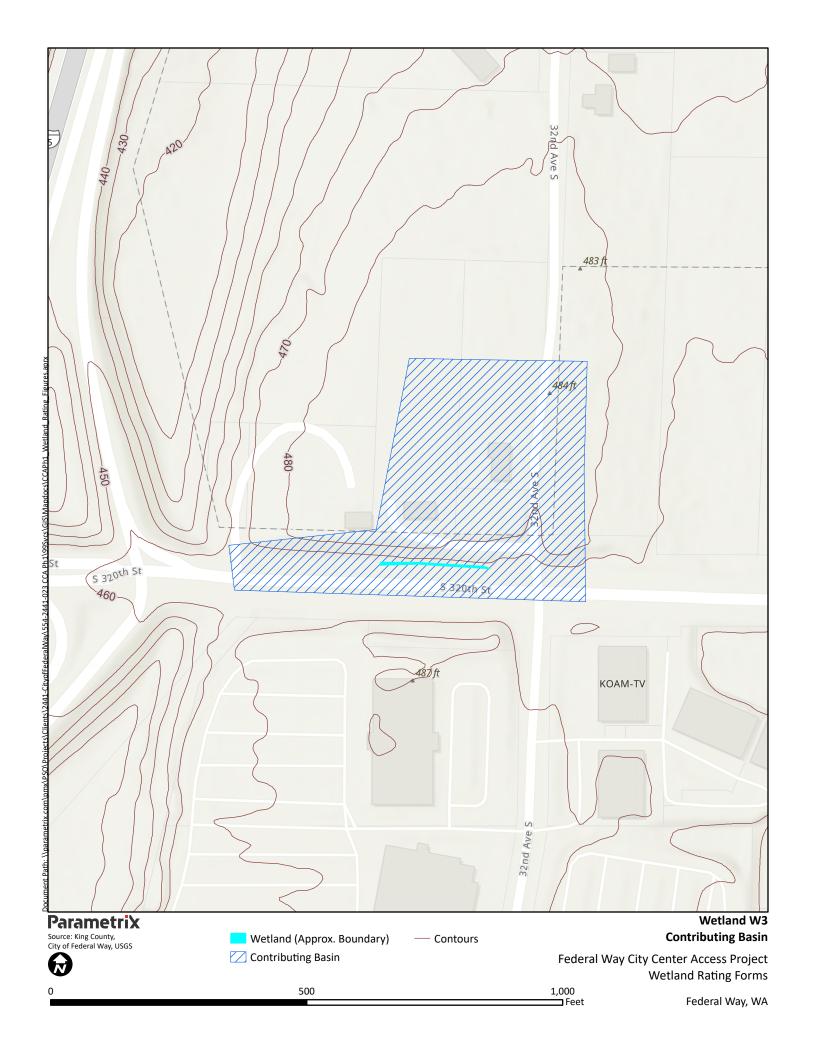
Cowardin Plant Classes

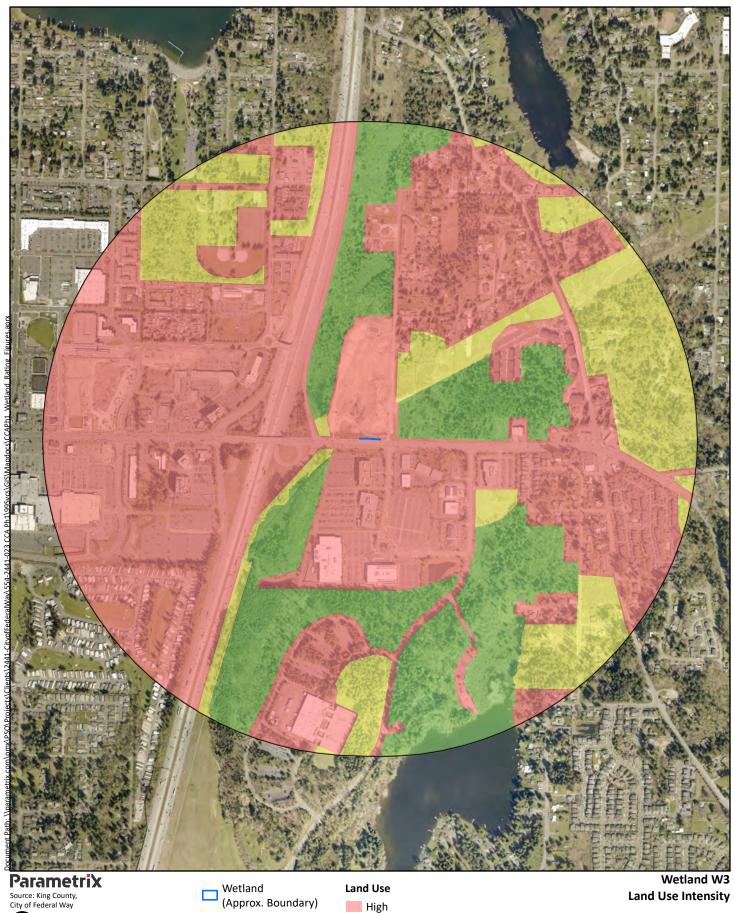
Federal Way City Center Access Project **Wetland Rating Forms**



Federal Way, WA

0 50 100 Feet







1,000 Feet 500

Wetland (Approx. Boundary)

☐ 1-km Polygon

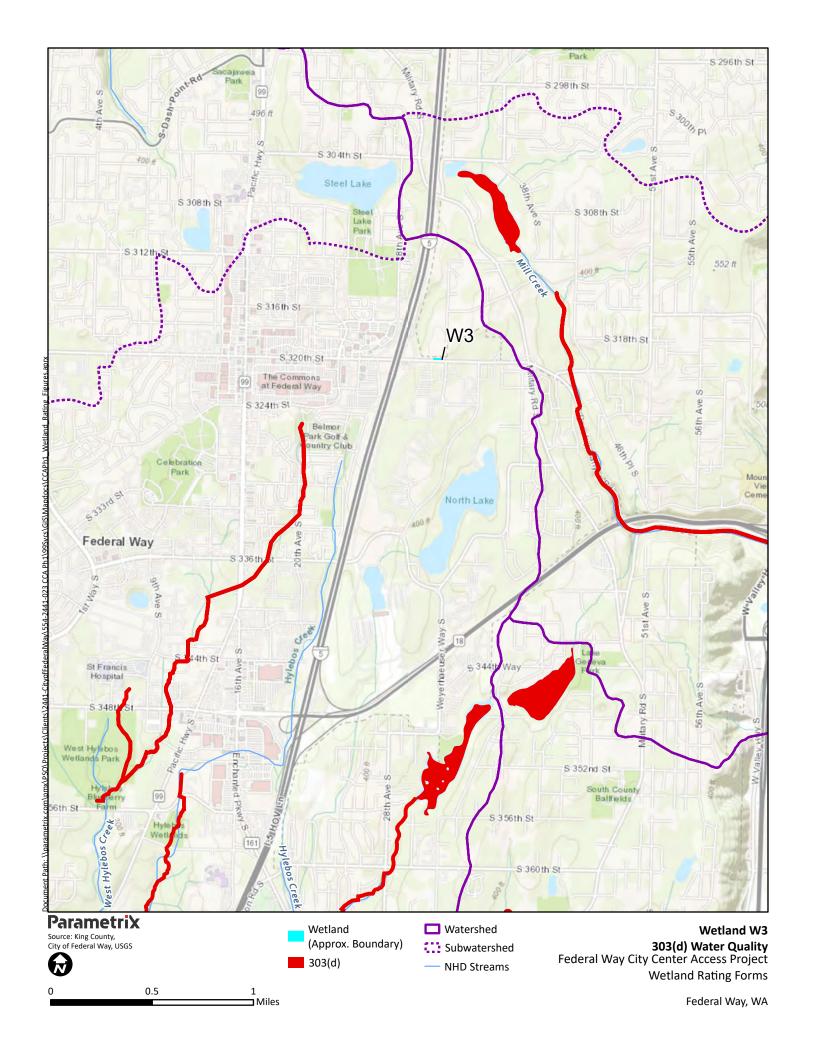
High

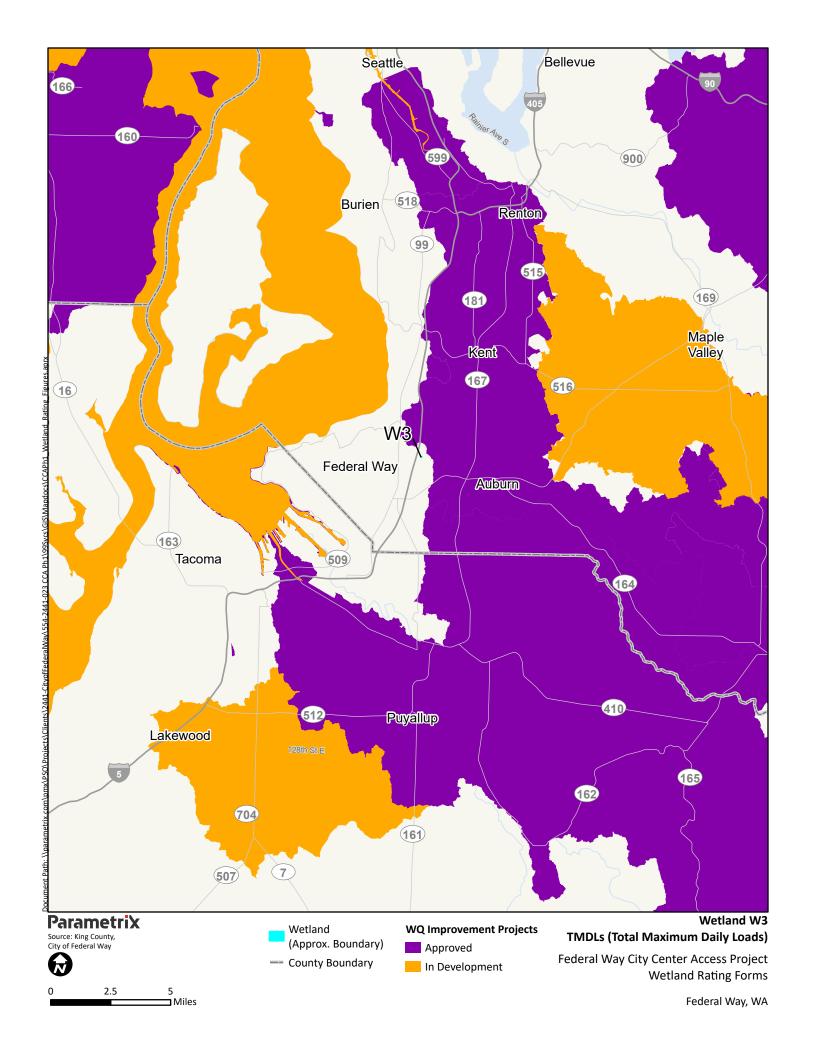
Low/moderate Undisturbed

Land Use Intensity

Federal Way City Center Access Project Wetland Rating Forms

Federal Way, WA





RATING SUMMARY – Western Washington

Name of wetland (or	ID #): W5					Date of site visit:	8/13/2020
Rated by Per Johns	on	Tr	ained by E	cology?⊡	Yes □ No	Date of training	Yr 2014
HGM Class used for	rating Depression	nal & Flats		Wetland	d has multip	ole HGM classes? ☑	Yes □ No
	rm is not complete Source of base aer		•	equested ((figures car	n be combined).	
OVERALL WETLAND CATEGORY							
1. Category of w	etland based on				i		
		I - Total score				Score for each	
		II - Total scor				function based	
		III - Total sco		9		on three	
	Category	IV - Total sco	re = 9 - 15			ratings	
						(order of ratings	
FUNCTION	Improving	Hydrologic	Habitat			is not	
	Water Quality					important)	
		ropriate rating	g (H, M, L)				
Site Potential	Н	M	Н			9 = H, H, H	
Landscape Potential	Н	Н	L		_	8 = H, H, M	
Value	M	Н	М	Total		7 = H, H, L	
Score Based on Ratings	8	8	6	22		7 = H, M, M 6 = H, M, L	

1

6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	I
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are th	ne water levels in the entire unit usual	ly controlled by tides e	xcept during floods?
~	NO - go to 2	□ YES - the wetland	class is Tidal Fringe - go to 1.1
1.1	Is the salinity of the water during pe	riods of annual low flow	v below 0.5 ppt (parts per thousand)?
		a Freshwater Tidal Fri Estuarine wetland ar	YES - Freshwater Tidal Fringe nge use the forms for <i>Riverine</i> wetlands. In the standard of th
	ntire wetland unit is flat and precipitat rater and surface water runoff are NC		
4	NO - go to 3 If your wetland can be classified as		YES - The wetland class is Flats are form for Depressional wetlands.
	the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of At least 30% of the open water area	on the shores of a bo the year) at least 20 a	
~	NO - go to 4	□ YES - The wetland	I class is Lake Fringe (Lacustrine Fringe)
	the entire wetland unit meet all of the The wetland is on a slope (<i>slope call</i>). The water flows through the wetland It may flow subsurface, as sheetflow The water leaves the wetland witho .	n be very gradual), I in one direction (unid v, or in a swale without	
~	NO - go to 5		YES - The wetland class is Slope
	surface water does not pond in these ons or behind hummocks (depression		ot occasionally in very small and shallow meter and less than 1 ft deep).
	the entire wetland unit meet all of the The unit is in a valley, or stream cha from that stream or river, The overbank flooding occurs at lea	innel, where it gets inu	ndated by overbank flooding
V	NO - go to 6		YES - The wetland class is Riverine
NOTE: T	he Riverine unit can contain depress	ions that are filled with	water when the river is not flooding.

Motlond	nama	or number	W5	
vvetland	name	or number	WYS	

□ NO - go to 8

	phic depression in which water ponds, or is saturated to the surface, at that any outlet, if present, is higher than the interior of the wetland.
□ NO - go to 7	☑ YES - The wetland class is Depressional
The unit does not pond surface water m	very flat area with no obvious depression and no overbank flooding? ore than a few inches. The unit seems to be maintained by high ay be ditched, but has no obvious natural outlet.

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

 $\hfill \square$ YES - The wetland class is Depressional

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

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

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

NOTES and FIELD OBSERVATIONS:

There are portions of the unit that meet the riverine crieria, slope criteria, and depressional criteria, therefore the HGM class used for this rating is depressional. A portion of the wetland is a peat bog; therefore this wetland was assigned dual rating for functions and special characteristics (bog).

DEPRESSIONAL AND FLATS WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water q	uality
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland:	
·	ts = 3
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. Description: Wetland has an unconstricted, or slightly constricted, surface outlet	ts = 2 2
that is permanently flowing point	s = 1
 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. 	s = 1
D 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic (use NRCS definitions). Yes = 4 N	4 lo = 0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or	
Forested Cowardin classes):	
	ts = 5
	ts = 3
1 10	ts = 1
	ts = 0
D 1.4. Characteristics of seasonal ponding or inundation:	
This is the area that is ponded for at least 2 months. See description in manual.	
Area seasonally ponded is > ½ total area of wetland poin	ts = 4 2
Area seasonally ponded is > 1/4 total area of wetland poin	ts = 2
Area seasonally ponded is < 1/4 total area of wetland poin	ts = 0
Total for D 1 Add the points in the boxes a	above 13
Rating of Site Potential If score is: 12 - 16 = H	ting on the first page
D 2.0. Does the landscape have the potential to support the water quality function of the site	?
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1	lo = 0 1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = $1 N$	lo = 0
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1	lo = 0 0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3?	1
Source Olympic pipeline maintenance, I-5 Yes = 1 N	lo = 0
Total for D 2 Add the points in the boxes a	
Rating of Landscape Potential If score is: 3 or 4 = H 1 or 2 = M 0 = L Record the ra	
D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the $303(d)$ list? Yes = 1	1o = 0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 N	4
	lo = 0
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)? Yes = 2	10 = 0 0
for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)? Yes = 2	0 No = 0
for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)? Yes = $2 N = 100$. Add the points in the boxes a	0 No = 0

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

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 ☑ Emergent 3 structures: points = 2 ☑ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☑ Forested (areas where trees have > 30% cover) 1 structure: points = 0If the unit has a Forested class, check if: ☑ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). □ Permanently flooded or inundated 4 or more types present: points = 3 ☑ Seasonally flooded or inundated 3 types present: points = 2 2 ☑ Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 2 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 3 **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 1.5. Special habitat features:	les is the mount on	
Check the habitat features that are present in the wetland. The number of check	ks is the number	
of points.	0 (1)	
☐ Large, downed, woody debris within the wetland (> 4 in diameter and	6 ft long)	
☑ Standing snags (dbh > 4 in) within the wetland		
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging		
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the	wetland, for at	_
least 33 ft (10 m)		5
☐ Stable steep banks of fine material that might be used by beaver or m		
(> 30 degree slope) OR signs of recent beaver activity are present (cu	it snrubs or trees	
that have not yet weathered where wood is exposed)		
☑ At least ¼ ac of thin-stemmed persistent plants or woody branches ar		
that are permanently or seasonally inundated (<i>structures for egg-layin</i>		
☐ Invasive plants cover less than 25% of the wetland area in every strat	um of plants (see	
H 1.1 for list of strata)	a tha havea ahava	40
	n the boxes above	16
Rating of Site Potential If Score is:	Record the rating on	tne tirst page
H 2.0. Does the landscape have the potential to support the habitat function of t	the site?	
H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).		
Calculate:		
6 % undisturbed habitat + (2 % moderate & low intensity land	uses / 2) = 7%	
	doco / 2) = 1 /0	
If total accessible habitat is:		0
	nointo 2	O
> ¹ / ₃ (33.3%) of 1 km Polygon	points = 3	
20 - 33% of 1 km Polygon	points = 2	
10 - 19% of 1 km Polygon	points = 1	
< 10 % of 1 km Polygon	points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.		
Calculate:		
21 % undisturbed habitat + (13 % moderate & low intensity land	uses $/2) = 27.5\%$	
11 11 4 1 11 11 4 500/ 4 D 1		1
Undisturbed habitat > 50% of Polygon	points = 3	
Undisturbed habitat 10 - 50% and in 1-3 patches	points = 2	
Undisturbed habitat 10 - 50% and > 3 patches	points = 1	
Undisturbed habitat < 10% of 1 km Polygon	points = 0	
H 2.3 Land use intensity in 1 km Polygon: If		
> 50% of 1 km Polygon is high intensity land use	points = (-2)	-2
≤ 50% of 1km Polygon is high intensity	points = 0	
	n the boxes above	-1
Rating of Landscape Potential If Score is: 4 - 6 = H 1 - 3 = M 2 < 1 = L	Record the rating on	the first page
H 3.0. Is the habitat provided by the site valuable to society?		
H 3.1. Does the site provide habitat for species valued in laws, regulations, or p	olicies? Choose	
only the highest score that applies to the wetland being rated.	01101001	
Site meets ANY of the following criteria:	points = 2	
☐ It has 3 or more priority habitats within 100 m (see next page	•	
☐ It provides habitat for Threatened or Endangered species (a	·	
or animal on the state or federal lists)	, μ	
☐ It is mapped as a location for an individual WDFW priority s	pecies	
☐ It is a Wetland of High Conservation Value as determined by	•	1
Department of Natural Resources	, · · -	
☐ It has been categorized as an important habitat site in a loca	al or	
regional comprehensive plan, in a Shoreline Master Plan, or		
watershed plan	🕶	
Site has 1 or 2 priority habitats (listed on next page) with in 100m	points = 1	
Site does not meet any of the criteria above	points = 0	
	Record the rating on	the first nage
		J. pugo

Wetland Rating System for Western WA: 2014 Update Rating Form - Effective January 1, 2015

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

_	Aspert status. If the of finished status of aspert greater than I at (0.4 ha).
	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
IJ	Old-growth/Mature forests: Old-growth west of Cascade crest — Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha > 32 in (81 cm) dbh or > 200 years of age. Mature forests — Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158</i> – see web link above).
	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page</i>).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
V	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
Check off	f any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☐ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
□ □	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
	☐ Yes = Category I ☐ No = Category II	
	Wetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?	
	✓ Yes - Go to SC 2.2 □ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
00 2.2.	☐ Yes = Category I ☐ No = Not WHCV	
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
	Value and listed it on their website?	
	☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. I	-	
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation	
	in bogs? Use the key below. If you answer YES you will still need to rate the	
00.04	wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
00 0.2.	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	☐ Yes - Go to SC 3.3 ☐ No = Is not a bog	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4?	
	□ Yes = Is a Category I bog □ No - Go to SC 3.4	
	NOTE : If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
SC 2 4	the wetland is a bog.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,	
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann	
	spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
	200 years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>	
	be measured near the bottom)	
20 5 4	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon	
	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,	
	grazing), and has less than 20% cover of aggressive, opportunistic plant species (see	
	list of species on p. 100).	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
20.60	☐ Yes = Category I ☐ No = Category II	
SC 6.0.	Interdunal Wetlands Is the wetland west of the 1990 line (also called the Western Roundary of Unland	
	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
_	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating	
SC 6.1.		
00 0	(rates H,H,H or H,H,M for the three aspects of function)?	
	☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.2.	• • • • • • • • • • • • • • • • • • • •	
00 0.2.	☐ Yes = Category II ☐ No - Go to SC 6.3	
SC 6.3.		
00 0.0.	1 ac?	
	☐ Yes = Category III ☐ No = Category IV	
Catego	ory of wetland based on Special Characteristics	
_	nswered No for all types, enter "Not Applicable" on Summary Form	



Source: King County, City of Federal Way



Wetland (Approx.Boundary)

150-ft Buffer

Cowardin Class

Palustrine Emergent (PEM) Palustrine Scrub Shrub (PSS)

Palustrine Forested (PFO)

Cowardin Plant Classes

Federal Way City Center Access Project **Wetland Rating Forms**



Source: King County, City of Federal Way



⊐ Feet

Wetland (Approx. Boundary)

Delineated OHWM

150-ft Buffer

Stream (Piped)

Hydroperiod

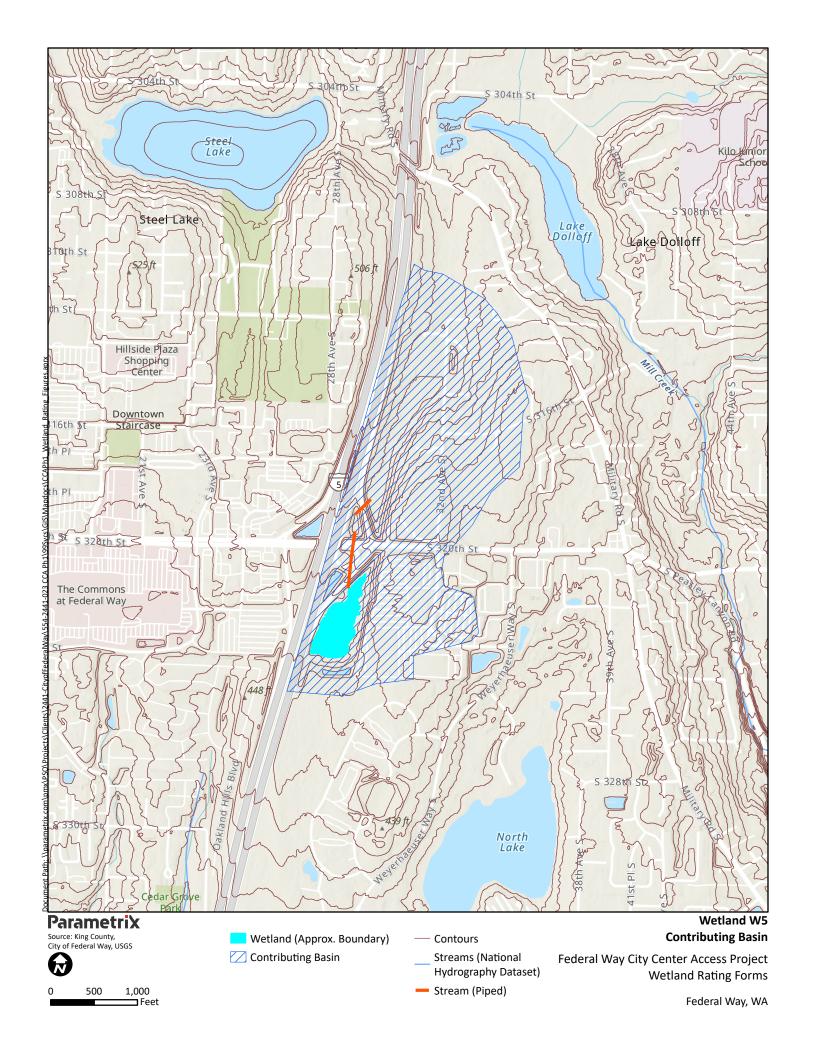
Saturated only

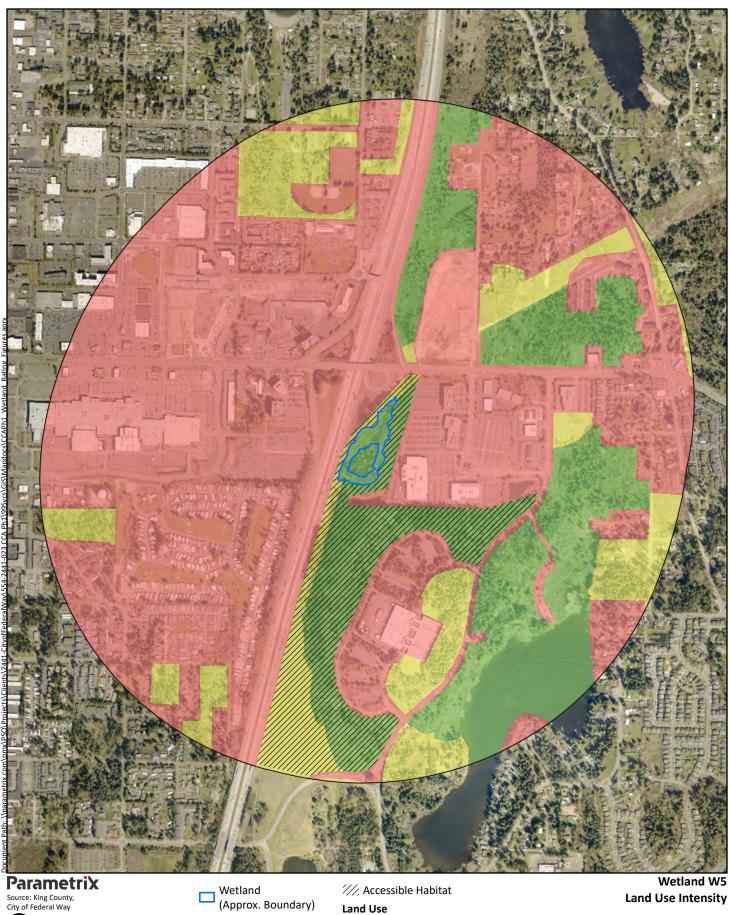
Occasionally flooded Seasonally flooded

Hydroperiods

Federal Way City Center Access Project **Wetland Rating Forms**

Federal Way, WA







1,000 Feet 500

Wetland (Approx. Boundary)

☐ 1-km Polygon

Land Use

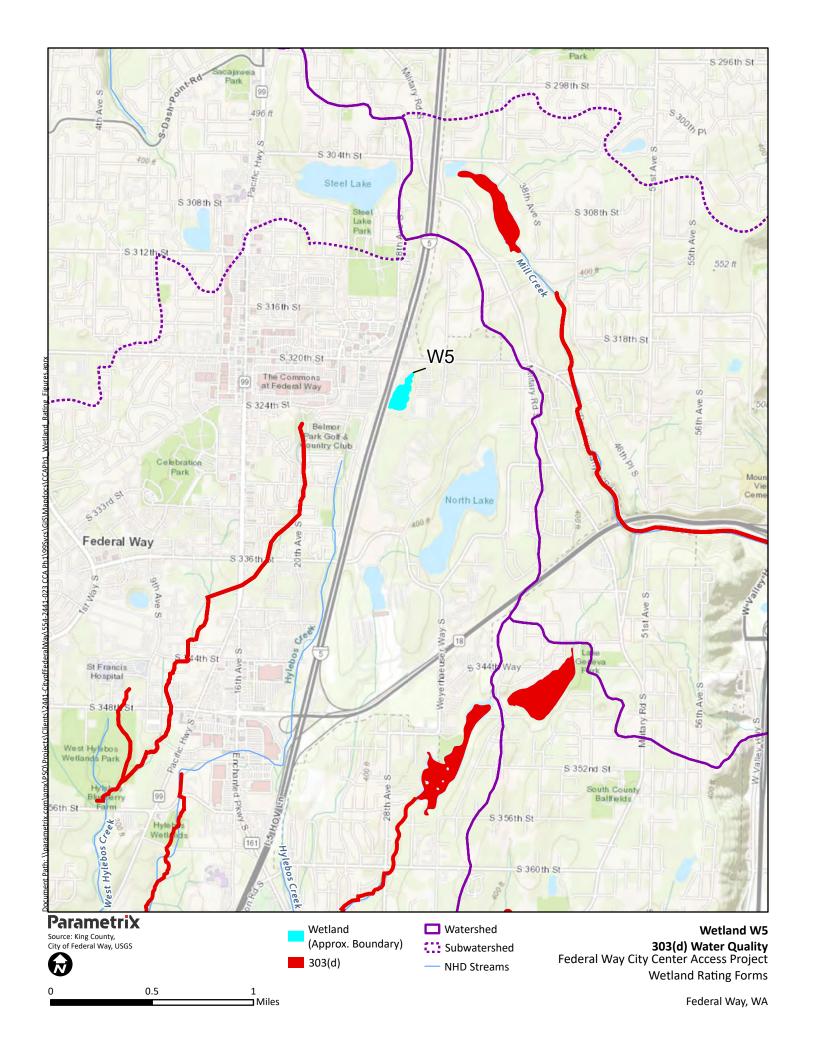
High

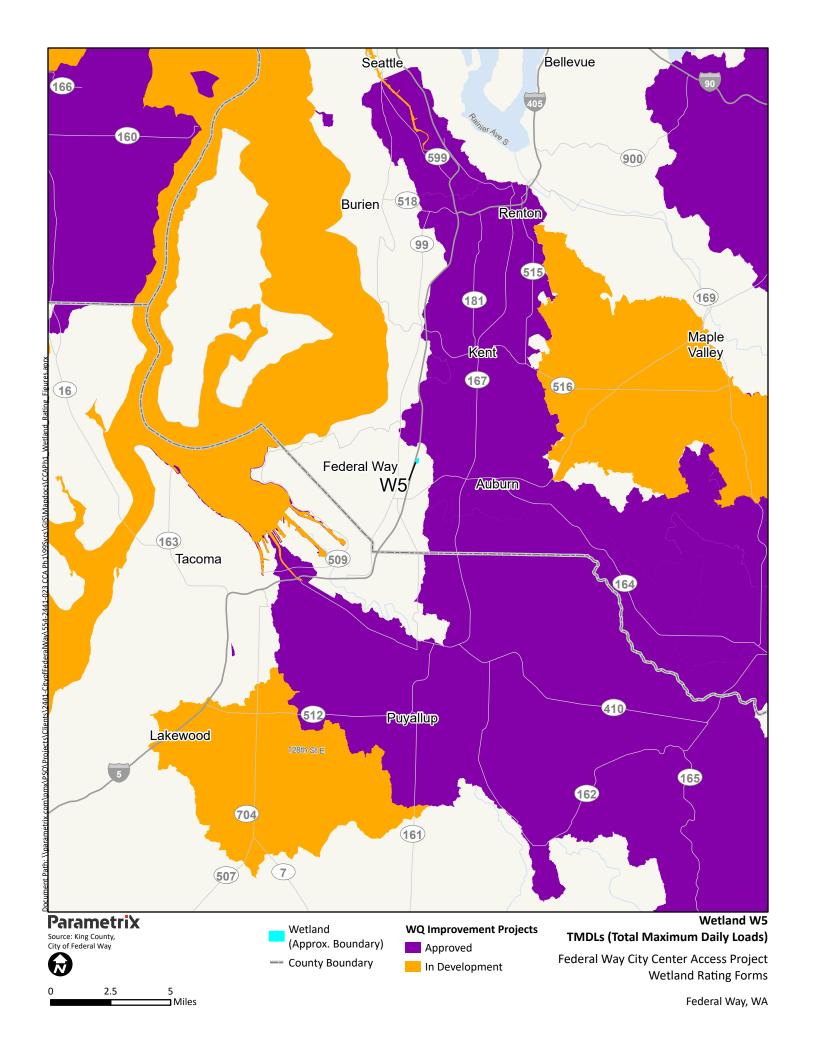
Low/moderate

Undisturbed

Federal Way City Center Access Project Wetland Rating Forms

Federal Way, WA





RATING SUMMARY – Western Washington

Name of wetland (or ID #):	W7			Date of site visit:	8/18/2020
Rated by Per Johnson, Aaro	on Thom	Trained by Ecology?☑	Yes □ No	Date of training	2014, 2018
HGM Class used for rating	Depressional & Flats	Wetland	d has multipl	e HGM classes? □	Yes ☑ No
	ot complete with out of base aerial photo/m	the figures requested (ap ESRI	figures can	be combined).	
OVERALL WETLAND CA	TEGORY III	(based on functions [☑ or special	characteristics \square)	
1. Category of wetland	I based on FUNCTIO	ONS			
	Category I - Total sco	ore = 23 - 27	;	Score for each	
	Category II - Total so	core = 20 - 22	1	unction based	
X	Category III - Total s	core = 16 - 19		on three	
	Category IV - Total s	core = 9 - 15	ı	ratings	
	=			order of ratings	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	ropriate rating	g (H, M, L)	
Site Potential	M	M	L	
Landscape Potential	Н	Н	L	
Value	M	Н	L	Total
Score Based on Ratings	7	8	3	18

Score for each function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are th	ne water levels in the entire unit usuall	y controlled by tides ex	cept d	luring floods?
V	NO - go to 2	☐ YES - the wetland of	class is	s Tidal Fringe - go to 1.1
1.1	Is the salinity of the water during per	ods of annual low flow	below	0.5 ppt (parts per thousand)?
	NO - Saltwater Tidal Fringe (Estua If your wetland can be classified as a If it is Saltwater Tidal Fringe it is an used to score functions for estuarine	n Freshwater Tidal Frin Estuarine wetland and	ge use	
	ntire wetland unit is flat and precipitation vater and surface water runoff are NO			
V	NO - go to 3 If your wetland can be classified as a		_	The wetland class is Flats for Depressional wetlands.
	the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of the At least 30% of the open water area	on the shores of a bod he year) at least 20 ac	(8 ha)	
V	NO - go to 4	□ YES - The wetland	class i	s Lake Fringe (Lacustrine Fringe)
	the entire wetland unit meet all of the The wetland is on a slope (slope can The water flows through the wetland It may flow subsurface, as sheetflow The water leaves the wetland withou	be very gradual), in one direction (unidir or in a swale without o		
V	NO - go to 5		YES -	The wetland class is Slope
	surface water does not pond in these to ons or behind hummocks (depression			
	the entire wetland unit meet all of the The unit is in a valley, or stream char from that stream or river, The overbank flooding occurs at leas	nnel, where it gets inun	dated	by overbank flooding
V	NO - go to 6		YES -	The wetland class is Riverine
NOTE: T	he Riverine unit can contain depression	ons that are filled with v	vater v	when the river is not flooding.

Wetland	name	٥r	number	W7

1 9 1	phic depression in which water ponds, or is saturated to the surface, at that any outlet, if present, is higher than the interior of the wetland.
□ NO - go to 7	☑ YES - The wetland class is Depressional
The unit does not pond surface water mo	very flat area with no obvious depression and no overbank flooding? ore than a few inches. The unit seems to be maintained by high ay be ditched, but has no obvious natural outlet.
☐ NO - go to 8	☐ YES - The wetland class is Depressional

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

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

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

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

NOTES and FIELD OBSERVATIONS:

Wetland W7 receives water from overland flow, its outlet is a stormwater catchbasin on the west shoulder of southbound I-5.

DEPRESSIONAL AND FLATS WETLA	NDS	
Water Quality Functions - Indicators that the site functions to im	prove water quality	
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland:		
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).	points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	points = 2	2
☐ Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 1	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.	points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic		0
(use NRCS definitions).	Yes = 4 No = 0	
D 1.3. <u>Characteristics and distribution of persistent plants</u> (Emergent, Scrub-sh Forested Cowardin classes):		
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	5
Wetland has persistent, ungrazed, plants > ½ of area	points = 3	Ŭ
Wetland has persistent, ungrazed plants > 1/10 of area	points = 1	
Wetland has persistent, ungrazed plants < 1/10 of area	points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:	. ,	
This is the area that is ponded for at least 2 months. See description		0
Area seasonally ponded is > ½ total area of wetland	points = 4	2
Area seasonally ponded is > 1/4 total area of wetland	points = 2	
Area seasonally ponded is < 1/4 total area of wetland	points = 0	
	in the boxes above	9
Rating of Site Potential If score is: 12 - 16 = H 6 - 11 = M 0 - 5 = L	Record the rating on	ırıe ıırsı page
D 2.0. Does the landscape have the potential to support the water quality function	on of the site?	
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3? Source <u>I-5</u>	Yes = 1 No = 0	1
	in the boxes above	3
Rating of Landscape Potential If score is: ☑ 3 or 4 = H ☐ 1 or 2 = M ☐ 0 = L		
D 3.0. Is the water quality improvement provided by the site valuable to society	?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,		0
lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	U
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the		1
	Yes = 1 No = 0	
D 3.3. Has the site been identified in a watershed or local plan as important		0
for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)?	Vaa 0 N 0	0
·	Yes = 2 No = 0	4
·	in the boxes above	the first nega
Rating of Value If score is: \square 2 - 4 = H \square 1 = M \square 0 = L	Record the rating on	uie iirst page

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

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 n ☑ Emergent 3 structures: points = 2 ☐ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☐ Forested (areas where trees have > 30% cover) 1 structure: points = 0If the unit has a Forested class, check if: ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 3 types present: points = 2 ☑ Seasonally flooded or inundated 1 ☑ Occasionally flooded or inundated 2 types present: points = 1 □ Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 0 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 0 **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are **HIGH** = 3 points

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

Rating of Value If Score is: \square 2 = H \square 1 = M \square 0 = L

147 (1 1				1 A /	
Wetland	name	or nu	mner	W7	

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: NOTE: This question is independent of the land use between the wetland unit and the priority habitat. Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha). Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlife (full descriptions in WDFW PHS report). Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock. Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests - Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest. ☐ Oregon White Oak: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (full descriptions in WDFW PHS report p. 158 - see web link above). Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161 – see web link above). □ **Instream**: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page). Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation. Talus: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m),

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings.

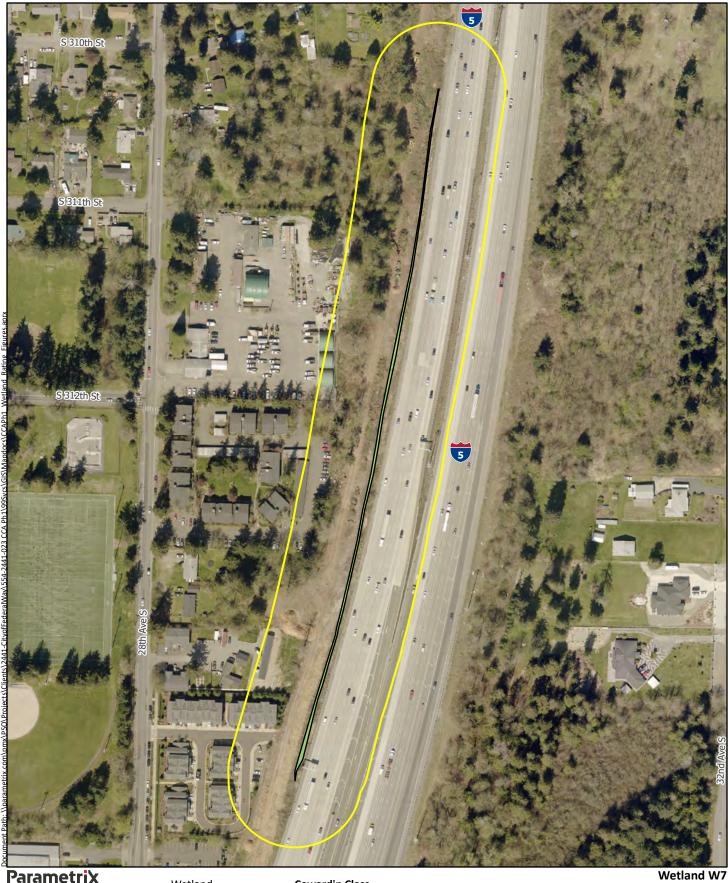
□ Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are >

May be associated with cliffs.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met. SC 1.0. Estuarine Wetlands Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal, Vegetated, and With a salinity greater than 0.5 ppt Yes - Go to SC 1.1 No = Not an estuarine wetland SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2 SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,
SC 1.0. Estuarine Wetlands Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal, Vegetated, and With a salinity greater than 0.5 ppt Yes - Go to SC 1.1 No = Not an estuarine wetland SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2 SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,
Does the wetland meet the following criteria for Estuarine wetlands? ☐ The dominant water regime is tidal, ☐ Vegetated, and ☐ With a salinity greater than 0.5 ppt ☐ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? ☐ Yes = Category I ☐ No - Go to SC 1.2 SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,
□ The dominant water regime is tidal, □ Vegetated, and □ With a salinity greater than 0.5 ppt □ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? □ Yes = Category I □ No - Go to SC 1.2 SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? □ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,
Use taken and Use the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? □ Yes = Category I □ No - Go to SC 1.2 SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? □ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,
□ With a salinity greater than 0.5 ppt □ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? □ Yes = Category I □ No - Go to SC 1.2 SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? □ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,
□ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? □ Yes = Category I □ No - Go to SC 1.2 SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? □ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,
Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? —————————————————————————————————
Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2 SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,
☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,
and has less than 10% cover of non-native plant species. (If non-native species are
Spartina, see page 25)
☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-
grazed or un-mowed grassland.
☐ The wetland has at least two of the following features: tidal channels, depressions with
open water, or contiguous freshwater wetlands.
☐ Yes = Category I ☐ No = Category II
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list
of Wetlands of High Conservation Value?
✓ Yes - Go to SC 2.2 □ No - Go to SC 2.3
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?
☐ Yes = Category I ☐ No = Not WHCV
SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?
http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf
□ Yes - Contact WNHP/WDNR and to SC 2.4 □ No = Not WHCV
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation
Value and listed it on their website?
□ Yes = Category I □ No = Not WHCV
SC 3.0. Bogs
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation
in bogs? Use the key below. If you answer YES you will still need to rate the
wetland based on its functions.
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks,
that compose 16 in or more of the first 32 in of the soil profile?
☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are
less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic
ash, or that are floating on top of a lake or pond?
☐ Yes - Go to SC 3.3 ☐ No = Is not a bog
SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground
level, AND at least a 30% cover of plant species listed in Table 4?
☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at
least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,
the wetland is a bog.
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,
western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann
spruce, or western white pine, AND any of the species (or combination of species)
listed in Table 4 provide more than 30% of the cover under the canopy?
☐ Yes = Is a Category I bog ☐ No = Is not a bog

SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
_	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
	200 years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	5X55541119 21 111 (55 5111).	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to	
	be measured near the bottom)	
	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon	
SC 5.1.	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,	
	grazing), and has less than 20% cover of aggressive, opportunistic plant species (see	
	list of species on p. 100).	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
	☐ Yes = Category I ☐ No = Category II	
SC 6.0.	Interdunal Wetlands	
	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland	
	based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating	
SC 6.1.	Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form	
	(rates H,H,H or H,H,M for the three aspects of function)?	
	$\Box \ \ \text{Yes} = \textbf{Category I} \qquad \ \Box \ \ \text{No - Go to SC 6.2}$	
SC 6.2.	Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	
	$\Box \ \ \text{Yes} = \textbf{Category II} \qquad \Box \ \ \text{No - Go to SC 6.3}$	
SC 6.3.	Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and	
	1 ac?	
0.1	☐ Yes = Category III ☐ No = Category IV	
_	ry of wetland based on Special Characteristics	
lit you ar	nswered No for all types, enter "Not Applicable" on Summary Form	



Parametrix
Source: King County,
City of Federal Way

Wetland (Approx.Boundary)

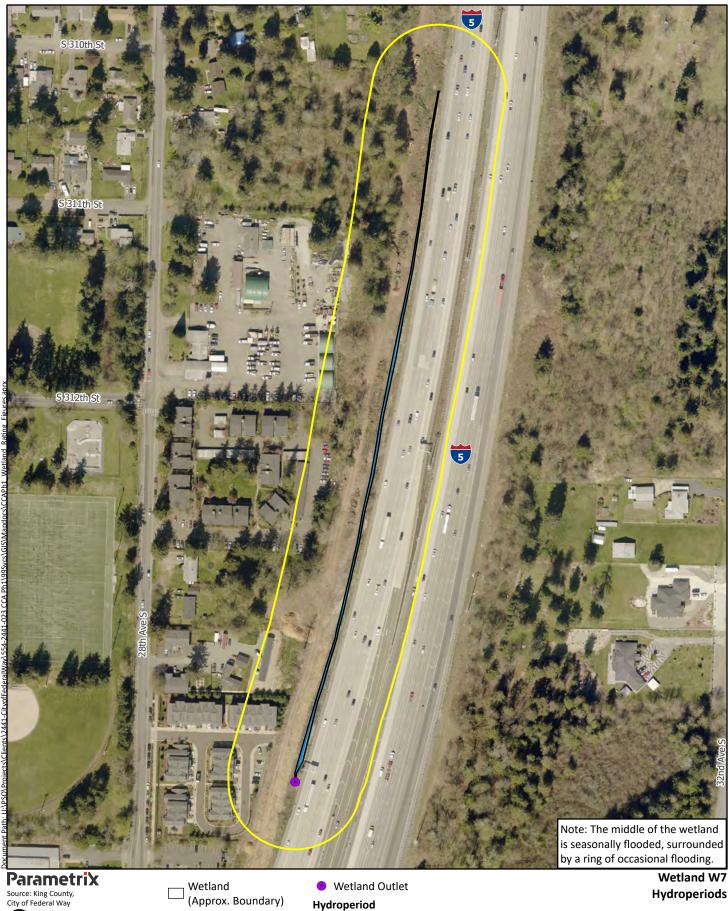
150-ft Buffer

Cowardin Class

Palustrine Emergent (PEM)

Cowardin Plant Classes

Federal Way City Center Access Project **Wetland Rating Forms**





0 50 100

⊐ Feet

Wetland (Approx. Boundary)

150-ft Buffer

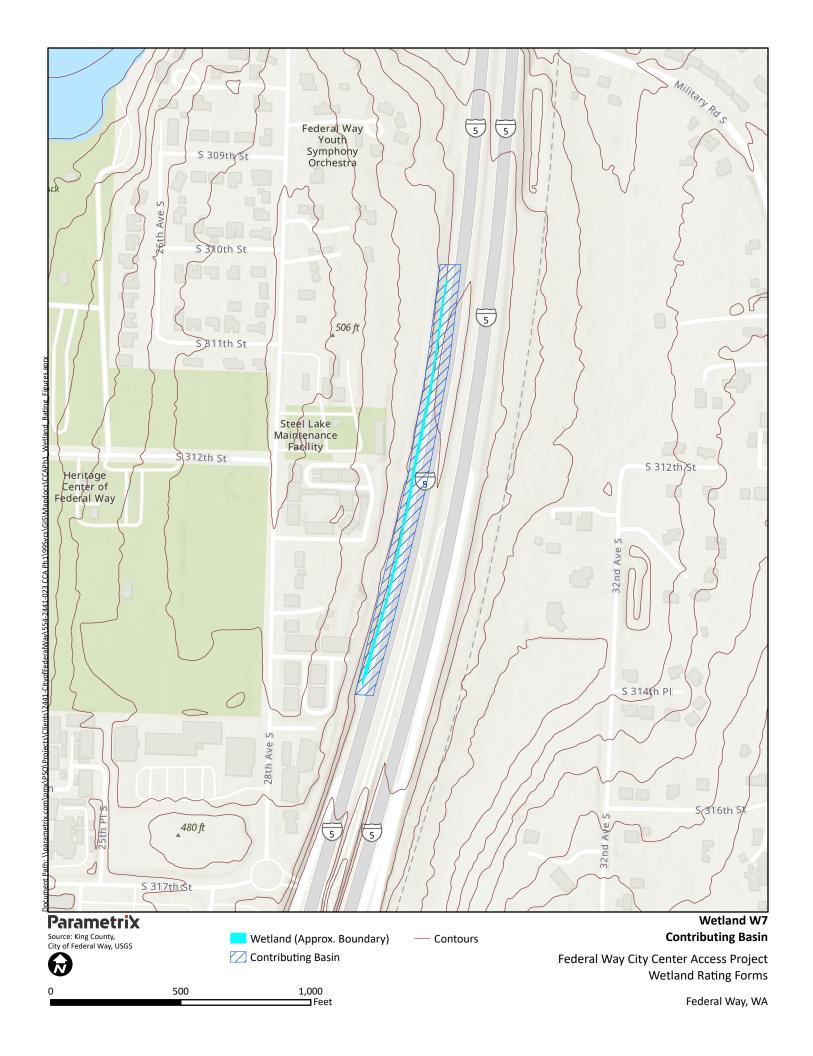
• Wetland Outlet

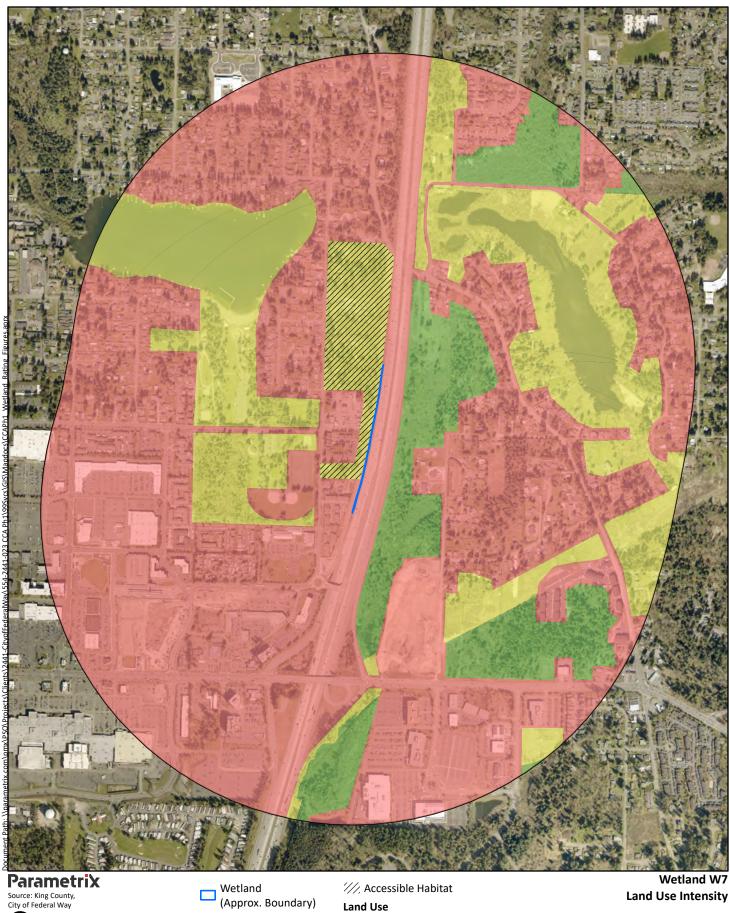
Hydroperiod

Occasionally flooded Seasonally flooded

Hydroperiods

Federal Way City Center Access Project **Wetland Rating Forms**







1,000 Feet 500

Wetland (Approx. Boundary)

☐ 1-km Polygon

Land Use

High

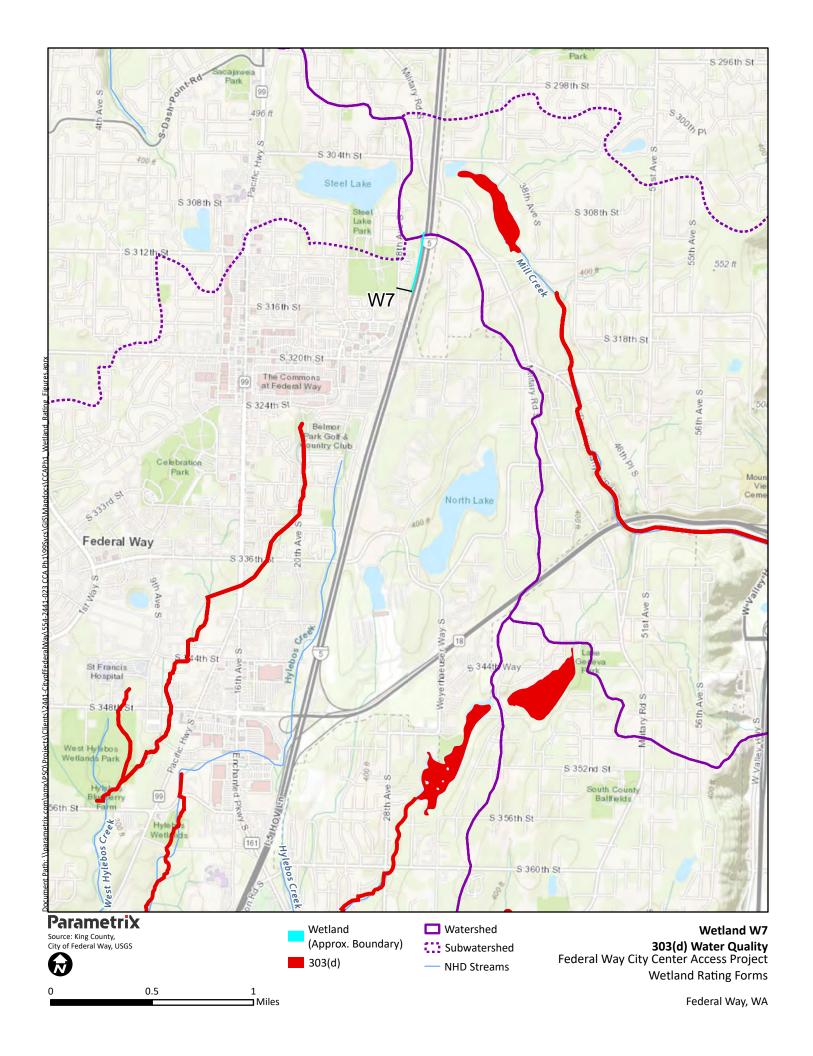
Low/moderate

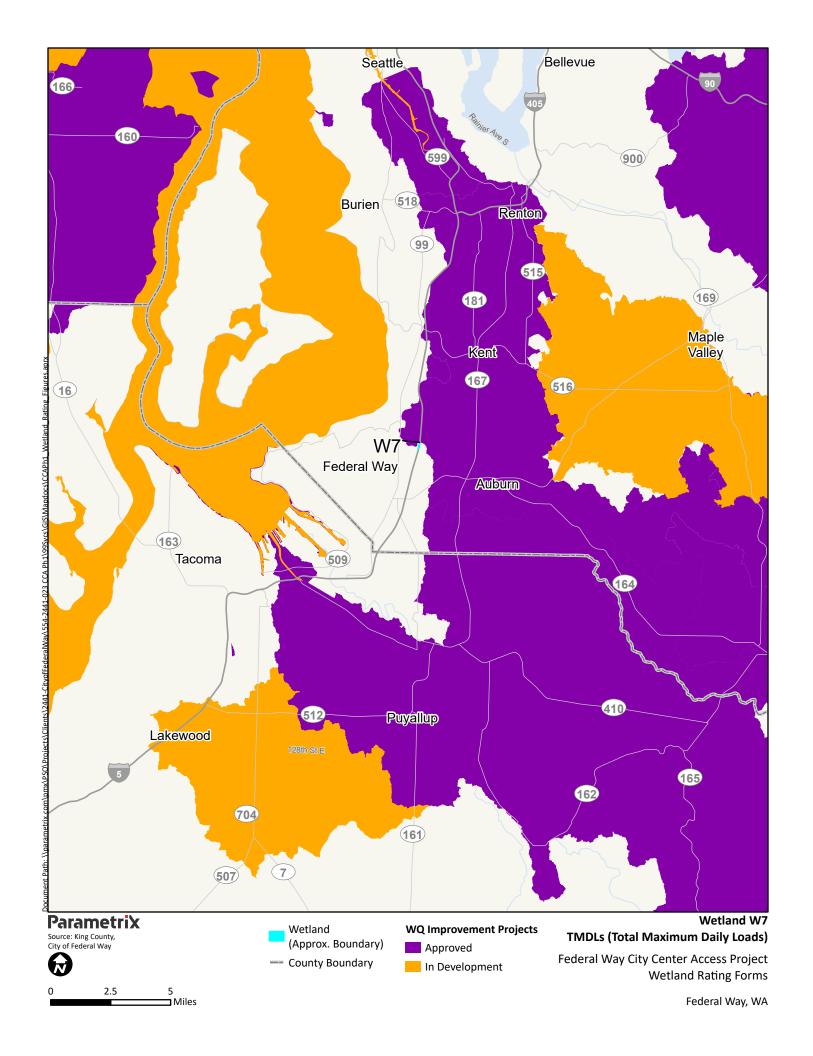
Undisturbed

Land Use Intensity

Federal Way City Center Access Project **Wetland Rating Forms**

Federal Way, WA





RATING SUMMARY – Western Washington

Name of wetland (or I	D #): <u>W</u> 9		Date of site visit:	8/18/2020
Rated by Per Johnso	on, Aaron Thom	Trained by Ecology? ☑ Yes ☐ No	Date of training	2014, 2018
HGM Class used for	rating Slope	Wetland has multipl	e HGM classes? □	Yes ☑ No
	Source of base aerial ph	h out the figures requested (figures car loto/map ESRI (based on functions 🗵 or specia	<u> </u>)
1. Category of w - -	Category II - To	tal score = 23 - 27 otal score = 20 - 22 fotal score = 16 - 19	Score for each function based on three	
_	Category IV - T	otal score = 9 - 15	ratings (order of ratings	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	List appropriate rating (H, M, L)		
Site Potential	M	M	L	
Landscape Potential	M	M	L	
Value	M	Н	L	Total
Score Based on Ratings	6	7	3	16

Score for each function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	Х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are th	ne water levels in the entire unit usua	lly controlled by tid	les except during floods?	
V	NO - go to 2	□ YES - the wetle	and class is Tidal Fringe - go to 1.1	
1.1	Is the salinity of the water during pe	riods of annual low	flow below 0.5 ppt (parts per thousand)?	
	NO - Saltwater Tidal Fringe (Estua If your wetland can be classified as wetlands. If it is Saltwater Tidal Frin cannot be used to score functions	a Freshwater Tida ge it is an Estuari	ne wetland and is not scored. This method	
	ntire wetland unit is flat and precipita vater and surface water runoff are NC			
V	NO - go to 3 If your wetland can be classified as	a Flats wetland, us	☐ YES - The wetland class is Flats se the form for Depressional wetlands.	
	the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of At least 30% of the open water area	on the shores of a the year) at least 2	a body of permanent open water (without any 20 ac (8 ha) in size;	
V	NO - go to 4	□ YES - The wet	land class is Lake Fringe (Lacustrine Fringe)	
 4. Does the entire wetland unit meet all of the following criteria? ☑ The wetland is on a slope (slope can be very gradual), ☑ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps It may flow subsurface, as sheetflow, or in a swale without distinct banks. ☑ The water leaves the wetland without being impounded. 				
	NO - go to 5		☑ YES - The wetland class is Slope	
NOTE : Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).				
	the entire wetland unit meet all of the The unit is in a valley, or stream cha flooding from that stream or river, The overbank flooding occurs at lea	annel, where it gets	s inundated by overbank	
	NO - go to 6		☐ YES - The wetland class is Riverine	
NOTE: T	he Riverine unit can contain depress	sions that are filled	with water when the river is not flooding.	

Motland	name or	number	W/O	
vvetiand	name or	number	vvs	

1 3	aphic depression in which water ponds, or is saturated to the surface ans that any outlet, if present, is higher than the interior of the
□ NO - go to 7	☐ YES - The wetland class is Depressional
The unit does not pond surface water r	a very flat area with no obvious depression and no overbank flooding nore than a few inches. The unit seems to be maintained by high may be ditched, but has no obvious natural outlet.
□ NO - go to 8	☐ YES - The wetland class is Depressional

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

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

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

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

SLOPE WETLANDS			
Water Quality Functions - Indicators that the site functions to in	nprove water	r quality	
S 1.0. Does the site have the potential to improve water quality?			
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a	1 ft vertical	drop	
in elevation for every 100 ft of horizontal distance)			
Slope is 1% or less	poi	ints = 3	1
Slope is > 1% - 2%	poi	ints = 2	ı
Slope is > 2% - 5%	poi	ints = 1	
Slope is greater than 5%	poi	ints = 0	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true			0
organic (use NRCS definitions):	Yes = 3	No = 0	U
S 1.3. Characteristics of the plants in the wetland that trap sediments and po			
Choose the points appropriate for the description that best fits the plants in the			
means you have trouble seeing the soil surface (>75% cover), and uncut me	ans not graz	ed or	
mowed and plants are higher than 6 in.			
Dense, uncut, herbaceous plants > 90% of the wetland area	•	ints = 6	6
Dense, uncut, herbaceous plants > ½ of area	-	nts = 3	
Dense, woody, plants > ½ of area	-	nts = 2	
Dense, uncut, herbaceous plants > 1/4 of area	•	ints = 1	
Does not meet any of the criteria above for plants	•	ints = 0	
Total for S 1 Add the points			7
Rating of Site Potential If score is: 12 = H 6 - 11 = M 0 - 5 = L	Record the r	rating on	the first page
S 2.0. Does the landscape have the potential to support the water quality fun	ction of the s	site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in	0		
land uses that generate pollutants?	Yes = 1	No = 0	1
S 2.2. Are there other sources of pollutants coming into the wetland that are	100 - 1	110 - 0	
not listed in question S 2.1?			1
Other Sources I-5	Yes = 1	No = 0	•
Total for S 2 Add the points			2
Rating of Landscape Potential If score is: ☑ 1 - 2 = M □ 0 = L			the first page
		aang en	ano mot pago
S 3.0. Is the water quality improvement provided by the site valuable to socie	ty?		
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream,			0
river, lake, or marine water that is on the 303(d) list?	Yes = 1	No = 0	U
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue?			1
At least one aquatic resource in the basin is on the 303(d) list.	Yes = 1	No = 0	ı
S 3.3. Has the site been identified in a watershed or local plan as important			
for maintaining water quality? Answer YES if there is a TMDL for the basin			0
in which the unit is found?	Yes = 2	No = 0	
Total for S 3 Add the points	in the boxes	above	1
Rating of Value If score is: 2-4=H 1=M 0=L	Record the r	rating on	the first page

OLODE WETLANDO		
SLOPE WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce flooding a		osion
S 4.0. Does the site have the potential to reduce flooding and stream erosion? 5 4.1. Characteristics of plants that reduce the velocity of surface nows during storm		
the points appropriate for the description that best fits conditions in the wetland. <i>Ste</i>		
should be thick enough (usually > $^{1}/_{8}$ in), or dense enough, to remain erect during	-	
flows	Suriace	1
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	
Rating of Site Potential If score is: □ 1 = M □ 0 = L Record	d the rating on	the first page
S 5.0. Does the landscape have the potential to support hydrologic functions of the	site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land		1
uses or cover that generate excess surface runoff?	= 1 No = 0	'
Rating of Landscape Potential If score is: 1 = M 0 = L Record	d the rating on	the first page
S 6.0. Are the hydrologic functions provided by the site valuable to society?		
S 6.1. Distance to the nearest areas downstream that have flooding problems:		
The sub-basin immediately down-gradient of site has flooding		
problems that result in damage to human or natural resources		2
(e.g., houses or salmon redds)	points = 2	2
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
No flooding problems anywhere downstream	points = 0	
S 6.2. Has the site been identified as important for flood storage or flood		0
	= 2 No = 0	0
Total for S 6 Add the points in the	boxes above	2
Rating of Value If score is: 2 - 4 = H 1 = M 0 = L Record	d the rating on	the first page

NOTES and FIELD OBSERVATIONS:

W9 receives water from surface/overland flow, it's outlet is a catchbasin.

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 Λ ☑ Emergent 3 structures: points = 2 ☐ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☐ Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☐ Seasonally flooded or inundated 3 types present: points = 2 0 □ Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle n If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. Λ **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. <i>The number of checks is the number</i>	
of points.	
□ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)	
☐ Standing snags (dbh > 4 in) within the wetland	
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends	
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at	
least 33 ft (10 m)	0
☐ Stable steep banks of fine material that might be used by beaver or muskrat for	U
denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut</i>	
shrubs or trees that have not yet weathered where wood is exposed)	
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in	
areas that are permanently or seasonally inundated (structures for egg-laying by	
□ Invasive plants cover less than 25% of the wetland area in every stratum of plants	
(see H 1.1 for list of strata)	
Total for H 1 Add the points in the boxes above	0
Rating of Site Potential If Score is: ☐ 15 - 18 = H ☐ 7 - 14 = M ☑ 0 - 6 = L Record the rating on	,
Tham is a second in the second	ano mot pago
H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).	
Calculate:	
0 % undisturbed habitat + (0 % moderate & low intensity land uses / 2) = 0%	
<u></u>	
If total accessible habitat is:	0
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20 - 33% of 1 km Polygon points = 2	
10 - 19% of 1 km Polygon points = 1	
< 10 % of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate:	
19 % undisturbed habitat + (9 % moderate & low intensity land uses / 2) = 23.5%	
<u> </u>	
Undisturbed habitat > 50% of Polygon points = 3	1
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2	
Undisturbed habitat 10 - 50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3 Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-2)	-2
≤ 50% of 1km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above	
Rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☐ <1=L Record the rating on	
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose	
only the highest score that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
☐ It has 3 or more priority habitats within 100 m (see next page)	
☐ It provides habitat for Threatened or Endangered species (any	
plant or animal on the state or federal lists)	
☐ It is mapped as a location for an individual WDFW priority species	0
☐ It is a Wetland of High Conservation Value as determined by the	
Department of Natural Resources	
☐ It has been categorized as an important habitat site in a local or	
regional comprehensive plan, in a Shoreline Master Plan, or in a	
watershed plan	
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1	
Site does not meet any of the criteria above points = 0	the effect
Rating of Value If Score is: □ 2 = H □ 1 = M □ 0 = L Record the rating on	tne tirst page

Wetland Rating System for Western WA: 2014 Update Rating Form - Effective January 1, 2015

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: NOTE: This question is independent of the land use between the wetland unit and the priority habitat. ☐ **Aspen Stands**: Pure or mixed stands of aspen greater than 1 ac (0.4 ha). ☐ Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlife (full descriptions in WDFW PHS report). Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock. Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests - Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in oldgrowth; 80-200 years old west of the Cascade crest. ☐ Oregon White Oak: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (full descriptions in WDFW PHS report p. 158 - see web link above). Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aguatic and terrestrial ecosystems which mutually influence each other. ☐ Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161 – see web link above). □ Instream: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. □ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page). □ Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ☐ **Cliffs**: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation. □ Talus: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

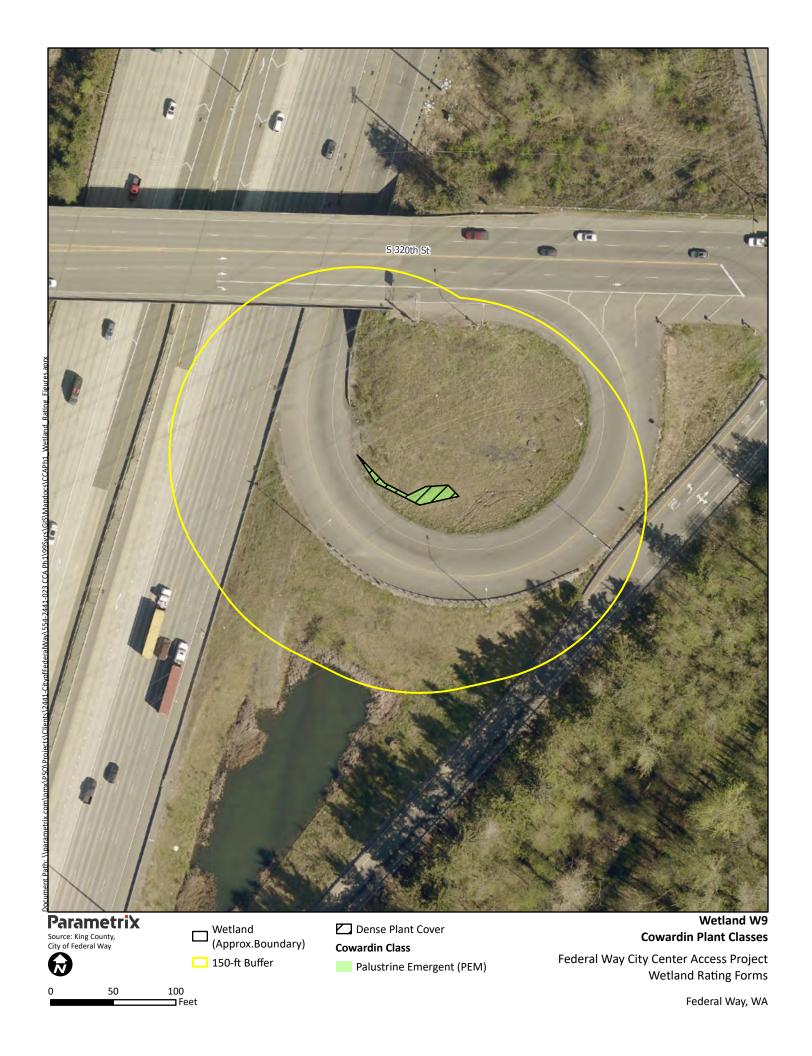
□ Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are >

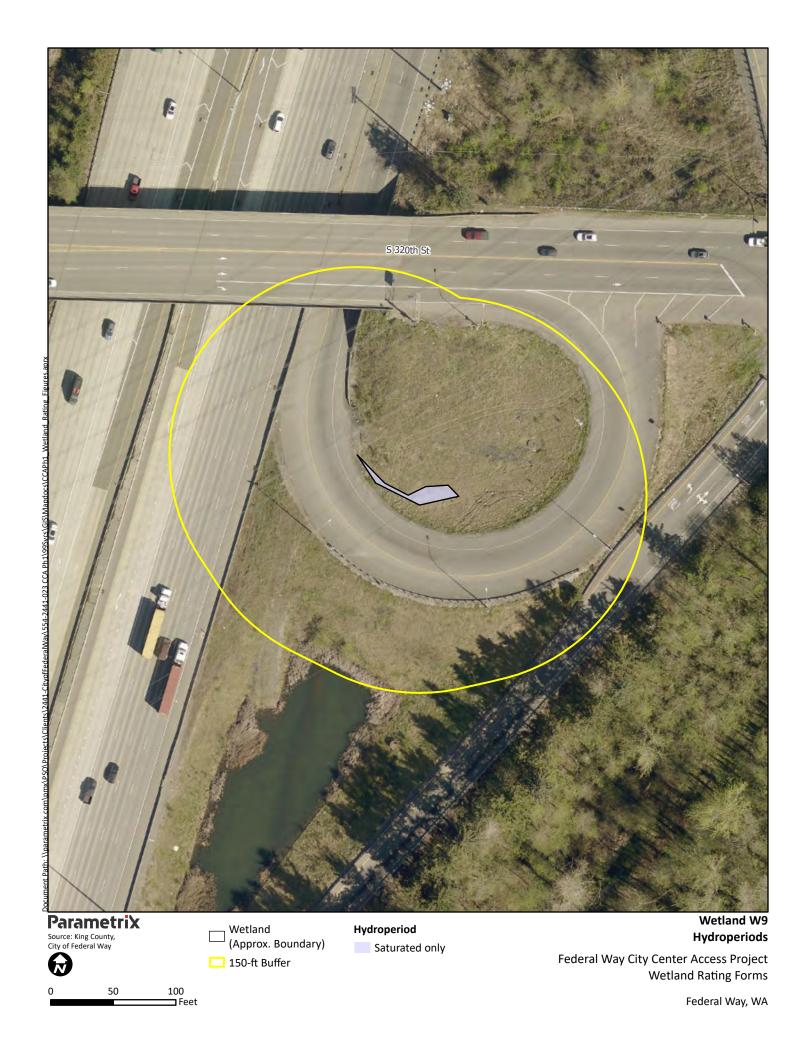
May be associated with cliffs.

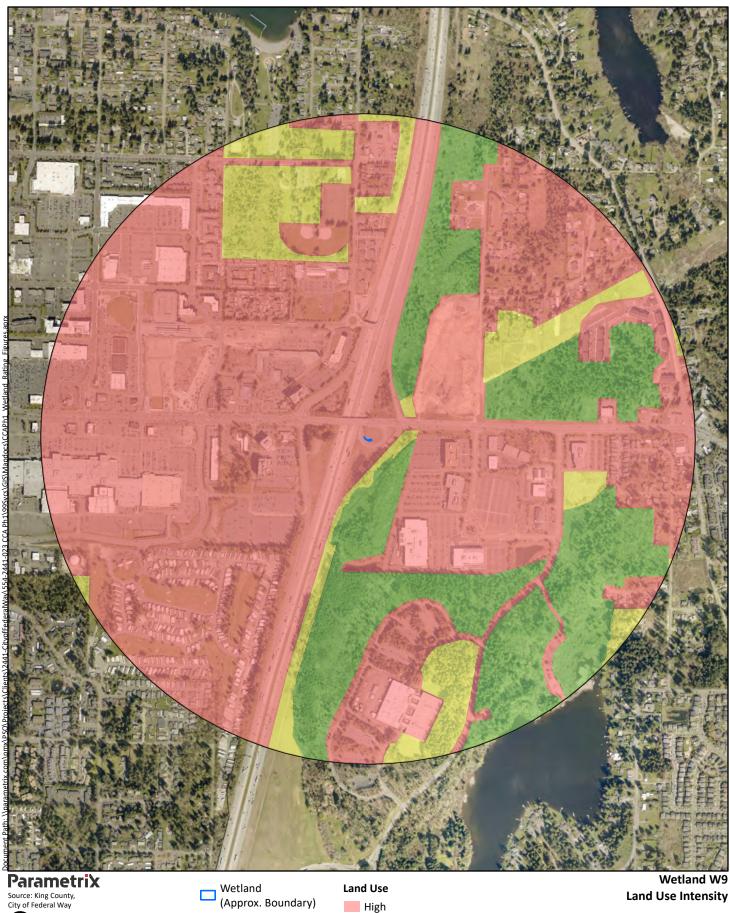
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Type	<u>Category</u>
	f any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
SC 1.0.	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or	
	Scientific Reserve designated under WAC 332-30-151?	
SC 1.2.	□ Yes = Category I □ No - Go to SC 1.2 Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
3C 1.2.	The wetland unit at least 1 ac in size and meets at least two of the following three conditions? The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,	
	grazing, and has less than 10% cover of non-native plant species. (If non-native	
	species are Spartina, see page 25)	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or	
	un-grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
0000	☐ Yes = Category I ☐ No = Category II	
	Wetlands of High Conservation Value (WHCV) Has the WA Department of Natural Resources updated their website to include the list	
00 2.1.	of Wetlands of High Conservation Value?	
	☑ Yes - Go to SC 2.2 □ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value	
	□ Yes = Category I	
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
SC 2.4.	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
30 2.4.	Value and listed it on their website?	
	☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0.	Bogs	
	Does the wetland (or any part of the unit) meet both the criteria for soils and	
	vegetation in bogs? Use the key below. If you answer YES you will still need to	
00.04	rate the wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that	
	are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or	
	volcanic ash, or that are floating on top of a lake or pond?	
	□ Yes - Go to SC 3.3 \square No = Is not a bog	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4?	
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4 NOTE : If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are	
	present, the wetland is a bog.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,	
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann	
	spruce, or western white pine, AND any of the species (or combination of species)	
	listed in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If</i>	
	you answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
	200 years old OR the species that make up the canopy have an average diameter	
	(dbh) exceeding 21 in (53 cm).	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less	
	frequently, rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs	
	to be measured near the bottom)	
	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon	
SC 5.1.	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,	
	grazing), and has less than 20% cover of aggressive, opportunistic plant species (see	
	list of species on p. 100).	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or	
	un-grazed or un-mowed grassland.	
	The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
	☐ Yes = Category I ☐ No = Category II	
SC 6.0.	Interdunal Wetlands	
	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland	
	based on its habitat functions.	
_	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103 Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating	
SC 6.1.		
00 0.1.	(rates H,H,H or H,H,M for the three aspects of function)?	
	☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.2.		
0.2.	$\Box \text{ Yes} = \textbf{Category II} \qquad \Box \text{ No - Go to } \textbf{SC 6.3}$	
SC 6.3.		
0.0.	and 1 ac?	
	□ Yes = Category III □ No = Category IV	
Catego	ry of wetland based on Special Characteristics	
_	nswered No for all types, enter "Not Applicable" on Summary Form	









1,000 Feet 500

Wetland (Approx. Boundary)

☐ 1-km Polygon

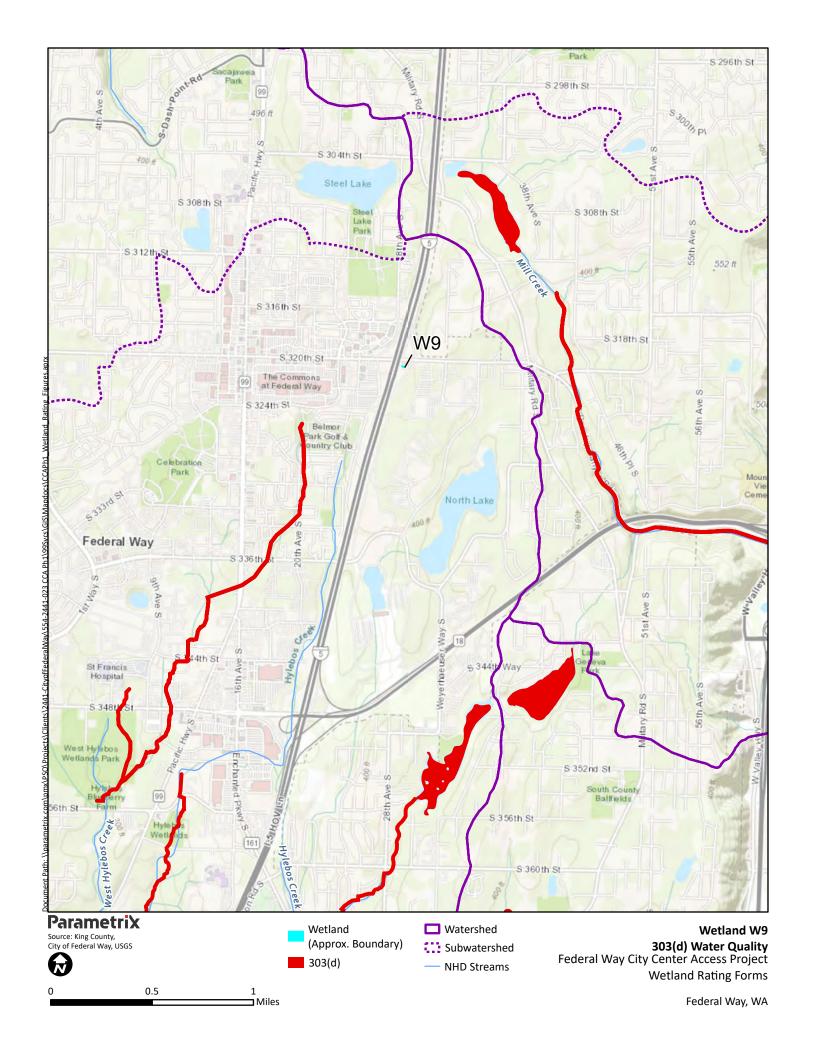
High

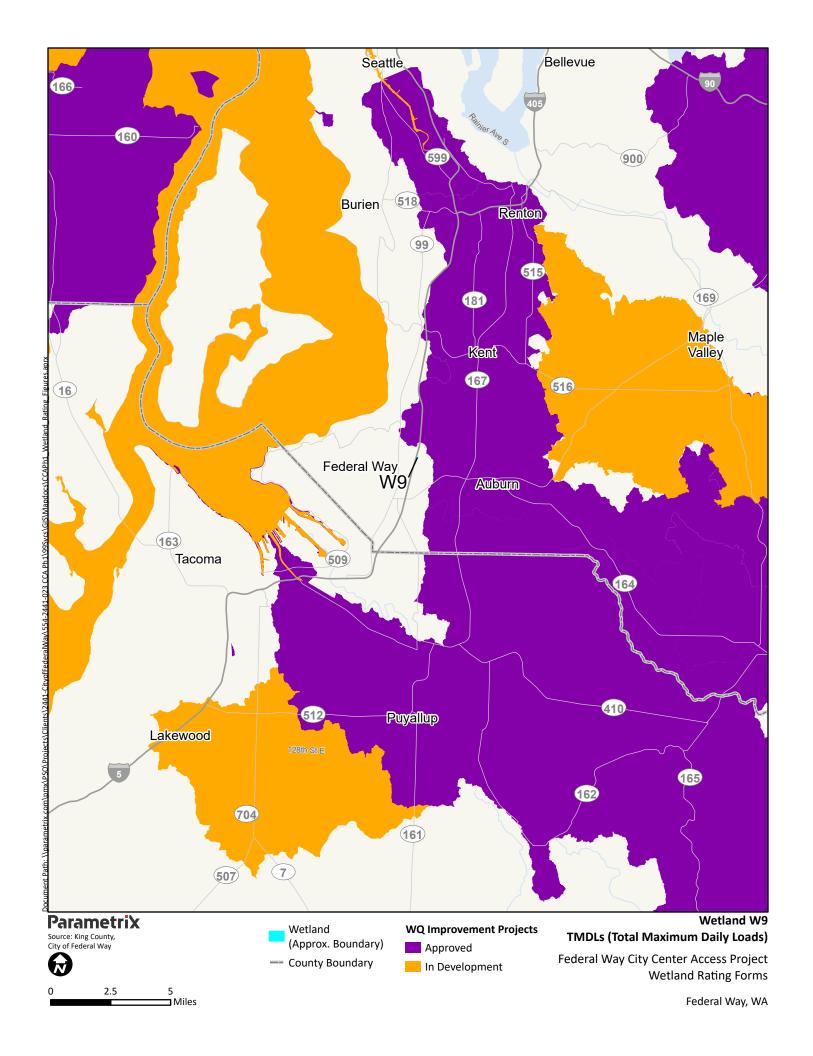
Low/moderate Undisturbed

Land Use Intensity

Federal Way City Center Access Project Wetland Rating Forms

Federal Way, WA





RATING SUMMARY – Western Washington

Name of wetland (or ID #):	W10		Date of site visit:	8/19/2020
Rated by Per Johnson, Aaro	on Thom Trained by	Ecology? ☑ Yes ☐ No	Date of training	2014, 2018
HGM Class used for rating	Depressional & Flats	Wetland has multip	e HGM classes? ☑	Yes □ No
	ot complete with out the figures of base aerial photo/map ESRI	requested (figures can	be combined).	
OVERALL WETLAND CA	TEGORY III (based o	on functions ☑ or specia	I characteristics □)	
1. Category of wetland	based on FUNCTIONS			
	Category I - Total score = 23 - 2	7	Score for each	
	Category II - Total score = 20 - 2	22	function based	
X	Category III - Total score = 16 -	19	on three	
	Category IV - Total score = 9 - 1	5	ratings	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	ropriate rating	g (H, M, L)	
Site Potential	L	L	М	
Landscape Potential	Н	Н	L	
Value	M	Н	М	Total
Score Based on Ratings	6	7	5	18

Score for each function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	Х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are th	ne water levels in the entire unit usuall	y controlled by tides	except during floods?
V	NO - go to 2	☐ YES - the wetla	nd class is Tidal Fringe - go to 1.1
1.1	Is the salinity of the water during per	ods of annual low fl	ow below 0.5 ppt (parts per thousand)?
		n Freshwater Tidal F Stuarine wetland ar	☐ YES - Freshwater Tidal Fringe Fringe use the forms for Riverine wetlands. It is not scored. This method cannot be
	ntire wetland unit is flat and precipitation vater and surface water runoff are NO		
✓	NO - go to 3 If your wetland can be classified as a	a Flats wetland, use	☐ YES - The wetland class is Flats the form for Depressional wetlands.
	the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of the At least 30% of the open water area	on the shores of a b he year) at least 20	
V	NO - go to 4	□ YES - The wetla	and class is Lake Fringe (Lacustrine Fringe)
✓	the entire wetland unit meet all of the The wetland is on a slope (<i>slope can</i> The water flows through the wetland may flow subsurface, as sheetflow, or The water leaves the wetland without	be very gradual), in one direction (un or in a swale without	
	NO - go to 5		☐ YES - The wetland class is Slope
	Surface water does not pond in these toons or behind hummocks (depressions		ept occasionally in very small and shallow ameter and less than 1 ft deep).
	the entire wetland unit meet all of the The unit is in a valley, or stream char from that stream or river, The overbank flooding occurs at leas	nnel, where it gets ir	•
V	NO - go to 6		☐ YES - The wetland class is Riverine
NOTE: T	he Riverine unit can contain denression	one that are filled wi	th water when the river is not flooding

Metland	name or number	W10	
vvenanu	name of number	VV 10	

	hic depression in which water ponds, or is saturated to the surface, at that any outlet, if present, is higher than the interior of the wetland.
□ NO - go to 7	☑ YES - The wetland class is Depressional
	ery flat area with no obvious depression and no overbank flooding? The an a few inches. The unit seems to be maintained by high groundwater but has no obvious natural outlet.
□ NO - go to 8	☐ YES - The wetland class is Depressional

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

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

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

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

NOTES and FIELD OBSERVATIONS:

W10 has slope and depressional HGM classes, so was rated as depressional.

W10 recieves water through a culvert from W11 (not flowing at the time of the site visit). Its outlet is a submerged culvert that discharges to W5.

DEPRESSIONAL AND FLATS WETLA	NDS		
Water Quality Functions - Indicators that the site functions to im	prove water	quality	
D 1.0. Does the site have the potential to improve water quality?			
D 1.1. Characteristics of surface water outflows from the wetland:			
Wetland is a depression or flat depression (QUESTION 7 on key)			
with no surface water leaving it (no outlet).	po	oints = 3	
Wetland has an intermittently flowing stream or ditch, OR highly			
constricted permanently flowing outlet.	po	oints = 2	1
Wetland has an unconstricted, or slightly constricted, surface outlet			
that is permanently flowing	ро	ints = 1	
☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is a			
permanently flowing ditch.	ро	ints = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic			0
(use NRCS definitions).	Yes = 4	No = 0	
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shr	ub, and/or F	orested	
Cowardin classes):		-into -	
Wetland has persistent, ungrazed, plants > 95% of area	•	oints = 5	1
Wetland has persistent, ungrazed, plants > ½ of area	•	oints = 3	
Wetland has persistent, ungrazed plants > 1/10 of area	•	oints = 1	
Wetland has persistent, ungrazed plants < 1/10 of area	ро	oints = 0	
D 1.4. Characteristics of seasonal ponding or inundation:			
This is the area that is ponded for at least 2 months. See description in			
Area seasonally ponded is > ½ total area of wetland	-	oints = 4	2
Area seasonally ponded is > 1/4 total area of wetland	р	oints = 2	
Area seasonally ponded is < 1/4 total area of wetland	р	oints = 0	
Total for D 1 Add the points			4
Rating of Site Potential If score is: \Box 12 - 16 = H \Box 6 - 11 = M \Box 0 - 5 = L	Record the	rating on	the first page
D 2.0. Does the landscape have the potential to support the water quality function	on of the site	€?	
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1	No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that			
generate pollutants?	Yes = 1	No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1	No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are			
not listed in questions D 2.1 - D 2.3?			1
Source <u>I-5</u>	Yes = 1	No = 0	
Total for D 2 Add the points	in the boxe	s above	3
Rating of Landscape Potential If score is: 2 3 or 4 = H 1 or 2 = M 0 = L	Record the	rating on	the first page
D 3.0. Is the water quality improvement provided by the site valuable to society?			
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,			0
lake, or marine water that is on the 303(d) list?	Yes = 1	No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the	e 303(d) list	?	4
	Yes = 1	No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for			
maintaining water quality (answer YES if there is a TMDL for the basin in which			0
the unit is found)?	Yes = 2	No = 0	
Total for D 3 Add the points	in the boxe	s above	1
Rating of Value If score is: □ 2-4=H ☑ 1=M ☑ 0=L	Record the	rating on	the first page

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

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 ☑ Emergent 3 structures: points = 2 ☑ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☑ Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: ☑ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). ☑ Permanently flooded or inundated 4 or more types present: points = 3 ☑ Seasonally flooded or inundated 3 types present: points = 2 2 □ Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points □ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 3 **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are HIGH = 3 points

Check the habitat features that are present in the wetland. The number of checks is the number of points. □ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) □ Standing snags (dbh > 4 in) within the wetland (> 4 in diameter and 6 ft long) □ Standing snags (dbh > 4 in) within the wetland (> 4 in diameter and 6 ft long) □ Stable steep banks of fine material that might be used by beaver or muskrat for at least 3.3 ft (10 m) □ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed) □ At least ¼ as of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) □ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata) Total for H 1	H 1.5. Special habitat features:			
□ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) □ Standing snags (dbh > 4 in) within the wetland (> 4 in diameter and 6 ft long) □ Indercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 3.3 ft (10 m) □ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed) □ At least ½ as of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) □ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1,1 for list of strate) Total for H 1 Total for H 1 Total for H 2.0. Does the landscape have the potential to support the habitat function of the site? H 2.0. Does the landscape have the potential to support the habitat function of the site? H 2.0. Value of the method of	Check the habitat features that are present in the wetland. The number of checks is the number of			
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H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated. Site meets ANY of the following criteria: It has 3 or more priority habitats within 100 m (see next page) It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) It is mapped as a location for an individual WDFW priority species It is a Wetland of High Conservation Value as determined by the Department of Natural Resources It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above	H 3.0. Is the habitat provided by the site valuable to society?			
only the highest score that applies to the wetland being rated. Site meets ANY of the following criteria: points = 2 It has 3 or more priority habitats within 100 m (see next page) It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) It is mapped as a location for an individual WDFW priority species It is a Wetland of High Conservation Value as determined by the Department of Natural Resources It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above				
Site meets ANY of the following criteria: It has 3 or more priority habitats within 100 m (see next page) It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) It is mapped as a location for an individual WDFW priority species It is a Wetland of High Conservation Value as determined by the Department of Natural Resources It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1	· · · · · · · · · · · · · · · · · · ·			
 □ It has 3 or more priority habitats within 100 m (see next page) □ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) □ It is mapped as a location for an individual WDFW priority species □ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources □ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above 				
□ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) □ It is mapped as a location for an individual WDFW priority species □ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources □ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0				
or animal on the state or federal lists) It is mapped as a location for an individual WDFW priority species It is a Wetland of High Conservation Value as determined by the Department of Natural Resources It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	, , , , , , , , , , , , , , , , , , , ,			
☐ It is a Wetland of High Conservation Value as determined by the ☐ Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or ☐ regional comprehensive plan, in a Shoreline Master Plan, or in a ☐ watershed plan ☐ Site has 1 or 2 priority habitats (listed on next page) with in 100m ☐ points = 1 ☐ Site does not meet any of the criteria above ☐ Department of High Conservation Value as determined by the ☐ Department of High Conservation Value as determined by the ☐ Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or ☐ regional comprehensive plan, in a Shoreline Master Plan, or in a ☐ watershed plan ☐ Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or ☐ regional comprehensive plan, in a Shoreline Master Plan, or in a ☐ watershed plan ☐ Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or ☐ regional comprehensive plan, in a Shoreline Master Plan, or in a ☐ watershed plan ☐ Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or ☐ regional comprehensive plan, in a Shoreline Master Plan, or in a ☐ watershed plan ☐ Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or ☐ regional comprehensive plan, in a Shoreline Master Plan, or in a ☐ watershed plan ☐ Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or ☐ regional comprehensive plan, in a Shoreline Master Plan, or in a ☐ watershed plan ☐ Department of Natural Resources ☐ Departm				
Department of Natural Resources It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	☐ It is mapped as a location for an individual WDFW priority species	4		
☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0		I		
regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	Department of Natural Resources			
watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	· · · · · · · · · · · · · · · · · · ·			
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	· · · · · · · · · · · · · · · · · · ·			
Site does not meet any of the criteria above points = 0				
LIGHT OF VALUE IT COOPS ON 1 1 7 - LI 1/1 7 BR 1 1 13 1		Han Final		

Wetland Rating System for Western WA: 2014 Update Rating Form - Effective January 1, 2015

Wetland name	or number	W10	
vvenano name	e or number	VVIU	

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: NOTE: This question is independent of the land use between the wetland unit and the priority habitat. **Aspen Stands**: Pure or mixed stands of aspen greater than 1 ac (0.4 ha). Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlife (full descriptions in WDFW PHS report). **Herbaceous Balds**: Variable size patches of grass and forbs on shallow soils over bedrock. Old-growth/Mature forests: Old-growth west of Cascade crest - Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests - Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest. Oregon White Oak: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (full descriptions in WDFW PHS report p. 158 - see web link above). Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. □ Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161 - see web link above). Instream: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page). Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. **Cliffs**: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation. Talus: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are

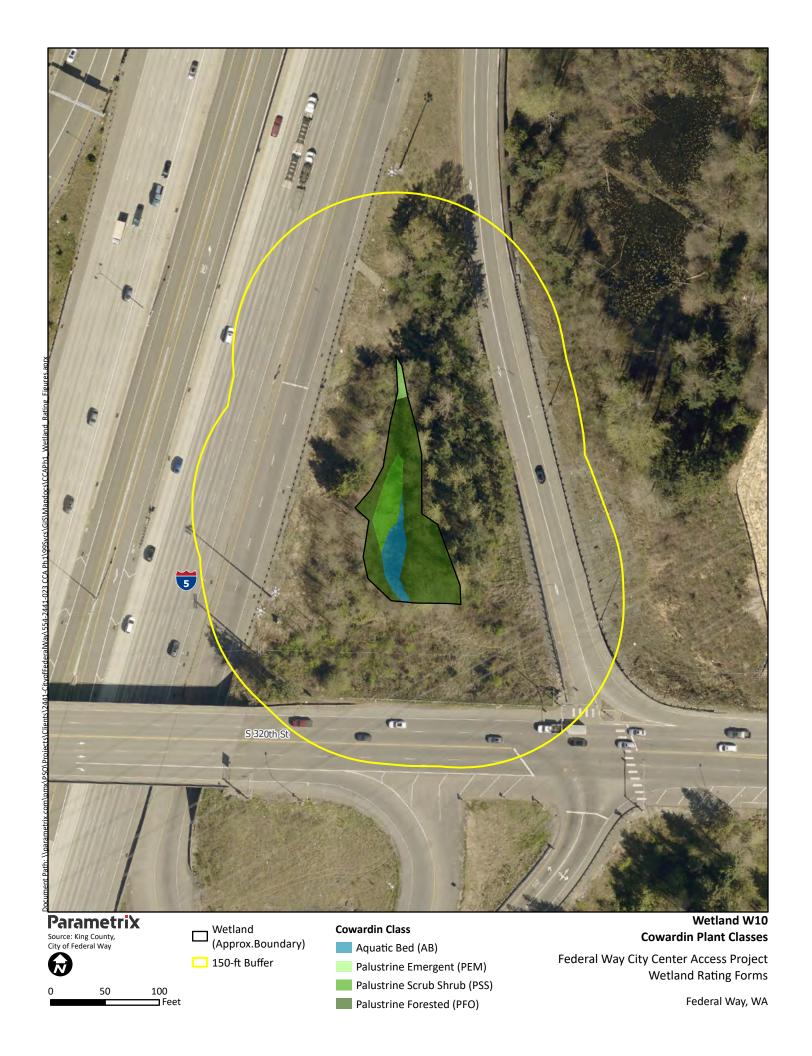
addressed elsewhere.

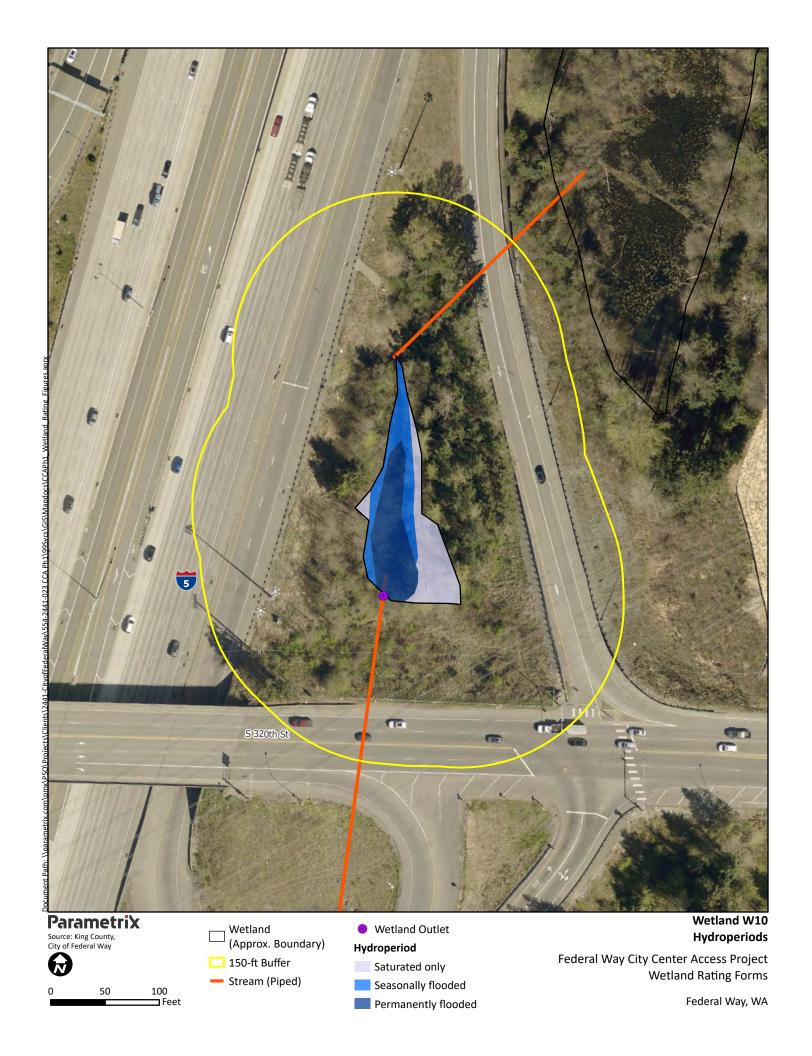
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12

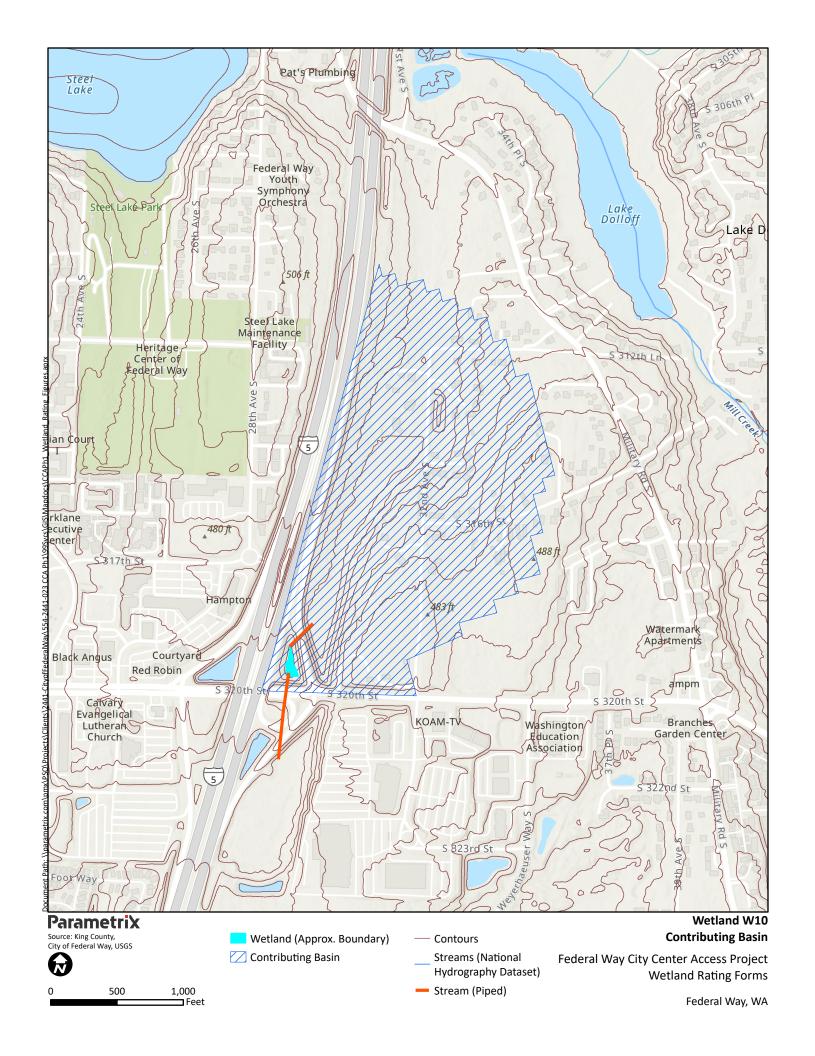
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

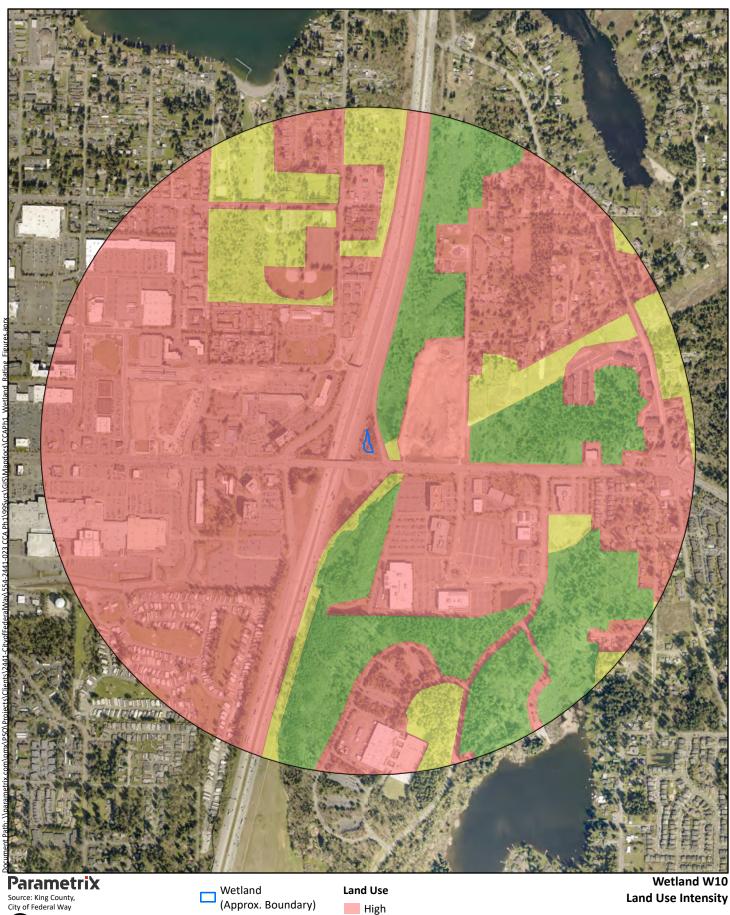
Wetland	Туре	Category
Chock of	f any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
	Estuarine Wetlands	
00 1.0. 1	Does the wetland meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☐ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve,	
	Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve	
	designated under WAC 332-30-151?	
	□ Yes = Category I □ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
	☐ Yes = Category I ☐ No = Category II	
	Wetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list of	
	Wetlands of High Conservation Value?	
00.00	✓ Yes - Go to SC 2.2 □ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
00.00	☐ Yes = Category I ☐ No = Not WHCV	
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes - Contact WNHP/WDNR and to SC 2.4 No = Not WHCV	
SC 2.4	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
SC 2.4.	Value and listed it on their website?	
	☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0.		
00 3.0. 1	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in	
	bogs? Use the key below. If you answer YES you will still need to rate the wetland	
	based on its functions	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
	that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	☐ Yes - Go to SC 3.3 ☐ No = Is not a bog	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground level,	
	AND at least a 30% cover of plant species listed in Table 4?	
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4	
	NOTE: If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
	the wetland is a bog.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,	
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce,	
	or western white pine, AND any of the species (or combination of species) listed in Table	
	4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

SC 4 0	Forested Wetlands	
JU 4.U.	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	· · · · · · · · · · · · · · · · · · ·	
	answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming	
	a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20	
	trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of	
_	32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-200	
	years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to	
	be measured near the bottom)	
	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon	
SC 5.1.	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing),	
	and has less than 20% cover of aggressive, opportunistic plant species (see list of	
	species on p. 100).	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland is larger than ¹ / ₁₀ ac (4350 ft ²)	
	$\square \text{ Yes} = \textbf{Category I} \qquad \square \text{ No} = \textbf{Category II}$	
SC 6.0	Interdunal Wetlands	
3C 0.0.	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland</i>	
	based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
	☐ Yes - Go to SC 6.1 ☑ No = Not an interdunal wetland for rating	
SC 6.1.	· ·	
	(rates H,H,H or H,H,M for the three aspects of function)?	
	□ Yes = Category I □ No - Go to SC 6.2	
SC 6.2.	ŭ ,	
	□ Yes = Category II □ No - Go to SC 6.3	
SC 6.3.	·	
	1 ac?	
	☐ Yes = Category III ☐ No = Category IV	
Catego	ry of wetland based on Special Characteristics	
If you or	oswarad No for all types, enter "Not Applicable" on Summary Form	











1,000 Feet 500

Wetland (Approx. Boundary)

☐ 1-km Polygon

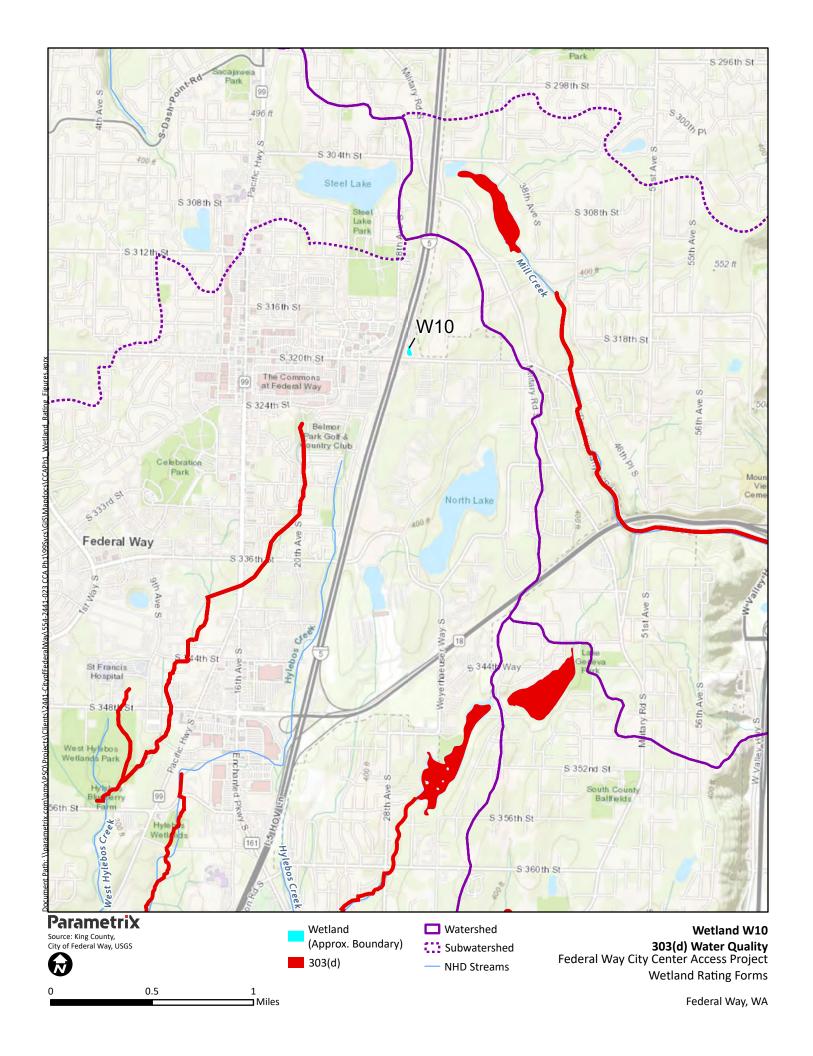
High

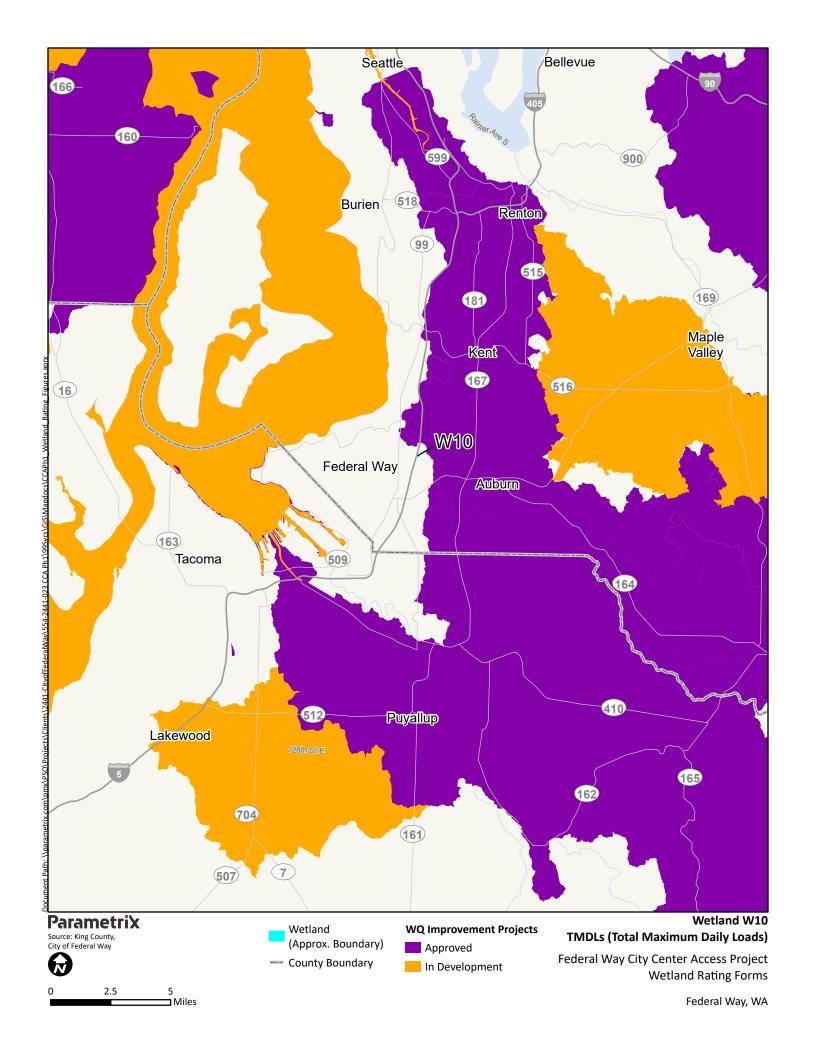
Low/moderate Undisturbed

Land Use Intensity

Federal Way City Center Access Project **Wetland Rating Forms**

Federal Way, WA





RATING SUMMARY – Western Washington

Name of wetland (or	ID #): W11				Date of site visit:	8/19/2020
Rated by Per Johns	on, Aaron Thom	Tr	ained by E	cology?⊡ Yes □ No	Date of training	2014, 2018
HGM Class used for	r rating Depression	nal & Flats		Wetland has multi	ole HGM classes? □	Yes ☑ No
NOTE: Fo	orm is not complete Source of base aer		•	equested (<i>figures cai</i> ty iMap	n be combined).	
OVERALL WETLAND CATEGORY II (based on functions ☑ or special characteristics □)						
1. Category of w	vetland based on	FUNCTION	S			
	Category 1	- Total score	= 23 - 27		Score for each	İ
	X Category	I - Total score	e = 20 - 22		function based	
	Category	II - Total sco	re = 16 - 19)	on three	
	Category	V - Total sco	re = 9 - 15		ratings	
					(order of ratings	
FUNCTION	Improving Water Quality	Hydrologic	Habitat		is not important)	
	l ist ann	ropriate ratino	I(HMI)			

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
List appropriate rating (H, M, L)				
Site Potential	Н	M	Н	
Landscape Potential	Н	Н	L	
Value	M	Н	М	Total
Score Based on Ratings	8	8	6	22

function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	Х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are th	ne water levels in the entire unit usual	ly controlled by tides	except dur	ing floods?
V	NO - go to 2	□ YES - the wetland	l class is T	idal Fringe - go to 1.1
1.1	Is the salinity of the water during per	riods of annual low flo	w below 0	.5 ppt (parts per thousand)?
	NO - Saltwater Tidal Fringe (Estua If your wetland can be classified as If it is Saltwater Tidal Fringe it is an used to score functions for estuarine	a Freshwater Tidal Fr Estuarine wetland a	inge use t	
	ntire wetland unit is flat and precipitativater and surface water runoff are NO			water to it.
4	NO - go to 3 If your wetland can be classified as		_	ne wetland class is Flats r Depressional wetlands.
	the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of At least 30% of the open water area	on the shores of a both	ıc (8 ha) ir	
V	NO - go to 4	□ YES - The wetlan	d class is	Lake Fringe (Lacustrine Fringe)
	the entire wetland unit meet all of the The wetland is on a slope (<i>slope call</i>). The water flows through the wetland It may flow subsurface, as sheetflow The water leaves the wetland witho .	n be very gradual), I in one direction (unic v, or in a swale withou	t distinct b	
V	NO - go to 5		YES - T	ne wetland class is Slope
	surface water does not pond in these ons or behind hummocks (depression			
	the entire wetland unit meet all of the The unit is in a valley, or stream cha from that stream or river, The overbank flooding occurs at lea	nnel, where it gets in		voverbank flooding
V	NO - go to 6	Е	YES - T	ne wetland class is Riverine
NOTE: T	he Riverine unit can contain depressi	ons that are filled with	n water wh	en the river is not flooding.

Wetland name or number W11	Wetland	name	or number	W11
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1 0 1	nic depression in which water ponds, or is saturated to the surface, at hat any outlet, if present, is higher than the interior of the wetland.
□ NO - go to 7	☑ YES - The wetland class is Depressional
The unit does not pond surface water mor	ery flat area with no obvious depression and no overbank flooding? re than a few inches. The unit seems to be maintained by high y be ditched, but has no obvious natural outlet.
□ NO - go to 8	☐ YES - The wetland class is Depressional

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

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

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

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

NOTES and FIELD OBSERVATIONS: Outlet is culvert leading to W10.

DEPRESSIONAL AND FLATS WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality		
D 1.1. Characteristics of surface water outflows from the wetland:		
Wetland is a depression or flat depression (QUESTION 7 on key)		
with no surface water leaving it (no outlet).	points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	nointa – 2	2
 Wetland has an unconstricted, or slightly constricted, surface outlet 	points = 2	2
that is permanently flowing	points = 1	
☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is		
a permanently flowing ditch.	points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic		4
(use NRCS definitions).	Yes = 4 No = 0	
D 1.3. <u>Characteristics and distribution of persistent plants</u> (Emergent, Scrub-sh Forested Cowardin classes):	nrub, and/or	
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > ½ of area	points = 3	5
Wetland has persistent, ungrazed plants > 1/10 of area	points = 1	
Wetland has persistent, ungrazed plants < 1/10 of area	points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:	·	
This is the area that is ponded for at least 2 months. See description	in manual.	
Area seasonally ponded is > 1/2 total area of wetland	points = 4	4
Area seasonally ponded is > 1/4 total area of wetland	points = 2	
Area seasonally ponded is < 1/4 total area of wetland	points = 0	
·	in the boxes above	15
Rating of Site Potential If score is: ☑ 12 - 16 = H ☐ 6 - 11 = M ☐ 0 - 5 = L	Record the rating on	the first page
D 2.0. Does the landscape have the potential to support the water quality funct	ion of the site?	
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that		1
generate pollutants?	Yes = 1 No = 0	<u>'</u>
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3?		4
Source <u>I-5</u>	Yes = 1 No = 0	1
	in the boxes above	3
Rating of Landscape Potential If score is: 2 3 or 4 = H 1 1 or 2 = M 1 0 = L		
	•	
D 3.0. Is the water quality improvement provided by the site valuable to society	/?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,	V 4 N- 0	0
lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the sub-basin where an aquatic resource is only the sub-basin where a sub-basin where	Yes = 1 No = 0	
D 3.2. Is the wettand in a pasin of sub-pasin where an aquatic resource is on the	Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important	1.0 - 0	
for maintaining water quality (answer YES if there is a TMDL for the basin in		0
which the unit is found)?	Yes = 2 No = 0	
Total for D 3 Add the points	in the boxes above	1
Rating of Value If score is: □ 2-4=H □ 1=M □ 0=L	Record the rating on	the first page

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

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 ☑ Emergent 3 structures: points = 2 ☑ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☑ Forested (areas where trees have > 30% cover) 1 structure: points = 0If the unit has a Forested class, check if: ☑ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). ☑ Permanently flooded or inundated 4 or more types present: points = 3 ☑ Seasonally flooded or inundated 3 types present: points = 2 2 □ Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 2 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 3 **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number</i>	
of points.	
☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)	
☑ Standing snags (dbh > 4 in) within the wetland	
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at	
least 33 ft (10 m)	4
☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning	•
(> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees	
that have not yet weathered where wood is exposed)	
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas	
that are permanently or seasonally inundated (structures for egg-laying by amphibians)	
☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see	
H 1.1 for list of strata) Total for H 1 Add the points in the boxes above	45
Total for H 1 Add the points in the boxes above Rating of Site Potential If Score is: ☑ 15 - 18 = H ☐ 7 - 14 = M ☐ 0 - 6 = L Record the rating on	the first nage
Training of Orice Following in Occidence in 10-10-11 1-14-11 0-0-1	the mot page
H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).	
Calculate:	
4 % undisturbed habitat + (0 % moderate & low intensity land uses / 2) = 4%	
If total accessible habitat is:	0
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20 - 33% of 1 km Polygon points = 2	
10 - 19% of 1 km Polygon points = 1	
< 10 % of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate:	
15 % undisturbed habitat + (24 % moderate & low intensity land uses / 2) = 27%	
15 /0 diffusion of the first of	_
Undisturbed habitat > 50% of Polygon points = 3	1
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2	
Undisturbed habitat 10 - 50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3 Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-2)	-2
≤ 50% of 1km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above Rating of Landscape Potential If Score is: □ 4-6=H □ 1-3=M ☑ <1=L Record the rating on	
Rating of Landscape Potential if Score is. 4-6=H 1-3=M < 1=L Record the rating of	ine insi paye
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose</i>	
only the highest score that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
☐ It has 3 or more priority habitats within 100 m (see next page)	
☐ It provides habitat for Threatened or Endangered species (any plant	
or animal on the state or federal lists)	
 ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the 	1
Department of Natural Resources	
☐ It has been categorized as an important habitat site in a local or	
regional comprehensive plan, in a Shoreline Master Plan, or in a	
watershed plan	
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1	
Site does not meet any of the criteria above points = 0	
Rating of Value If Score is: 2 = H 2 1 = M 0 = L Record the rating on	the first page

Motlond	nama	or number	W11	
vvetland	name	or number	VVTT	

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

Ш	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
V	Old-growth/Mature forests: Old-growth west of Cascade crest — Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha > 32 in (81 cm) dbh or > 200 years of age. Mature forests — Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158</i> – see web link above).
	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report</i> – see web link on previous page).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
V	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
Check off	f any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☐ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	•
_	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
20.00	☐ Yes = Category I ☐ No = Category II	
SC 2.0. V	Wetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?	
	✓ Yes - Go to SC 2.2 □ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
00 2.2.	☐ Yes = Category I ☐ No = Not WHCV	
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
00 2.0.	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
	Value and listed it on their website?	
	☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. I		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation	
	in bogs? Use the key below. If you answer YES you will still need to rate the	
	wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
	that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	□ Yes - Go to SC 3.3	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4?	
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4	
	NOTE : If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
SC 3.4.	the wetland is a bog.	
00 0.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann	
	spruce, or western white pine, AND any of the species (or combination of species)	
	listed in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	
	□ 165 – 15 a Category i bog □ 100 = 15 flot a bog	

SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
	200 years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
20.5.0	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	
	•	
SC 5 1	☐ Yes - Go to SC 5.1 ☑ No = Not a wetland in a coastal lagoon Does the wetland meet all of the following three conditions?	
GC 5.1.	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,	
	grazing), and has less than 20% cover of aggressive, opportunistic plant species (see	
	list of species on p. 100).	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
_	grazed or un-mowed grassland.	
	The wetland is larger than $\frac{1}{10}$ ac (4350 ft ²)	
	☐ Yes = Category I ☐ No = Category II	
SC 6.0.	Interdunal Wetlands	
	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland	
	based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating	
SC 6.1.		
	(rates H,H,H or H,H,M for the three aspects of function)?	
	□ Yes = Category I □ No - Go to SC 6.2	
SC 6.2.		
	□ Yes = Category II □ No - Go to SC 6.3	
SC 6.3.	Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and	
	1 ac?	
	☐ Yes = Category III ☐ No = Category IV	
_	ry of wetland based on Special Characteristics	
If you ar	nswered No for all types, enter "Not Applicable" on Summary Form	



Parametrix Source: King County, City of Federal Way



0 50100 Feet

Wetland (Approx.Boundary)

150-ft Buffer

Cowardin Class

Aquatic Bed (AB)

Palustrine Emergent (PEM)

Palustrine Scrub Shrub (PSS)

Palustrine Forested (PFO)

Cowardin Plant Classes

Federal Way City Center Access Project **Wetland Rating Forms**





0 50 100 Feet

Wetland (Approx. Boundary)

150-ft Buffer

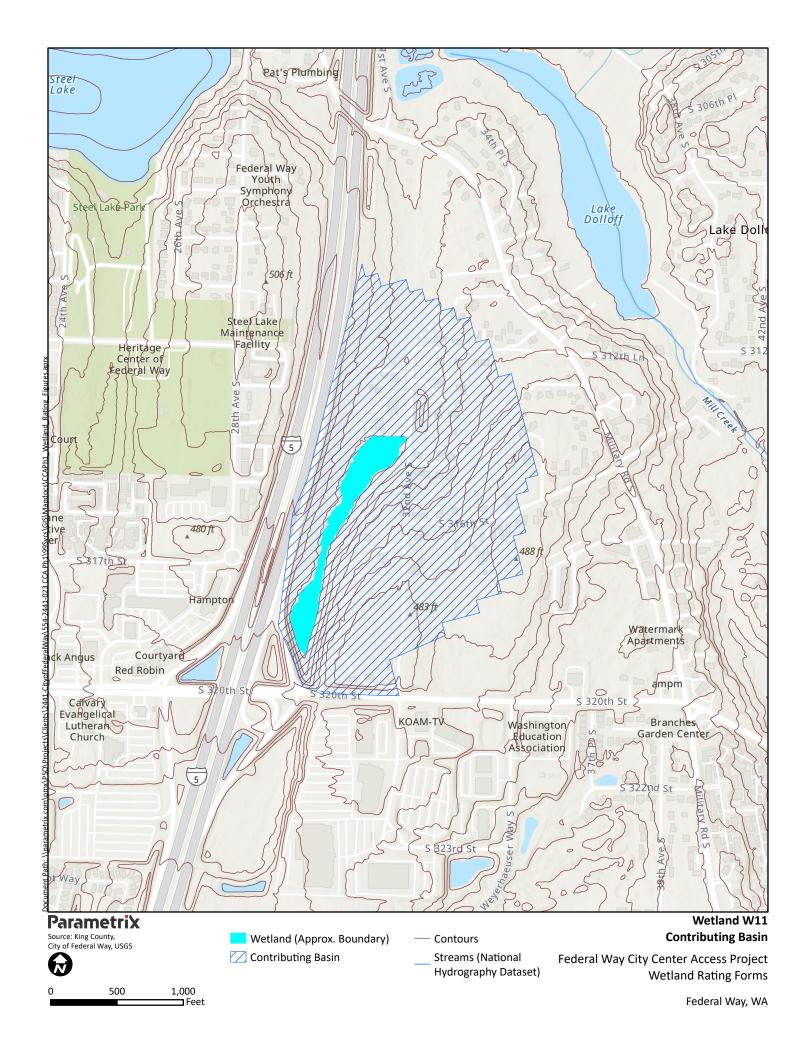
Stream (Piped)

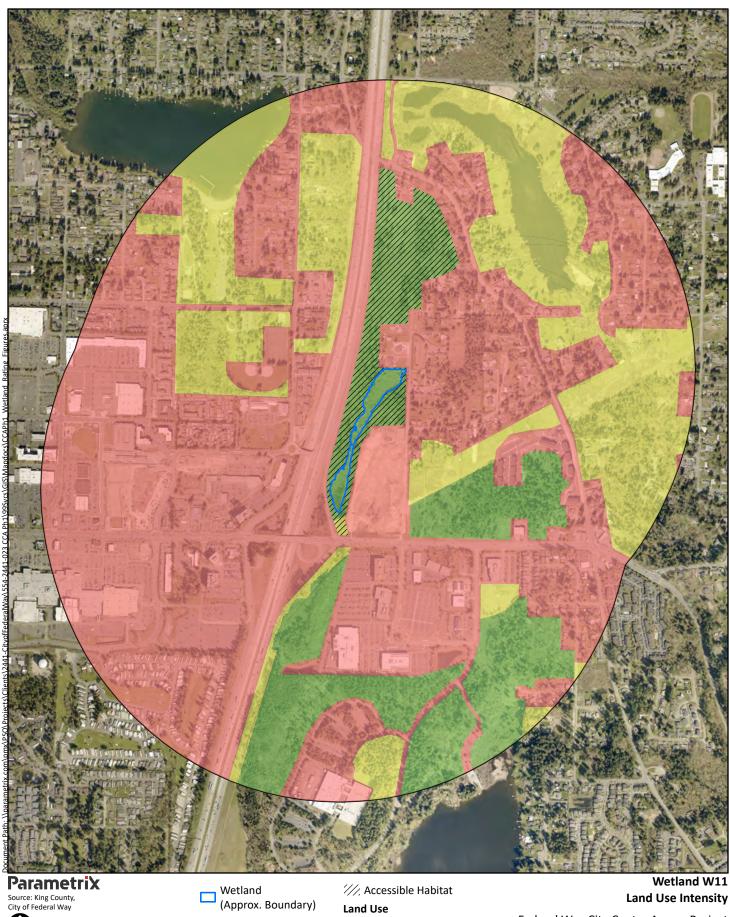
Hydroperiod

Saturated only

Seasonally flooded Permanently flooded Hydroperiods

Federal Way City Center Access Project **Wetland Rating Forms**







1,000 Feet 500

Wetland (Approx. Boundary)

☐ 1-km Polygon

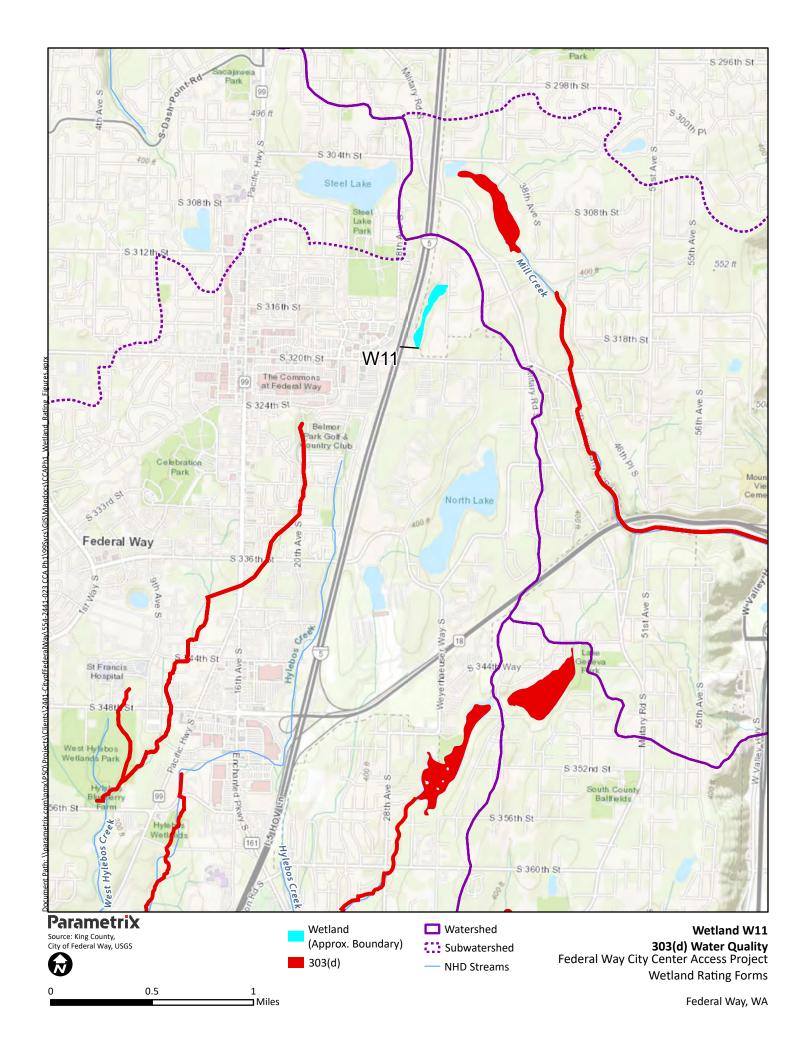
Land Use

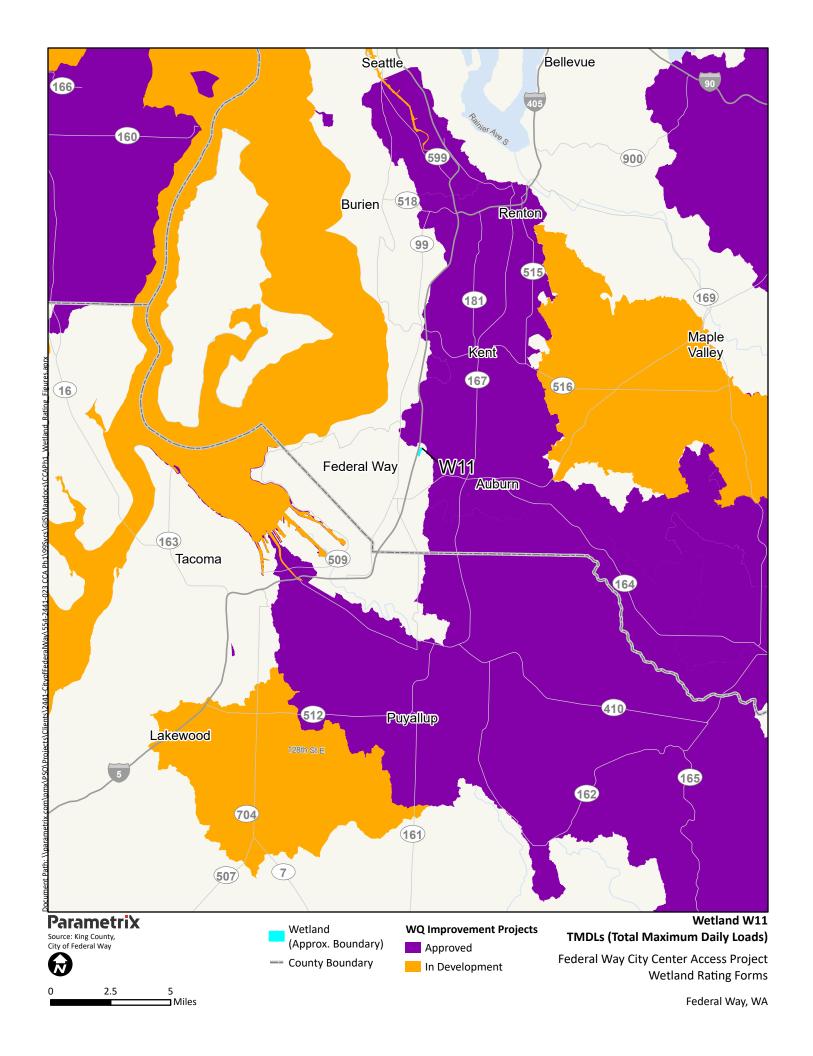
High

Low/moderate

Undisturbed

Federal Way City Center Access Project Wetland Rating Forms





RATING SUMMARY – Western Washington

Name of wetland (or	ID #): W12				Date of site visit:	8/19/20,6/11/2
Rated by Per Johns	on, Anna Hoenig	Tra	ained by Ed	cology?	o Date of training	2014, 2015
HGM Class used fo	r rating Slope			Wetland has mult	iple HGM classes? □	Yes ☑ No
NOTE: Fo	orm is not complete Source of base aeria		•	equested (figures o	can be combined).	_
OVERALL WETLA	AND CATEGORY _	IV	(based on	functions ☑ or spe	cial characteristics □)
1. Category of v	wetland based on					1
	Category I	 Total score 	= 23 - 27		Score for each	
	Category II	I - Total score	e = 20 - 22		function based	
	Category II	II - Total sco	re = 16 - 19)	on three	
	X Category IV	V - Total sco	re = 9 - 15		ratings	
					(order of ratings	
EUNCTION	Improving	Hydrologic	Habitat		is not	

1

FUNCTION	Improving Water Quality	Hydrologic	Habitat		
	List app	ropriate rating	(H, M, L)		
Site Potential	M	M L L			
Landscape Potential	M	М	L		
Value	M	Н	L	Total	
Score Based on Ratings	6	6	3	15	

Score for each function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	Х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

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

1. Are tr	ne water levels in the entire unit usua	any controlled by tide	s except during floods?					
V	NO - go to 2	□ YES - the wetlar	nd class is Tidal Fringe - go to 1.1					
1.1	Is the salinity of the water during pe	Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?						
	NO - Saltwater Tidal Fringe (Estua If your wetland can be classified as wetlands. If it is Saltwater Tidal Frin cannot be used to score functions	a Freshwater Tidal I nge it is an Estuarin	e wetland and is not scored. This method					
	ntire wetland unit is flat and precipita vater and surface water runoff are NC							
V	NO - go to 3 If your wetland can be classified as		☐ YES - The wetland class is Flats the form for Depressional wetlands.					
	the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of At least 30% of the open water area.	s on the shores of a l the year) at least 20						
V	NO - go to 4	□ YES - The wetla	nd class is Lake Fringe (Lacustrine Fringe)					
\ \	the entire wetland unit meet all of the The wetland is on a slope (<i>slope ca</i> The water flows through the wetland It may flow subsurface, as sheetflow The water leaves the wetland withc	n be very gradual), d in one direction (ur v, or in a swale witho						
	NO - go to 5		☑ YES - The wetland class is Slope					
	Surface water does not pond in these ons or behind hummocks (depressions)		cept occasionally in very small and shallow diameter and less than 1 ft deep).					
	the entire wetland unit meet all of the The unit is in a valley, or stream cha flooding from that stream or river, The overbank flooding occurs at lea	annel, where it gets i	•					
	NO - go to 6		☐ YES - The wetland class is Riverine					
NOTE: T	he Riverine unit can contain depress	sions that are filled w	rith water when the river is not flooding.					

Motland	name or number	1//12	
vvetiano	name or number	VV12	

1 0	phic depression in which water ponds, or is saturated to the surface ons that any outlet, if present, is higher than the interior of the
□ NO - go to 7	☐ YES - The wetland class is Depressional
The unit does not pond surface water m	very flat area with no obvious depression and no overbank flooding ore than a few inches. The unit seems to be maintained by high ay be ditched, but has no obvious natural outlet.
□ NO - go to 8	☐ YES - The wetland class is Depressional

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

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

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

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

SLOPE WETLANDS				
Water Quality Functions - Indicators that the site functions to ir	nprove wate	r quality		
S 1.0. Does the site have the potential to improve water quality?				
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a	1 ft vertical	drop		
in elevation for every 100 ft of horizontal distance)				
Slope is 1% or less	po	ints = 3	2	
Slope is > 1% - 2%	po	ints = 2	2	
Slope is > 2% - 5%	po	ints = 1		
Slope is greater than 5%	po	ints = 0		
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true			0	
organic (use NRCS definitions):	Yes = 3	No = 0	0	
S 1.3. Characteristics of the plants in the wetland that trap sediments and po	llutants:			
Choose the points appropriate for the description that best fits the plants in the				
means you have trouble seeing the soil surface (>75% cover), and uncut me	ans not graz	ed or		
mowed and plants are higher than 6 in.				
Dense, uncut, herbaceous plants > 90% of the wetland area	-	ints = 6	6	
Dense, uncut, herbaceous plants > ½ of area	· ·	ints = 3		
Dense, woody, plants > ½ of area	-	ints = 2		
Dense, uncut, herbaceous plants > 1/4 of area	•	ints = 1		
Does not meet any of the criteria above for plants		ints = 0	8	
Total for S 1 Add the points in the boxes above				
Rating of Site Potential If score is: 12 = H 6 - 11 = M 0 - 5 = L	Record the I	rating on	the first page	
S 2.0. Does the landscape have the potential to support the water quality fun	ction of the s	site?		
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in				
land uses that generate pollutants?	Yes = 1	No = 0	1	
S 2.2. Are there other sources of pollutants coming into the wetland that are				
not listed in question S 2.1?			1	
Other Sources I-5	Yes = 1	No = 0		
Total for S 2 Add the points	in the boxes	above	2	
Rating of Landscape Potential If score is: ☑ 1 - 2 = M □ 0 = L			the first page	
		Ü	, 0	
S 3.0. Is the water quality improvement provided by the site valuable to socie	ty?			
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream,			0	
river, lake, or marine water that is on the 303(d) list?	Yes = 1	No = 0	0	
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue?			1	
At least one aquatic resource in the basin is on the 303(d) list.	Yes = 1	No = 0	ı	
S 3.3. Has the site been identified in a watershed or local plan as important				
for maintaining water quality? Answer YES if there is a TMDL for the basin			0	
in which the unit is found?	Yes = 2	No = 0		
Total for S 3 Add the points	in the boxes	above	1	
Rating of Value If score is: \Box 2 - 4 = H \Box 1 = M \Box 0 = L	Record the I	rating on	the first page	

SLOPE WETLANDS				
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream er				
S 4.0. Does the site have the potential to reduce flooding and stream erosion		031011		
5 4.1. Characteristics of plants that reduce the velocity of surface flows duffin	ig storms. Choose 			
the points appropriate for the description that best fits conditions in the wetlar	nd. Stems of plants			
should be thick enough (usually > $^{1}/_{8}$ in), or dense enough, to remain erect	during surface	0		
flows		0		
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1			
All other conditions	points = 0			
Rating of Site Potential If score is: \Box 1 = M \boxdot 0 = L	Record the rating on	the first page		
S 5.0. Does the landscape have the potential to support hydrologic functions	of the site?			
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land		1		
uses or cover that generate excess surface runoff?	Yes = 1 No = 0	'		
Rating of Landscape Potential If score is: 1 = M 0 = L Record the rating on				
S 6.0. Are the hydrologic functions provided by the site valuable to society?				
S 6.1. Distance to the nearest areas downstream that have flooding problem	s:			
The sub-basin immediately down-gradient of site has flooding				
problems that result in damage to human or natural resources		0		
(e.g., houses or salmon redds)	points = 2	2		
Surface flooding problems are in a sub-basin farther down-gradient	points = 1			
No flooding problems anywhere downstream	points = 0			
S 6.2. Has the site been identified as important for flood storage or flood	11 - 12 -			
conveyance in a regional flood control plan?	Yes = 2 No = 0	0		
·	in the boxes above	2		
Rating of Value If score is: ☑ 2-4=H ☐ 1=M ☐ 0=L	Record the rating on			
		- 1,		

NOTES and FIELD OBSERVATIONS:

Its outlet is a catchbasin at the southern point.

These questions apply to wetlands of all HGM classes.	
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.	
 □ Aquatic bed □ Emergent □ Scrub-shrub (areas where shrubs have > 30% cover) □ Forested (areas where trees have > 30% cover) □ If the unit has a Forested class, check if: □ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon 	0
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). □ Permanently flooded or inundated 4 or more types present: points = 3	
□ Seasonally flooded or inundated 3 types present: points = 2 □ Occasionally flooded or inundated 2 types present: points = 1 □ Saturated only 1 types present: points = 0 □ Permanently flowing stream or river in, or adjacent to, the wetland □ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points	0
☐ Freshwater tidal wetland 2 points	
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1	0
< 5 species points = 0	
H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high.	0
None = 0 points	
All three diagrams in this row are HIGH = 3 points	

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number	
of points.	
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)	
☐ Standing snags (dbh > 4 in) within the wetland	
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends	
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at	
least 33 ft (10 m)	0
☐ Stable steep banks of fine material that might be used by beaver or muskrat for	
denning (> 30 degree slope) OR signs of recent beaver activity are present (cut	
shrubs or trees that have not yet weathered where wood is exposed)	
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in	
areas that are permanently or seasonally inundated (structures for egg-laying by	
☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants	
(see H 1.1 for list of strata)	
Total for H 1 Add the points in the boxes above	0
Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 0 - 6 = L Record the rating on	the first page
H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).]
Calculate:	
0 % undisturbed habitat + (0 % moderate & low intensity land uses / 2) = 0%	
<u> </u>	
If total accessible habitat is:	0
	U
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20 - 33% of 1 km Polygon points = 2	
10 - 19% of 1 km Polygon points = 1	
< 10 % of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate:	
18 % undisturbed habitat + (10 % moderate & low intensity land uses / 2) = 23%	
Undisturbed habitat > 50% of Polygon points = 3	1
·	
· ·	
Undisturbed habitat 10 - 50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3 Land use intensity in 1 km Polygon: If	_
> 50% of 1 km Polygon is high intensity land use points = (-2)	
≤ 50% of 1km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above	
Rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating on	the first page
LL 2.0. In the habitet provided by the site valuable to assist of	
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose</i>	
only the highest score that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
☐ It has 3 or more priority habitats within 100 m (see next page)	
☐ It provides habitat for Threatened or Endangered species (any	
plant or animal on the state or federal lists)	
☐ It is mapped as a location for an individual WDFW priority species	0
It is a Wetland of High Conservation Value as determined by the	
Department of Natural Resources	
☐ It has been categorized as an important habitat site in a local or	
regional comprehensive plan, in a Shoreline Master Plan, or in a	
watershed plan	
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1	
Site does not meet any of the criteria above points = 0	
Rating of Value If Score is: \square 2 = H \square 1 = M \square 0 = L Record the rating or	the first page

Wetland Rating System for Western WA: 2014 Update Rating Form - Effective January 1, 2015

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

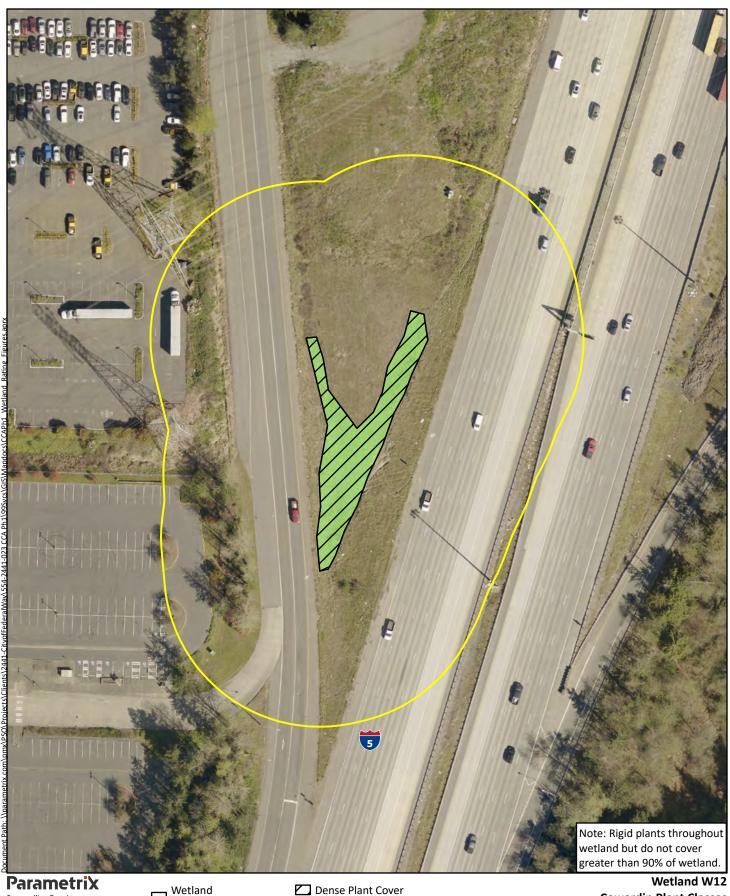
Ш	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158</i> – see web link above).
	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page</i>).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category				
0, , ,						
	f any criteria that apply to the wetland. List the category when the appropriate criteria are met. Estuarine Wetlands					
30 1.0.1	Does the wetland meet the following criteria for Estuarine wetlands?					
	The dominant water regime is tidal,					
	Vegetated, and					
	With a salinity greater than 0.5 ppt					
	☐ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland					
SC 1.1.						
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or					
	Scientific Reserve designated under WAC 332-30-151?					
	$\square \ \ \text{Yes} = \textbf{Category I} \qquad \qquad \square \ \ \text{No - Go to SC 1.2}$					
SC 1.2.	ŏ					
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,					
	grazing, and has less than 10% cover of non-native plant species. (If non-native					
	species are <i>Spartina</i> , see page 25) At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or					
	un-grazed or un-mowed grassland.					
	The wetland has at least two of the following features: tidal channels, depressions with					
	open water, or contiguous freshwater wetlands.					
	□ Yes = Category I □ No = Category II					
SC 2.0. \	Wetlands of High Conservation Value (WHCV)					
SC 2.1.	` ,					
	of Wetlands of High Conservation Value?					
	☑ Yes - Go to SC 2.2 □ No - Go to SC 2.3					
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value					
	□ Yes = Category I					
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?					
	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf					
00 0 4	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV					
SC 2.4.	4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?					
	☐ Yes = Category I ☐ No = Not WHCV					
SC 3.0. I						
	Does the wetland (or any part of the unit) meet both the criteria for soils and					
	vegetation in bogs? Use the key below. If you answer YES you will still need to					
	rate the wetland based on its functions.					
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or					
	mucks, that compose 16 in or more of the first 32 in of the soil profile?					
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2					
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that					
	are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or					
	volcanic ash, or that are floating on top of a lake or pond?					
SC 3.3.	☐ Yes - Go to SC 3.3 ☐ No = Is not a bog					
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?					
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4					
	NOTE: If you are uncertain about the extent of mosses in the understory, you may					
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at					
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are					
	present, the wetland is a bog.					
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,					
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann					
	spruce, or western white pine, AND any of the species (or combination of species)					
	listed in Table 4 provide more than 30% of the cover under the canopy?					
	☐ Yes = Is a Category I bog ☐ No = Is not a bog					

SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If</i>	
	you answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
	200 years old OR the species that make up the canopy have an average diameter	
	(dbh) exceeding 21 in (53 cm).	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less	
	frequently, rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs	
	to be measured near the bottom)	
00 - 1	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon	
	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,	
	grazing), and has less than 20% cover of aggressive, opportunistic plant species (see	
	list of species on p. 100).	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or	
	un-grazed or un-mowed grassland.	
	The wetland is larger than $^{1}/_{10}$ ac (4350 ft²)	
20.00	☐ Yes = Category I ☐ No = Category II	
SC 6.0.	Interdunal Wetlands	
	Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland</i>	
	based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating	
SC 6 1	Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form	
00 0	(rates H,H,H or H,H,M for the three aspects of function)?	
	☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.2.		
	□ Yes = Category II □ No - Go to SC 6.3	
SC 6.3.		
	and 1 ac?	
	☐ Yes = Category III ☐ No = Category IV	
Catego	ry of wetland based on Special Characteristics	
_	nswered No for all types, enter "Not Applicable" on Summary Form	



Parametrix
Source: King County,
City of Federal Way

Wetland (Approx.Boundary)

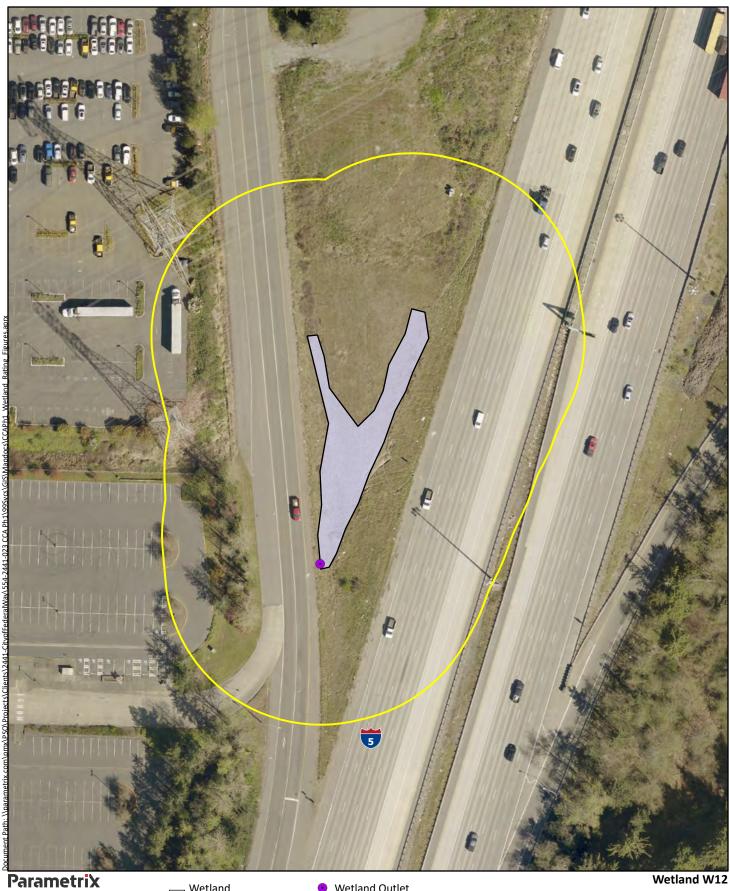
150-ft Buffer

Cowardin Class

Palustrine Emergent (PEM)

Cowardin Plant Classes

Federal Way City Center Access Project **Wetland Rating Forms**



Parametrix
Source: King County,
City of Federal Way

Wetland (Approx. Boundary)

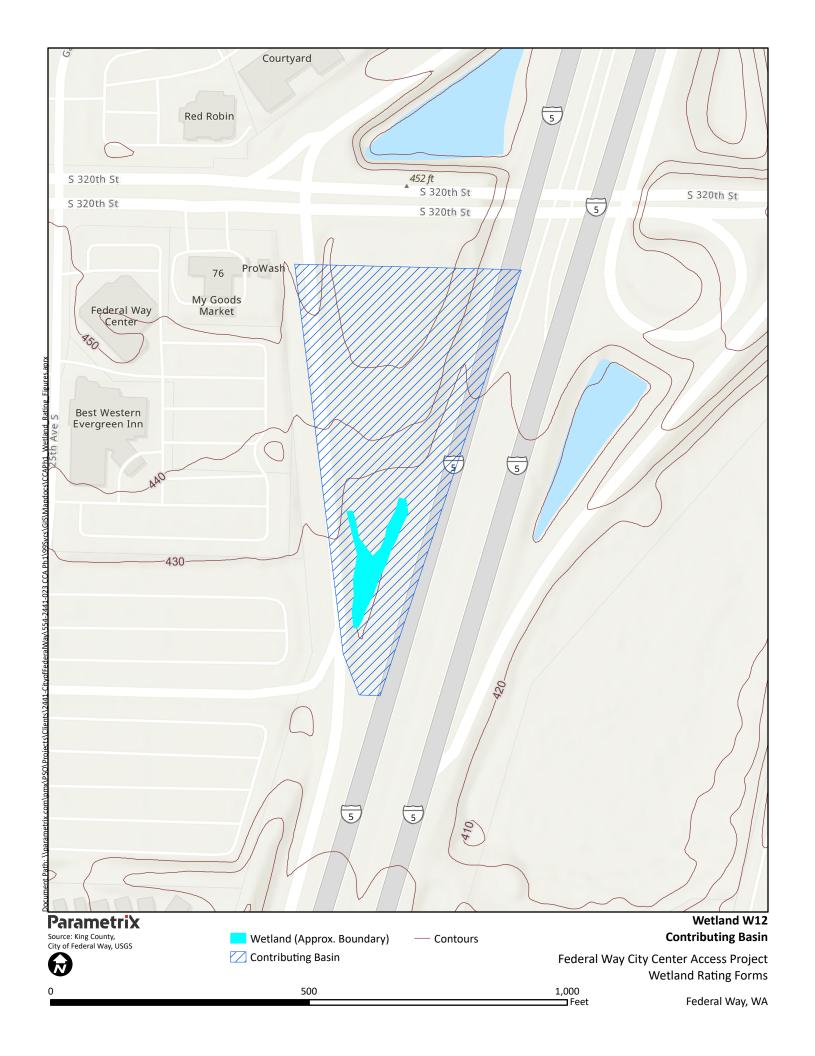
150-ft Buffer

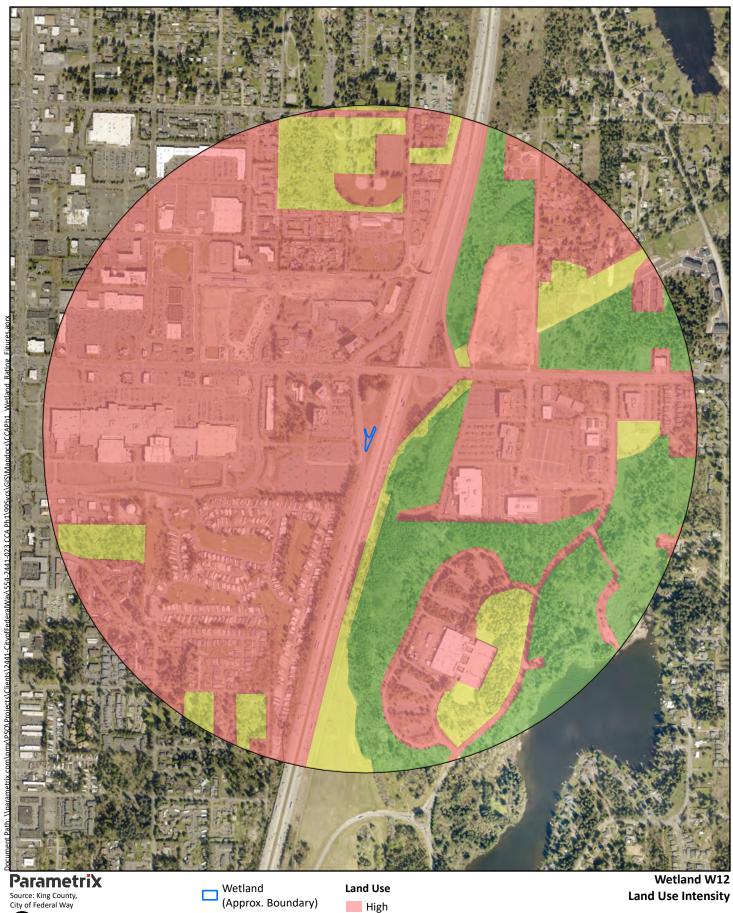
• Wetland Outlet Hydroperiod

Saturated only

Hydroperiods

Federal Way City Center Access Project **Wetland Rating Forms**







1,000 Feet 500

Wetland (Approx. Boundary)

☐ 1-km Polygon

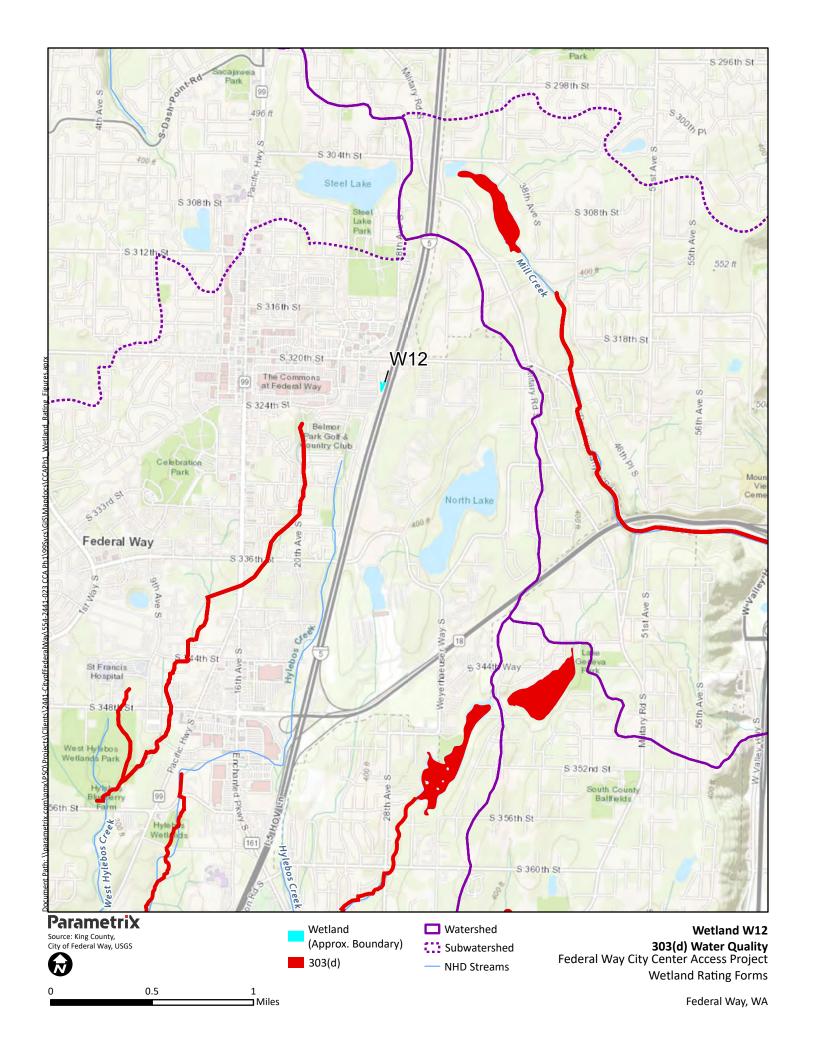
High

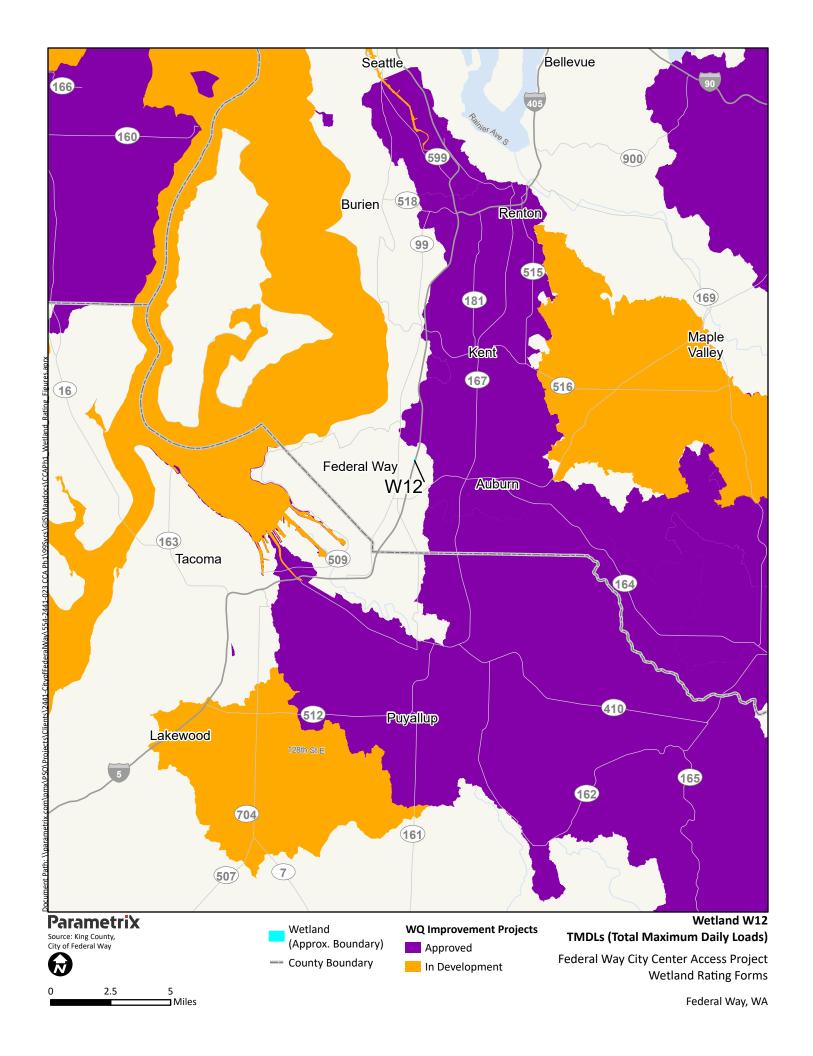
Low/moderate

Undisturbed

Land Use Intensity

Federal Way City Center Access Project Wetland Rating Forms





RATING SUMMARY – Western Washington

Name of wetland (or ID #):	W13					Date of site visit:	9/2/2020
Rated by Per Johnson, A	aron Thom	_ Tı	rained by E	cology?⊡	Yes □ No	Date of training	2014, 2018
HGM Class used for ratir	g Depressio	nal & Flats		Wetlan	d has multip	le HGM classes? □	Yes ☑ No
NOTE: Form is Sour	-	e with out the rial photo/map		equested	(figures can	be combined).	
OVERALL WETLAND CATEGORY II (based on functions ☑ or special characteristics □)							
1. Category of wetla	nd based or	FUNCTION	IS				
	Category	I - Total score	= 23 - 27			Score for each	
X Category II - Total score = 20 - 22					function based		
					on three		
				ratings			
	_					(order of ratings	
	nproving	Hydrologic	Habitat			is not	
FUNCTION	ter Quality	roprioto rotina				important)	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	ropriate rating	g (H, M, L)	
Site Potential	M	M	М	
Landscape Potential	Н	Н	L	
Value	M	Н	М	Total
Score Based on Ratings	7	8	5	20

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are th	ne water levels in the entire unit usuall	y controlled by tides ex	xcept d	uring floods?
V	NO - go to 2	☐ YES - the wetland	class is	Tidal Fringe - go to 1.1
1.1	Is the salinity of the water during peri	ods of annual low flow	v below	0.5 ppt (parts per thousand)?
	NO - Saltwater Tidal Fringe (Estual If your wetland can be classified as a If it is Saltwater Tidal Fringe it is an i used to score functions for estuarine	a Freshwater Tidal Frir Estuarine wetland an	nge use	
	ntire wetland unit is flat and precipitation vater and surface water runoff are NO			
V	NO - go to 3 If your wetland can be classified as a			The wetland class is Flats for Depressional wetlands.
	the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of t At least 30% of the open water area	on the shores of a boo he year) at least 20 ac	(8 ha)	
V	NO - go to 4	□ YES - The wetland	class i	s Lake Fringe (Lacustrine Fringe)
	the entire wetland unit meet all of the The wetland is on a slope (<i>slope can</i> The water flows through the wetland It may flow subsurface, as sheetflow, The water leaves the wetland withou	be very gradual), in one direction (unidior in a swale without		
V	NO - go to 5		YES -	The wetland class is Slope
	Surface water does not pond in these to ons or behind hummocks (depression			
	the entire wetland unit meet all of the The unit is in a valley, or stream char from that stream or river, The overbank flooding occurs at leas	nnel, where it gets inur	ndated	by overbank flooding
V	NO - go to 6		YES -	The wetland class is Riverine
NOTE: T	he Riverine unit can contain depression	ons that are filled with	water \	when the river is not flooding.

Wetland	nama	or nu	mhar	W13	
vvenano	name	Or mil	mner	VV 1.3	

1 9 1	whic depression in which water ponds, or is saturated to the surface, at that any outlet, if present, is higher than the interior of the wetland.
□ NO - go to 7	YES - The wetland class is Depressional
The unit does not pond surface water mo	very flat area with no obvious depression and no overbank flooding? ore than a few inches. The unit seems to be maintained by high ay be ditched, but has no obvious natural outlet.
□ NO - go to 8	☐ YES - The wetland class is Depressional

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

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

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

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

NOTES and FIELD OBSERVATIONS:

DEPRESSIONAL AND FLATS WETLA	NDS	
Water Quality Functions - Indicators that the site functions to im	prove water quality	
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland:		
Wetland is a depression or flat depression (QUESTION 7 on key)		
with no surface water leaving it (no outlet).	points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	nointa – 2	3
 Wetland has an unconstricted, or slightly constricted, surface outlet 	points = 2	3
that is permanently flowing	points = 1	
☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is		
a permanently flowing ditch.	points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic		0
(use NRCS definitions).	Yes = 4 No = 0	
D 1.3. <u>Characteristics and distribution of persistent plants</u> (Emergent, Scrub-sh Forested Cowardin classes):	rub, and/or	
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	
Wetland has persistent, ungrazed, plants > ½ of area	points = 3	5
Wetland has persistent, ungrazed plants > 1 / ₁₀ of area	points = 1	
Wetland has persistent, ungrazed plants < 1/10 of area	points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:	•	
This is the area that is ponded for at least 2 months. See description	in manual.	
Area seasonally ponded is > $\frac{1}{2}$ total area of wetland	points = 4	2
Area seasonally ponded is > 1/4 total area of wetland	points = 2	
Area seasonally ponded is < 1/4 total area of wetland	points = 0	
	in the boxes above	10
Rating of Site Potential If score is: \Box 12 - 16 = H \Box 6 - 11 = M \Box 0 - 5 = L	Record the rating on	the first page
D 2.0. Does the landscape have the potential to support the water quality funct	ion of the site?	
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that		4
generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are		
not listed in questions D 2.1 - D 2.3?	V 4 N- 0	1
Source <u>Trash</u>	Yes = 1 No = 0	2
Total for D 2 Add the points Rating of Landscape Potential If score is: \square 3 or 4 = H \square 1 or 2 = M \square 0 = L	in the boxes above	the first nage
Training of Earliascape Fotoritial in Societies. In Contract In Inc. 1 of 2 - In In Inc. 2 - In Inc. 2	record the ruling on	uio iiiot pago
D 3.0. Is the water quality improvement provided by the site valuable to society	?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,		0
lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the		1
	Yes = 1 No = 0	
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in		0
which the unit is found)?	Yes = 2 No = 0	5
	in the boxes above	1
Rating of Value If score is: 2-4=H 1=M 0=L	Record the rating on	•

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

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 2 ☑ Emergent 3 structures: points = 2 ☑ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☑ Forested (areas where trees have > 30% cover) 1 structure: points = 0If the unit has a Forested class, check if: ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 3 types present: points = 2 ☐ Seasonally flooded or inundated 1 ☑ Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 2 **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. The number of checks is the number		
of points.		
☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6	ft lona)	
 ✓ Standing snags (dbh > 4 in) within the wetland 	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging	plants extends	
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the we		
least 33 ft (10 m)		3
☐ Stable steep banks of fine material that might be used by beaver or must	skrat for denning	
(> 30 degree slope) OR signs of recent beaver activity are present (cut	shrubs or trees	
that have not yet weathered where wood is exposed)		
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are		
that are permanently or seasonally inundated (structures for egg-laying		
☐ Invasive plants cover less than 25% of the wetland area in every stratur	n of plants (see	
H 1.1 for list of strata)		_
Total for H 1 Add the points in		<i>y</i>
Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 - 6 = L Record the rating on the first page		
H 2.0. Does the landscape have the potential to support the habitat function of the	e site?	
H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).		
Calculate:		
0 % undisturbed habitat + (0 % moderate & low intensity land uses / 2) = 0%		
\ <u></u>	,	
If total accessible habitat is:		0
$> \frac{1}{3}$ (33.3%) of 1 km Polygon	points = 3	
20 - 33% of 1 km Polygon	points = 2	
10 - 19% of 1 km Polygon	points = 1	
< 10 % of 1 km Polygon	points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	poe	
Calculate:		
21 % undisturbed habitat + (21 % moderate & low intensity land uses / 2) = 31.5%		
Lindiatum ad habitat . FOOV at Daluman	nainta 0	1
Undisturbed habitat > 50% of Polygon	points = 3	
Undisturbed habitat 10 - 50% and in 1-3 patches	points = 2	
Undisturbed habitat 10 - 50% and > 3 patches Undisturbed habitat < 10% of 1 km Polygon	points = 1 points = 0	
H 2.3 Land use intensity in 1 km Polygon: If		
> 50% of 1 km Polygon is high intensity land use	points = (-2)	-2
≤ 50% of 1 km Polygon is high intensity land use	points = (-2)	-2
Total for H 2 Add the points in		-1
Rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L R		
Training of Europeaper of Straining in Section 18.	soora aro raarig ori	aro mot pago
H 3.0. Is the habitat provided by the site valuable to society?		
H 3.1. Does the site provide habitat for species valued in laws, regulations, or pol	cies? Choose	
only the highest score that applies to the wetland being rated.		
Site meets ANY of the following criteria:	points = 2	
☐ It has 3 or more priority habitats within 100 m (see next page)	•	
☐ It provides habitat for Threatened or Endangered species (any	/ plant	
or animal on the state or federal lists)		
☐ It is mapped as a location for an individual WDFW priority spe	cies	1
☐ It is a Wetland of High Conservation Value as determined by the second secon	he	1
Department of Natural Resources		
☐ It has been categorized as an important habitat site in a local		
regional comprehensive plan, in a Shoreline Master Plan, or in	na	
watershed plan		
Site has 1 or 2 priority habitats (listed on next page) with in 100m	points = 1	
Site does not meet any of the criteria above	points = 0	the first
Rating of Value If Score is: \square 2 = H \square 1 = M \square 0 = L	ecord the rating on	ule ilist bade

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

	Aspen Stands : Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158</i> – see web link above).
	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page</i>).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
V	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
Check off	f any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☐ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	•
_	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
20.00	☐ Yes = Category I ☐ No = Category II	
SC 2.0. V	Wetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?	
	✓ Yes - Go to SC 2.2 □ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
00 2.2.	☐ Yes = Category I ☐ No = Not WHCV	
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
00 2.0.	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
	Value and listed it on their website?	
	☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. I		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation	
	in bogs? Use the key below. If you answer YES you will still need to rate the	
	wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
	that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	□ Yes - Go to SC 3.3	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4?	
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4	
	NOTE : If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
SC 3.4.	the wetland is a bog.	
00 0.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann	
	spruce, or western white pine, AND any of the species (or combination of species)	
	listed in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	
	□ 165 – 15 a Category i bog □ 100 = 15 liot a bog	

SC 4.0.	Forested Wetlands			
	Does the wetland have at least 1 contiguous acre of forest that meets one of these			
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? If you			
	answer YES you will still need to rate the wetland based on its functions.			
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,			
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac			
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height			
	(dbh) of 32 in (81 cm) or more.			
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-			
	200 years old OR the species that make up the canopy have an average diameter (dbh)			
	exceeding 21 in (53 cm).			
	☐ Yes = Category I ☑ No = Not a forested wetland for this section			
SC 5.0	Wetlands in Coastal Lagoons			
30 3.0.	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?			
	The wetland lies in a depression adjacent to marine waters that is wholly or partially			
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,			
	rocks			
	The lagoon in which the wetland is located contains ponded water that is saline or			
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>			
	be measured near the bottom)			
	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon			
SC 5.1.	Does the wetland meet all of the following three conditions?			
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,			
	grazing), and has less than 20% cover of aggressive, opportunistic plant species (see			
	list of species on p. 100).			
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-			
	grazed or un-mowed grassland.			
	The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)			
	☐ Yes = Category I ☐ No = Category II			
SC 6.0. Interdunal Wetlands				
	Is the wetland west of the 1889 line (also called the Western Boundary of Upland			
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland			
	based on its habitat functions.			
_	In practical terms that means the following geographic areas:			
	Long Beach Peninsula: Lands west of SR 103			
	Grayland-Westport: Lands west of SR 105			
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109			
SC 6.1.	□ Yes - Go to SC 6.1 □ No = Not an interdunal wetland for rating Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form			
SC 0.1.	(rates H,H,H or H,H,M for the three aspects of function)?			
	Takes 11,11,11 of 11,11,11 for the three aspects of function)? $\Box \text{ Yes} = \textbf{Category I} \qquad \Box \text{ No - Go to } \textbf{SC 6.2}$			
SC 6.2.	~ ,			
0.2.	□ Yes = Category II □ No - Go to SC 6.3			
SC 6.3.				
30 0.5.	1 ac?			
	□ Yes = Category III □ No = Category IV			
Catego	ry of wetland based on Special Characteristics			
_	nswered No for all types, enter "Not Applicable" on Summary Form			



Source: King County, City of Federal Way

50

100 ☐ Feet

Wetland (Approx.Boundary)

150-ft Buffer

Palustrine Emergent (PEM)

Palustrine Scrub Shrub (PSS)

Cowardin Plant Classes

Federal Way City Center Access Project **Wetland Rating Forms**

Palustrine Forested (PFO)

Federal Way, WA



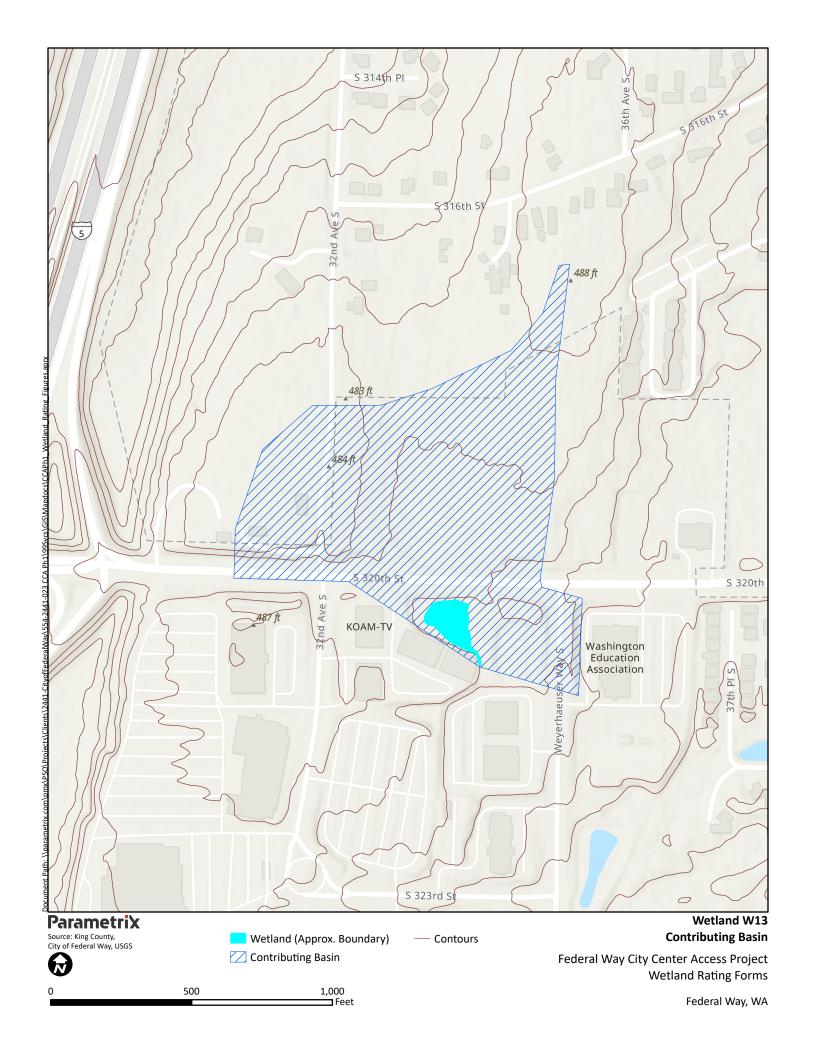


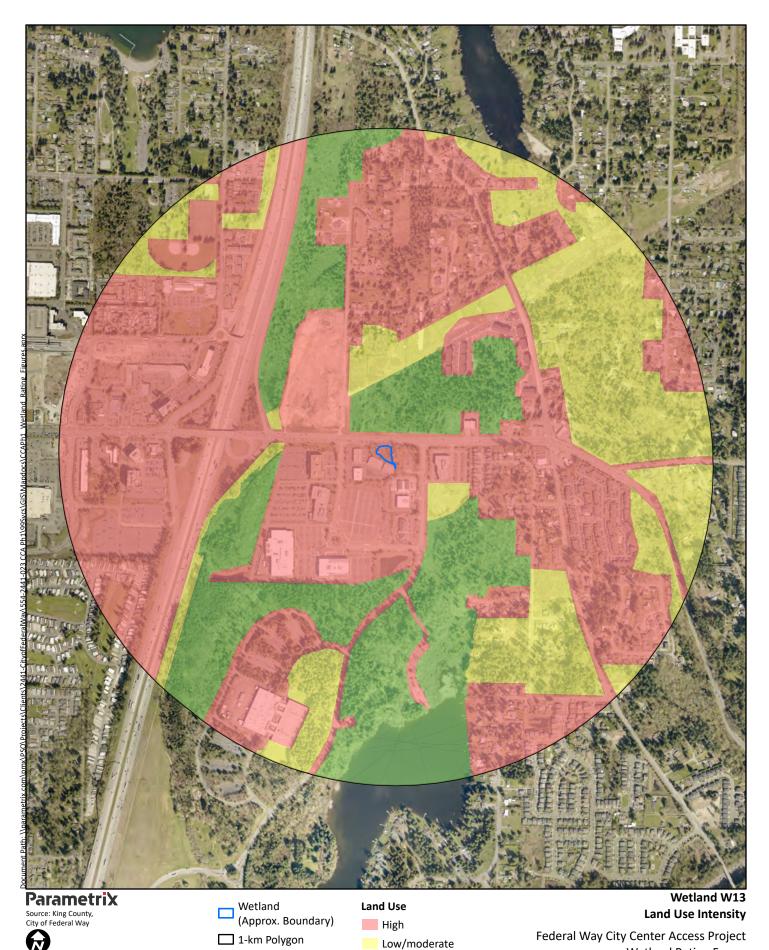
Wetland (Approx. Boundary)

150-ft Buffer

Saturated only Occasionally flooded Hydroperiods

Federal Way City Center Access Project **Wetland Rating Forms**

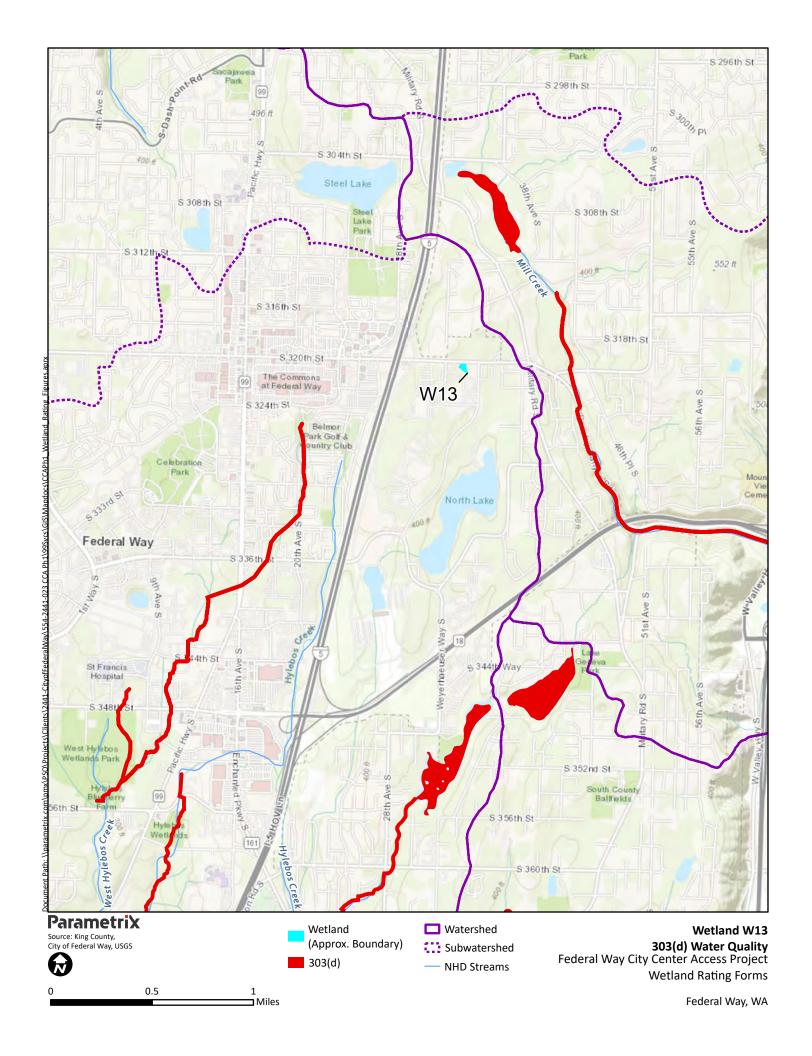


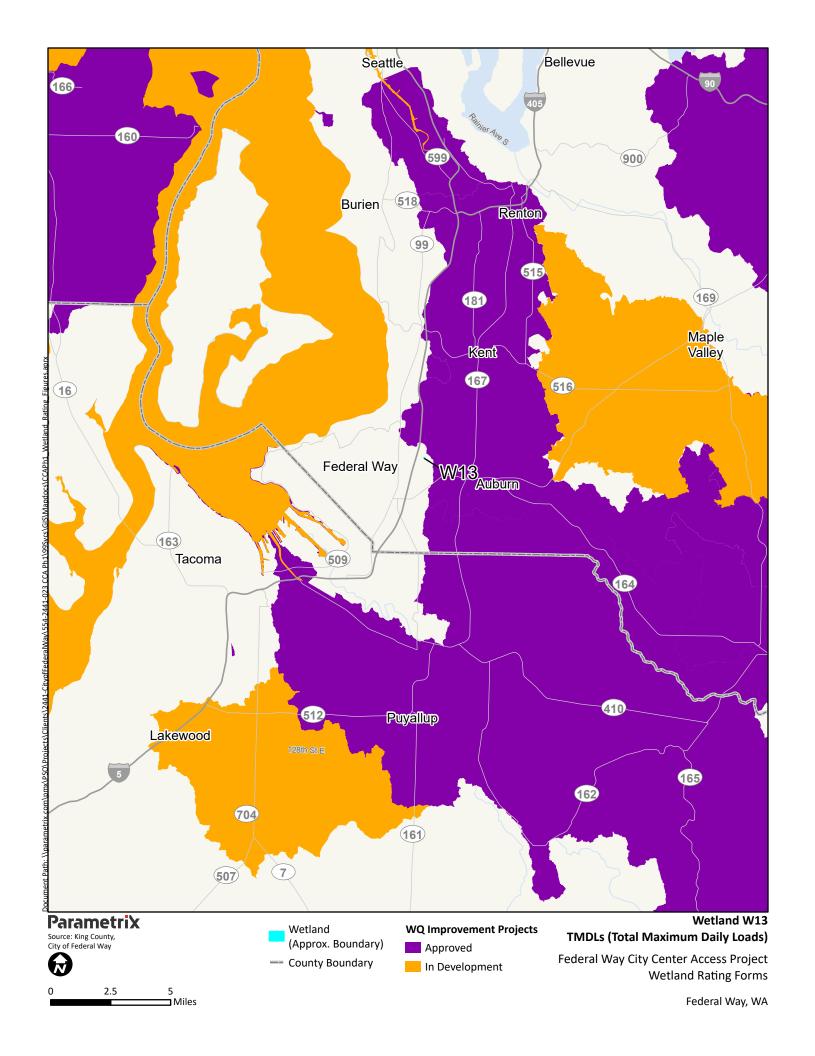


Undisturbed

0 500 1,000 Feet Wetland Rating Forms

Federal Way, WA





RATING SUMMARY – Western Washington

Name of wetland (or ID #):	: W14			Date of site visit:	9/2/2020
Rated by Per Johnson, A	aron Thom	Trained by Ecology?☑	Yes □ No	Date of training	2014, 2018
HGM Class used for ration	ng Depressional & Flats	Wetland	d has multipl	e HGM classes? □	Yes ☑ No
	s not complete with out to ree of base aerial photo/ma		figures can	be combined).	
OVERALL WETLAND	CATEGORY III	_(based on functions I	☑ or special	characteristics \square)	
1. Category of wetla	nd based on FUNCTIO	NS			
Category I - Total score = 23 - 27			;	Score for each	
Category II - Total score = 20 - 22			1	function based	
X Category III - Total score = 16 - 19				on three	
Category IV - Total score = 9 - 15			1	ratings	
	<u> </u>			order of ratings	
	mnraving Hydrologi	c Habitat		io not	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	ropriate rating	g (H, M, L)	
Site Potential	M	L	M	
Landscape Potential	M	Н	L	
Value	M	Н	М	Total
Score Based on Ratings	6	7	5	18

Score for each function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are the water levels in the entire unit usually controlled by tides except during floods?				
V	NO - go to 2	□ YES - the wetland class is Tidal Fringe - go to 1.1		
1.1	Is the salinity of the water during per	iods of annual low flow below 0.5 ppt (parts per thousand)?		
		a Freshwater Tidal Fringe use the forms for Riverine wetlands Estuarine wetland and is not scored. This method cannot be		
	ntire wetland unit is flat and precipitativater and surface water runoff are NO	on is the only source (>90%) of water to it. T sources of water to the unit.		
V	NO - go to 3 If your wetland can be classified as a	☐ YES - The wetland class is Flats a Flats wetland, use the form for Depressional wetlands.		
		on the shores of a body of permanent open water (without any he year) at least 20 ac (8 ha) in size;		
V	NO - go to 4	☐ YES - The wetland class is Lake Fringe (Lacustrine Fringe)		
 4. Does the entire wetland unit meet all of the following criteria? ☐ The wetland is on a slope (slope can be very gradual), ☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seep It may flow subsurface, as sheetflow, or in a swale without distinct banks. ☐ The water leaves the wetland without being impounded. 				
V	NO - go to 5	□ YES - The wetland class is Slope		
NOTE : Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).				
 5. Does the entire wetland unit meet all of the following criteria? The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river, The overbank flooding occurs at least once every 2 years. 				
V	NO - go to 6	☐ YES - The wetland class is Riverine		
NOTE: T	he Riverine unit can contain depressi	ons that are filled with water when the river is not flooding.		

\A/a4laad aanaa au au aa aa	10/4/4	
Wetland name or number	W14	

1 9 1	phic depression in which water ponds, or is saturated to the surface, at that any outlet, if present, is higher than the interior of the wetland.
□ NO - go to 7	☑ YES - The wetland class is Depressional
The unit does not pond surface water mo	very flat area with no obvious depression and no overbank flooding? ore than a few inches. The unit seems to be maintained by high ay be ditched, but has no obvious natural outlet.
☐ NO - go to 8	☐ YES - The wetland class is Depressional

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

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

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

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

NOTES and FIELD OBSERVATIONS:

Culvert under 320th (mapped but not observed). No right of entry.

DEPRESSIONAL AND FLATS WETLANDS		
Water Quality Functions - Indicators that the site functions to improve water quality		
D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland:		
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3		
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2	2	
☐ Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1		
☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1		
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0	
(use NRCS definitions). Yes = 4 No = 0 D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or		
Forested Cowardin classes):		
Wetland has persistent, ungrazed, plants > 95% of area points = 5	5	
Wetland has persistent, ungrazed, plants > $\frac{1}{2}$ of area points = 3	3	
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area points = 1		
Wetland has persistent, ungrazed plants $< \frac{1}{10}$ of area points = 0		
D 1.4. Characteristics of seasonal ponding or inundation:		
This is the area that is ponded for at least 2 months. See description in manual.		
Area seasonally ponded is > 1/2 total area of wetland points = 4	0	
Area seasonally ponded is > 1/4 total area of wetland points = 2		
Area seasonally ponded is < 1/4 total area of wetland points = 0		
Total for D 1 Add the points in the boxes above	7	
Rating of Site Potential If score is: 12 - 16 = H 6 - 11 = M 0 - 5 = L Record the rating on	the first page	
D 2.0. Does the landscape have the potential to support the water quality function of the site?		
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	1	
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that	1	
generate pollutants? Yes = 1 No = 0	· ·	
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0	
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3?	0	
Source Yes = 1 No = 0	U	
Total for D 2 Add the points in the boxes above	2	
Rating of Landscape Potential If score is: □ 3 or 4 = H ☑ 1 or 2 = M □ 0 = L Record the rating on		
D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,	0	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Ves = 1 No = 0 D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	0	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0 D 3.3. Has the site been identified in a watershed or local plan as important		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0 D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the armitist formal 100.	1	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0 D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)? Yes = 2 No = 0	0	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0 D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the armitist formal 100.	1 0 1	

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

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 □ Emergent 3 structures: points = 2 ☑ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☑ Forested (areas where trees have > 30% cover) 1 structure: points = 0If the unit has a Forested class, check if: ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 3 types present: points = 2 ☐ Seasonally flooded or inundated 1 ☑ Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 1 **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number</i>				
of points.				
☑ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)				
☑ Standing snags (dbh > 4 in) within the wetland				
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants ex				
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for				
least 33 ft (10 m)	3			
☐ Stable steep banks of fine material that might be used by beaver or muskrat for o				
(> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or</i>	rtrees			
that have not yet weathered where wood is exposed)	0.000			
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in that are permanently or seasonally inundated (structures for egg-laying by amphi				
☐ Invasive plants cover less than 25% of the wetland area in every stratum of plant				
H 1.1 for list of strata)	.5 (366			
Total for H 1 Add the points in the boxes	s above 7			
·	rating on the first page			
H 2.0. Does the landscape have the potential to support the habitat function of the site?				
H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).				
Calculate:				
3 % undisturbed habitat + (2 % moderate & low intensity land uses / 2) = 4	4%			
If total accessible habitat is:	0			
$> \frac{1}{3}$ (33.3%) of 1 km Polygon po	ints = 3			
20 - 33% of 1 km Polygon po	ints = 2			
10 - 19% of 1 km Polygon po	ints = 1			
< 10 % of 1 km Polygon po	ints = 0			
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.				
Calculate:				
17 % undisturbed habitat + (27 % moderate & low intensity land uses / 2) = 3	30.5%			
	1			
	ints = 3			
· ·	ints = 2			
·	ints = 1			
Undisturbed habitat < 10% of 1 km Polygon po H 2.3 Land use intensity in 1 km Polygon: If	pints = 0			
, , , ,	ts = (-2) -2			
	ts = (-2) -2 pints = 0			
Total for H 2 Add the points in the boxes				
Rating of Landscape Potential If Score is: 4-6=H 1-3=M <				
Training of Eurococcopo Formital in Cocco to	raing on the met page			
H 3.0. Is the habitat provided by the site valuable to society?				
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Ch	oose			
only the highest score that applies to the wetland being rated.				
Site meets ANY of the following criteria: po	ints = 2			
☐ It has 3 or more priority habitats within 100 m (see next page)				
☐ It provides habitat for Threatened or Endangered species (any plant				
or animal on the state or federal lists)				
☐ It is mapped as a location for an individual WDFW priority species	1			
☐ It is a Wetland of High Conservation Value as determined by the	·			
Department of Natural Resources				
☐ It has been categorized as an important habitat site in a local or				
regional comprehensive plan, in a Shoreline Master Plan, or in a				
watershed plan Site has 1 or 2 priority habitate (lieted on payt page) with in 100m	inte – 1			
	vints = 1 vints = 0			
	rating on the first page			
Theorem 1 and 1 an	g a.oot pago			

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
V	Old-growth/Mature forests: Old-growth west of Cascade crest — Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests — Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158 – see web link above</i>).
	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page</i>).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
V	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type					
Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.					
SC 1.0. Estuarine Wetlands					
	Does the wetland meet the following criteria for Estuarine wetlands?				
	The dominant water regime is tidal,				
	Vegetated, and				
	With a salinity greater than 0.5 ppt				
	☐ Yes - Go to SC 1.1 ☐ No = Not an estuarine wetland				
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary				
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?				
	☐ Yes = Category I ☐ No - Go to SC 1.2				
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?				
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,				
	and has less than 10% cover of non-native plant species. (If non-native species are				
	Spartina, see page 25)				
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-				
	grazed or un-mowed grassland.				
	The wetland has at least two of the following features: tidal channels, depressions with				
	open water, or contiguous freshwater wetlands.				
	☐ Yes = Category I ☐ No = Category II				
SC 2.0. V	Wetlands of High Conservation Value (WHCV) Has the WA Department of Natural Resources updated their website to include the list				
30 2.1.	of Wetlands of High Conservation Value?				
	✓ Yes - Go to SC 2.2 □ No - Go to SC 2.3				
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?				
00 2.2.	☐ Yes = Category I ☐ No = Not WHCV				
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?				
20 2.0.	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf				
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV				
SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation					
Value and listed it on their website?					
	☐ Yes = Category I ☐ No = Not WHCV				
SC 3.0. I	•				
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation				
in bogs? Use the key below. If you answer YES you will still need to rate the wetland based on its functions.					
00.04					
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?				
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2				
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are				
00 0.2.	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic				
	ash, or that are floating on top of a lake or pond?				
	☐ Yes - Go to SC 3.3 ☐ No = Is not a bog				
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground				
0.0.	level, AND at least a 30% cover of plant species listed in Table 4?				
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4				
	NOTE: If you are uncertain about the extent of mosses in the understory, you may				
substitute that criterion by measuring the pH of the water that seeps into a hole dug at					
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,				
the wetland is a bog.					
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,					
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann				
	spruce, or western white pine, AND any of the species (or combination of species)				
listed in Table 4 provide more than 30% of the cover under the canopy?					
	☐ Yes = Is a Category I bog ☐ No = Is not a bog				

SC 4.0.	Forested Wetlands				
	Does the wetland have at least 1 contiguous acre of forest that meets one of these				
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>				
	answer YES you will still need to rate the wetland based on its functions.				
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac				
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height				
	(dbh) of 32 in (81 cm) or more.				
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-				
	200 years old OR the species that make up the canopy have an average diameter (dbh)				
	exceeding 21 in (53 cm).				
	☐ Yes = Category I ☑ No = Not a forested wetland for this section				
SC 5.0.	Wetlands in Coastal Lagoons				
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?				
	The wetland lies in a depression adjacent to marine waters that is wholly or partially				
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,				
_	rocks				
	The lagoon in which the wetland is located contains ponded water that is saline or				
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>				
	be measured near the bottom)				
00.54	☐ Yes - Go to SC 5.1 ☑ No = Not a wetland in a coastal lagoon				
l	Does the wetland meet all of the following three conditions?				
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,				
	grazing), and has less than 20% cover of aggressive, opportunistic plant species (see				
	list of species on p. 100).				
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland.				
	☐ The wetland is larger than ¹ / ₁₀ ac (4350 ft²)				
	The wetland is larger than 7 ₁₀ ac (4350 ft) ☐ Yes = Category I ☐ No = Category II				
SC 6.0	Interdunal Wetlands				
3C 0.0.	Is the wetland west of the 1889 line (also called the Western Boundary of Upland				
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland				
	based on its habitat functions.				
	In practical terms that means the following geographic areas:				
	Long Beach Peninsula: Lands west of SR 103				
	Grayland-Westport: Lands west of SR 105				
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109				
_	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating				
SC 6.1.					
	(rates H,H,H or H,H,M for the three aspects of function)?				
	☐ Yes = Category I ☐ No - Go to SC 6.2				
SC 6.2.					
	☐ Yes = Category II ☐ No - Go to SC 6.3				
SC 6.3.	Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and				
	1 ac?				
	☐ Yes = Category III ☐ No = Category IV				
Category of wetland based on Special Characteristics					
If you answered No for all types, enter "Not Applicable" on Summary Form					



Parametrix
Source: King County,
City of Federal Way

☐ Wetland (Approx.Boundary)

150-ft Buffer

Cowardin Class

Palustrine Scrub Shrub (PSS)

Palustrine Forested (PFO)

Cowardin Plant Classes

Federal Way City Center Access Project **Wetland Rating Forms**



50

100 Feet

Wetland (Approx. Boundary)

150-ft Buffer

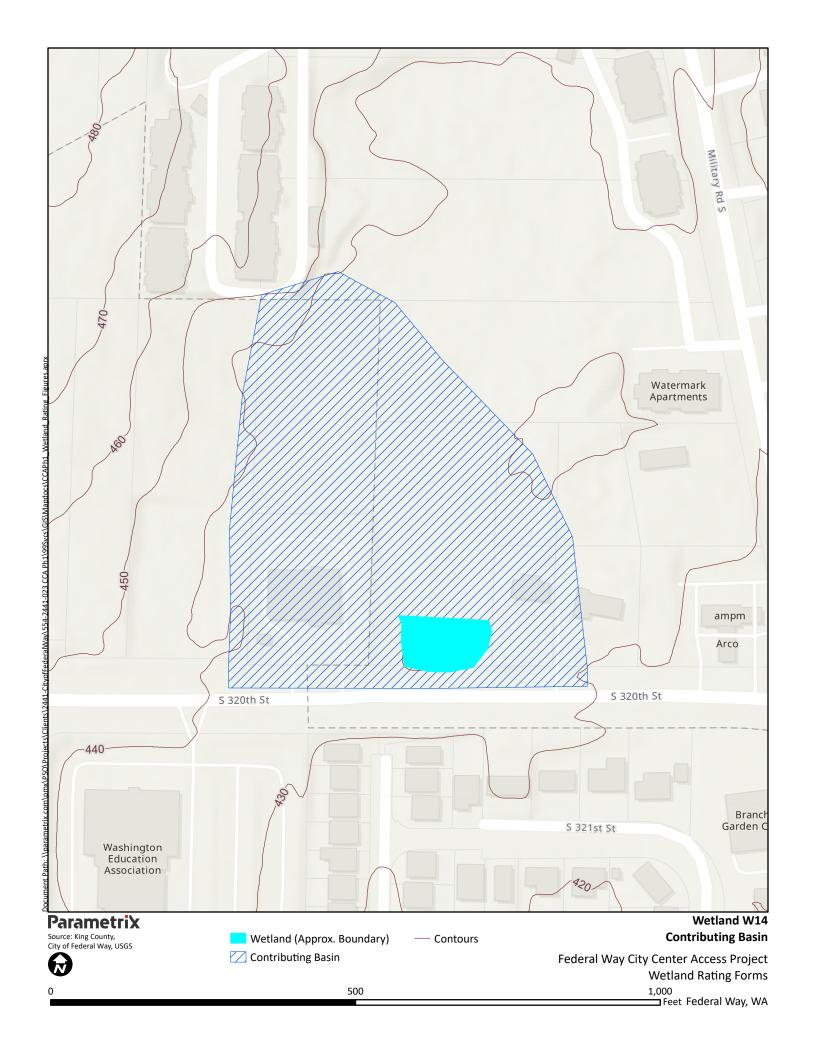
Hydroperiod

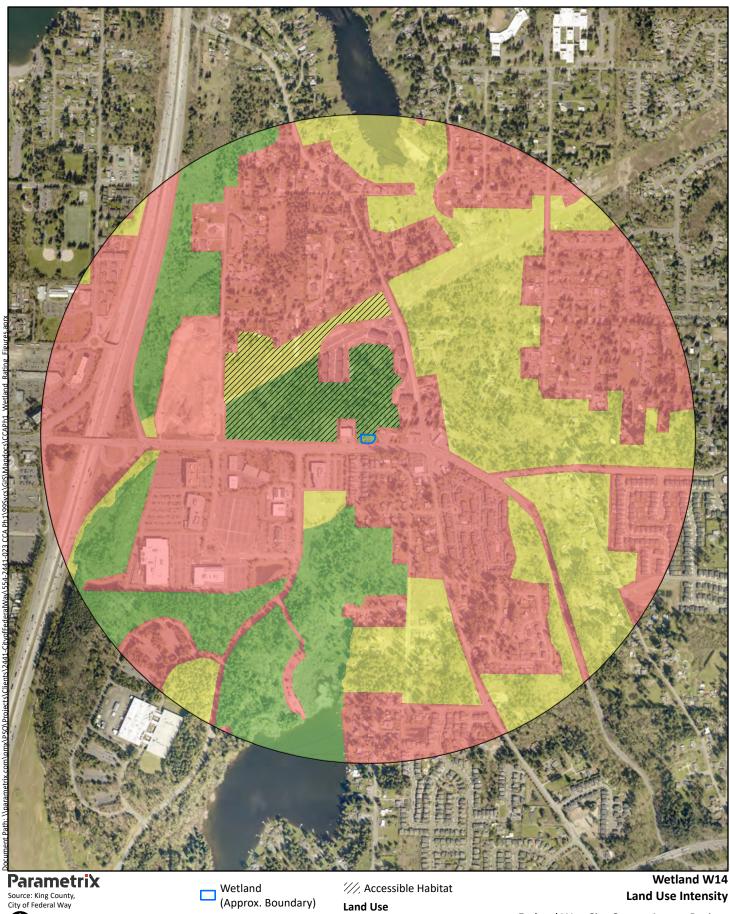
Saturated only

Occasionally flooded

Hydroperiods

Federal Way City Center Access Project Wetland Rating Forms







1,000 Feet 500

☐ 1-km Polygon

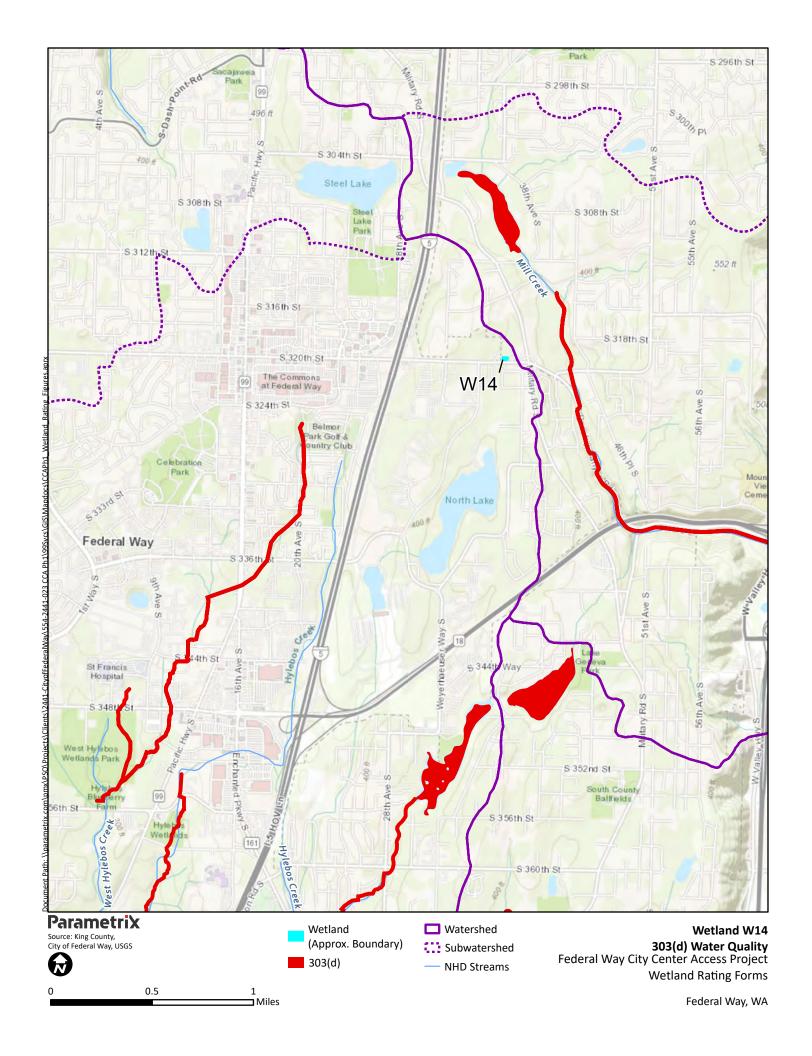
High

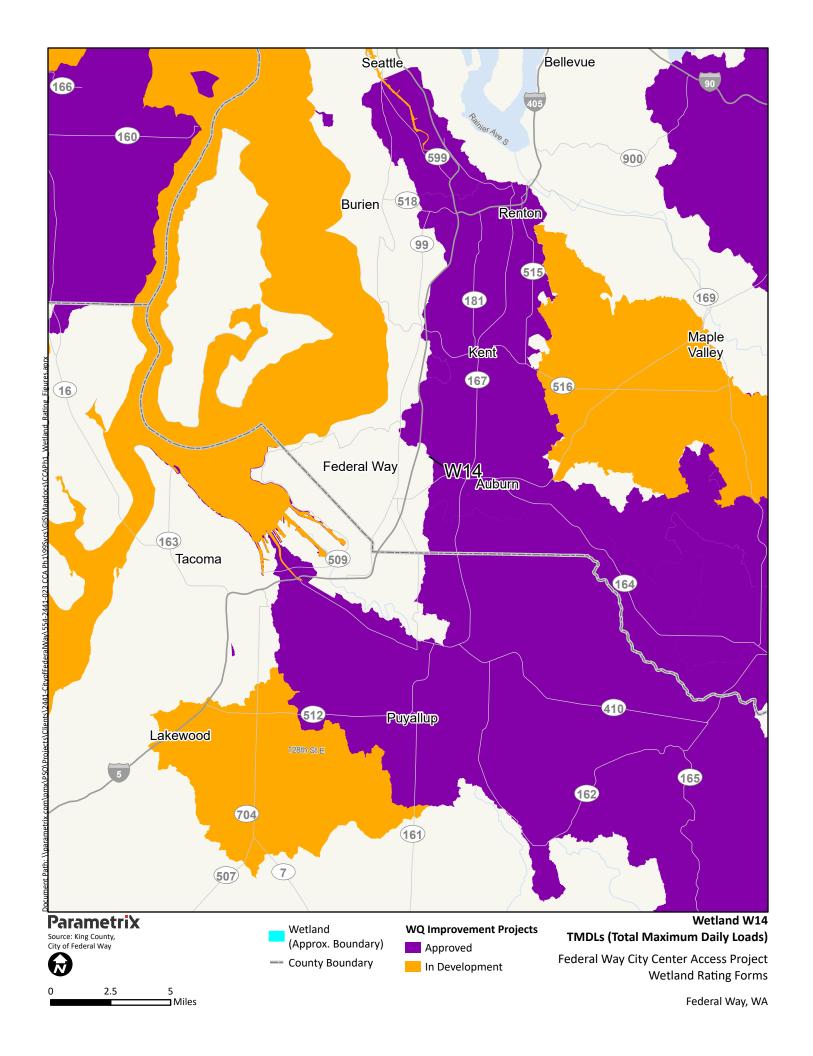
Low/moderate

Undisturbed

Federal Way City Center Access Project **Wetland Rating Forms**

Federal Way, WA





RATING SUMMARY – Western Washington

Name of wetland (or ID #): W17 Date of site visit: 1/7/				
Rated by <u>Josh Wozniak</u> Trained by Ecology? ✓ Yes ☐ No	Date of training_	Jul-05		
HGM Class used for rating Depressional & Flats Wetland has multiple HGM classes? □ Yes				
NOTE: Form is not complete with out the figures requested (figures can be combined). Source of base aerial photo/map ESRI				
OVERALL WETLAND CATEGORY III (based on functions ☑ or special characteristics □)				
1. Category of wetland based on FUNCTIONS				
Category I - Total score = 23 - 27	Score for each			
Category II - Total score = 20 - 22	function based			
X Category III - Total score = 16 - 19	on three			
Category IV - Total score = 9 - 15	ratings			
	(order of ratings			
FUNCTION Improving Hydrologic Habitat	is not			
	important)			

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List appropriate rating (H, M, L)			
Site Potential	M	М	L	
Landscape Potential	M	M	L	
Value	M	Н	М	Total
Score Based on Ratings	6	7	4	17

Score for each function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are the water levels in the entire unit usually controlled by tides except during floods?				
√	NO - go to 2	☐ YES - the wetland	d class is	Tidal Fringe - go to 1.1
1.1	Is the salinity of the water during per	iods of annual low flo	w below	0.5 ppt (parts per thousand)?
	NO - Saltwater Tidal Fringe (Estua If your wetland can be classified as a If it is Saltwater Tidal Fringe it is an used to score functions for estuarine	a Freshwater Tidal Fr Estuarine wetland a	ringe use	
	ntire wetland unit is flat and precipitativater and surface water runoff are NO			
J	NO - go to 3 If your wetland can be classified as a			The wetland class is Flats for Depressional wetlands.
	the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of the At least 30% of the open water area	on the shores of a both he year) at least 20 a	ac (8 ha)	
V	NO - go to 4	☐ YES - The wetlan	d class i	s Lake Fringe (Lacustrine Fringe)
	the entire wetland unit meet all of the The wetland is on a slope (<i>slope car</i> The water flows through the wetland It may flow subsurface, as sheetflow The water leaves the wetland without	n be very gradual), in one direction (unic , or in a swale withou	t distinct	
V	NO - go to 5		YES -	The wetland class is Slope
NOTE : Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).				
	the entire wetland unit meet all of the The unit is in a valley, or stream cha from that stream or river, The overbank flooding occurs at leas	nnel, where it gets in		by overbank flooding
V	NO - go to 6		YES -	The wetland class is Riverine
NOTF: T	he Riverine unit can contain depressi	ons that are filled with	n water v	when the river is not flooding.

Matland	nama	or number	\//17	

1 0 1	c depression in which water ponds, or is saturated to the surface, at any outlet, if present, is higher than the interior of the wetland.
□ NO - go to 7	☑ YES - The wetland class is Depressional
The unit does not pond surface water more	ry flat area with no obvious depression and no overbank flooding? than a few inches. The unit seems to be maintained by high be ditched, but has no obvious natural outlet.
□ NO - go to 8	☐ YES - The wetland class is Depressional

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

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

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

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

NOTES and FIELD OBSERVATIONS:

DEPRESSIONAL AND FLATS WETLANDS				
Water Quality Functions - Indicators that the site functions to improve water quality				
D 1.0. Does the site have the potential to improve water quality?				
D 1.1. Characteristics of surface water outflows from the wetland:				
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3				
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2	3			
☐ Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1				
☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1				
D 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0			
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or				
Forested Cowardin classes):				
Wetland has persistent, ungrazed, plants > 95% of area points = 5	3			
Wetland has persistent, ungrazed, plants > ½ of area points = 3				
Wetland has persistent, ungrazed plants > $\frac{1}{10}$ of area points = 1				
Wetland has persistent, ungrazed plants $< \frac{1}{10}$ of area points = 0				
D 1.4. Characteristics of seasonal ponding or inundation:				
This is the area that is ponded for at least 2 months. See description in manual.	4			
Area seasonally ponded is > ½ total area of wetland points = 4				
Area seasonally ponded is > 1/4 total area of wetland points = 2				
Area seasonally ponded is < ¼ total area of wetland points = 0 Total for D 1 Add the points in the boxes above				
LIOTAL TOF LUT AND THE DOINTS IN THE DOXES ADOVE	40			
·				
Rating of Site Potential If score is: ☐ 12 - 16 = H ☐ 6 - 11 = M ☐ 0 - 5 = L Record the rating or				
·				
Rating of Site Potential If score is: 12 - 16 = H 6 - 11 = M 0 - 5 = L Record the rating or	the first page			
Rating of Site Potential If score is: □ 12 - 16 = H □ 6 - 11 = M □ 0 - 5 = L Record the rating or □ 2.0. Does the landscape have the potential to support the water quality function of the site? □ 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0 □ 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that	the first page			
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Rating of Site Potential If score is: □ 12 - 16 = H ☑ 6 - 11 = M □ 0 - 5 = L Record the rating or D 2.0. Does the landscape have the potential to support the water quality function of the site? D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0 D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0 D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0 D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3? Source Yes = 1 No = 0 Total for D 2 Add the points in the boxes above Rating of Landscape Potential If score is: □ 3 or 4 = H ☑ 1 or 2 = M □ 0 = L Record the rating or D 3.0. Is the water quality improvement provided by the site valuable to society? D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	the first page 1 0 0 0 1			
Rating of Site Potential If score is: □ 12-16 = H ☑ 6-11 = M □ 0-5 = L Record the rating or D 2.0. Does the landscape have the potential to support the water quality function of the site? D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0 D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0 D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0 D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3? Source Yes = 1 No = 0 Total for D 2 Add the points in the boxes above Rating of Landscape Potential If score is: □ 3 or 4 = H ☑ 1 or 2 = M □ 0 = L Record the rating or D 3.0. Is the water quality improvement provided by the site valuable to society? D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,	the first page 1 0 0 1 the first page 1 the first page			
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Rating of Site Potential If score is: □ 12 - 16 = H ☑ 6 - 11 = M □ 0 - 5 = L Record the rating or D 2.0. Does the landscape have the potential to support the water quality function of the site? D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0 D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0 D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0 D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3? Source Yes = 1 No = 0 Total for D 2 Add the points in the boxes above Rating of Landscape Potential If score is: □ 3 or 4 = H ☑ 1 or 2 = M □ 0 = L Record the rating or D 3.0. Is the water quality improvement provided by the site valuable to society? D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0 D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	the first page 1 0 0 0 1 the first page 0 1			
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DEPRESSIONAL AND FLATS WETLANDS			
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation			
D 4.0. Does the site have the potential to reduce flooding and erosion?			
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	4		
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0 D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.	3		
☐ The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 ☐ Entire wetland is in the Flats class points = 5 Total for D 4 Add the points in the boxes above	3 10		
Rating of Site Potential If score is: ☐ 12 - 16 = H ☐ 6 - 11 = M ☐ 0 - 5 = L Record the rating on	_		
	uie iiisi paye		
D 5.0. Does the landscape have the potential to support hydrologic function of the site?	4		
D 5.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0 D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1		
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	0		
Total for D 5 Add the points in the boxes above	2		
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on	the first page		
D 6.0. Are the hydrologic functions provided by the site valuable to society?			
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): Flooding occurs in a sub-basin that is immediately down-gradient of unit.	2		
 Surface flooding problems are in a sub-basin farther down-gradient. Flooding from groundwater is an issue in the sub-basin. The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why There are no problems with flooding downstream of the wetland. 	2		
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0		
conveyance in a regional flood control plan? Yes = 2 No = 0 Total for D 6 Add the points in the boxes above	2		
Rating of Value If score is: \square 2 - 4 = H \square 1 = M \square 0 = L Record the rating on			

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 □ Emergent 3 structures: points = 2 ☐ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☑ Forested (areas where trees have > 30% cover) 1 structure: points = 0If the unit has a Forested class, check if: ☑ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 3 types present: points = 2 ☑ Seasonally flooded or inundated 1 □ Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 0 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 0 **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number</i>	
of points.	
 □ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) □ Standing snags (dbh > 4 in) within the wetland 	
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends	
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	2
☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning	
(> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)	'
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas	
that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)	
☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see	
H 1.1 for list of strata)	
Total for H 1 Add the points in the boxes above	e 4
Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 - 6 = L Record the rating of	
H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).	
Calculate:	
12 % undisturbed habitat + (6 % moderate & low intensity land uses / 2) = 15%	
Mark I I I I I I I I I I I I I I I I I I I	
If total accessible habitat is:	1
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20 - 33% of 1 km Polygon points = 2	
10 - 19% of 1 km Polygon points = 7	
< 10 % of 1 km Polygon points = 0)
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate:	
25 % undisturbed habitat + (18 % moderate & low intensity land uses / 2) = 34%	
Undisturbed habitat > 50% of Polygon points = 3	1
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2	
Undisturbed habitat 10 - 50% and > 3 patches points = 2	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3 Land use intensity in 1 km Polygon: If	,
> 50% of 1 km Polygon is high intensity land use points = (-2	-2
≤ 50% of 1km Polygon is high intensity data disc points = (2)	
	i e
Total for H 2 Add the points in the boxes above Rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☑ <1=L Record the rating of Landscape Potential If Score is: ☐ 4-6=H ☐ 1-3=M ☐	
Training of Editoration of the International Control of the International	n the mot page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose	
only the highest score that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	2
☐ It has 3 or more priority habitats within 100 m (see next page)	
☐ It provides habitat for Threatened or Endangered species (any plant	
or animal on the state or federal lists)	
□ It is mapped as a location for an individual WDFW priority species	1
☐ It is a Wetland of High Conservation Value as determined by the	'
Department of Natural Resources	
☐ It has been categorized as an important habitat site in a local or	
regional comprehensive plan, in a Shoreline Master Plan, or in a	
watershed plan	
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 7	
Site does not meet any of the criteria above points = 0	
Rating of Value If Score is: 2 = H 1 = M 0 = L Record the rating of	n the first page

Wetland Rating System for Western WA: 2014 Update Rating Form - Effective January 1, 2015

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
V	Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158</i> – see web link above).
	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report</i> – see web link on previous page).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
√	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
Check off	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
_	open water, or contiguous freshwater wetlands.	
	□ Yes = Category I □ No = Category II	
SC 2.0. V	Wetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list	
	of Wetlands of High Conservation Value?	
	☑ Yes - Go to SC 2.2 □ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
	☐ Yes = Category I ☐ No = Not WHCV	
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
0004	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
	Value and listed it on their website? ☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. E		
30 3.0. 1	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation	
	in bogs? Use the key below. If you answer YES you will still need to rate the	
	wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
	that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	$\Box \text{ Yes - Go to SC 3.3} \qquad \Box \text{ No = Is not a bog}$	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4?	
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4	
	NOTE : If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
	the wetland is a bog.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,	
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann	
	spruce, or western white pine, AND any of the species (or combination of species)	
	listed in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

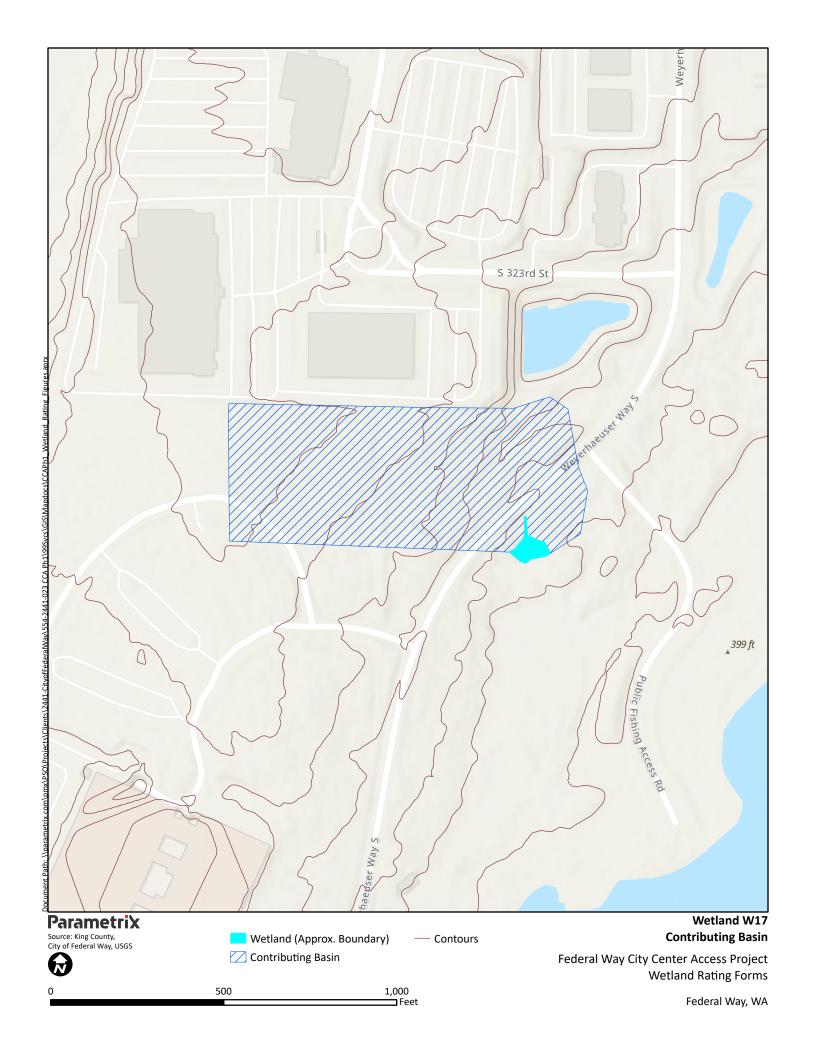
SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? If you	
	answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
	200 years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	Use Cotogony I D No - Not a forested watland for this contion	
SC 5.0	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons Does the wetland most all of the following criteria of a wetland in a coastal lagoon?	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? The wetland lies in a depression adjacent to marine waters that is whelly or partially	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
-	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>	
	be measured near the bottom)	
	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon	
SC 5.1.	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,	
	grazing), and has less than 20% cover of aggressive, opportunistic plant species (see	
	list of species on p. 100).	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland is larger than $\frac{1}{10}$ ac (4350 ft ²)	
	□ Yes = Category I □ No = Category II	
SC 6.0.	Interdunal Wetlands	
	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland	
	based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
3004	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating	
SC 6.1.		
	(rates H,H,H or H,H,M for the three aspects of function)?	
22.00	☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.2.	5	
22.00	☐ Yes = Category II ☐ No - Go to SC 6.3	
SC 6.3.		
	1 ac?	
Catago	☐ Yes = Category III ☐ No = Category IV	
	ry of wetland based on Special Characteristics	
li you ai	nswered No for all types, enter "Not Applicable" on Summary Form	

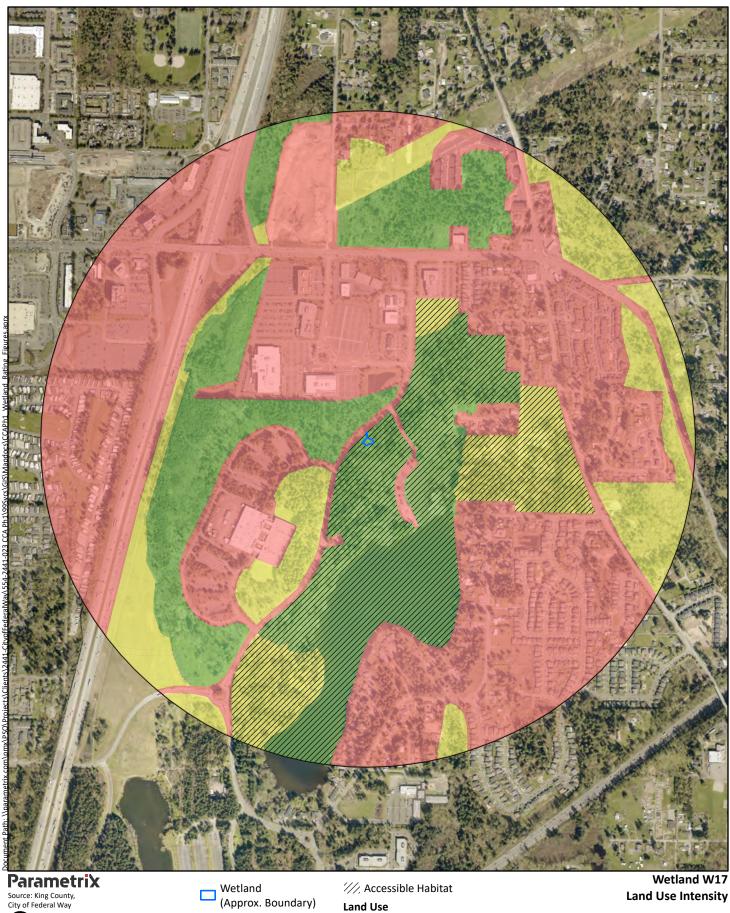


100 Feet

Wetland Rating Forms









1,000 Feet 500

Wetland (Approx. Boundary)

☐ 1-km Polygon

Land Use

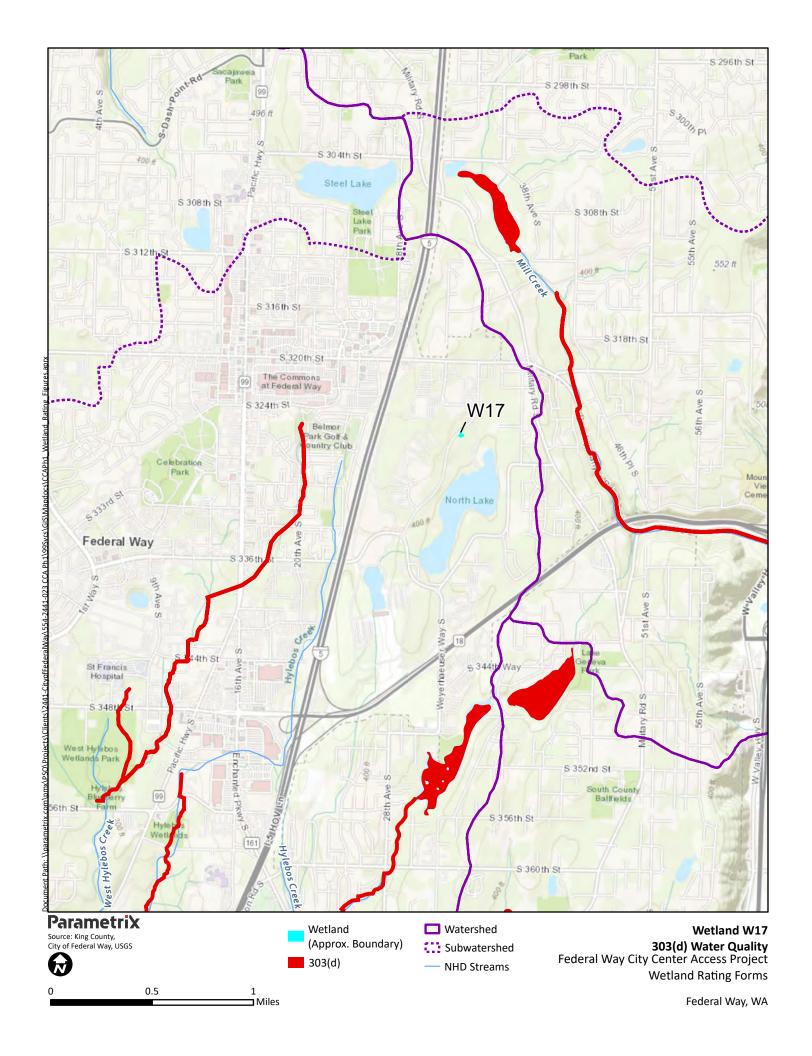
High

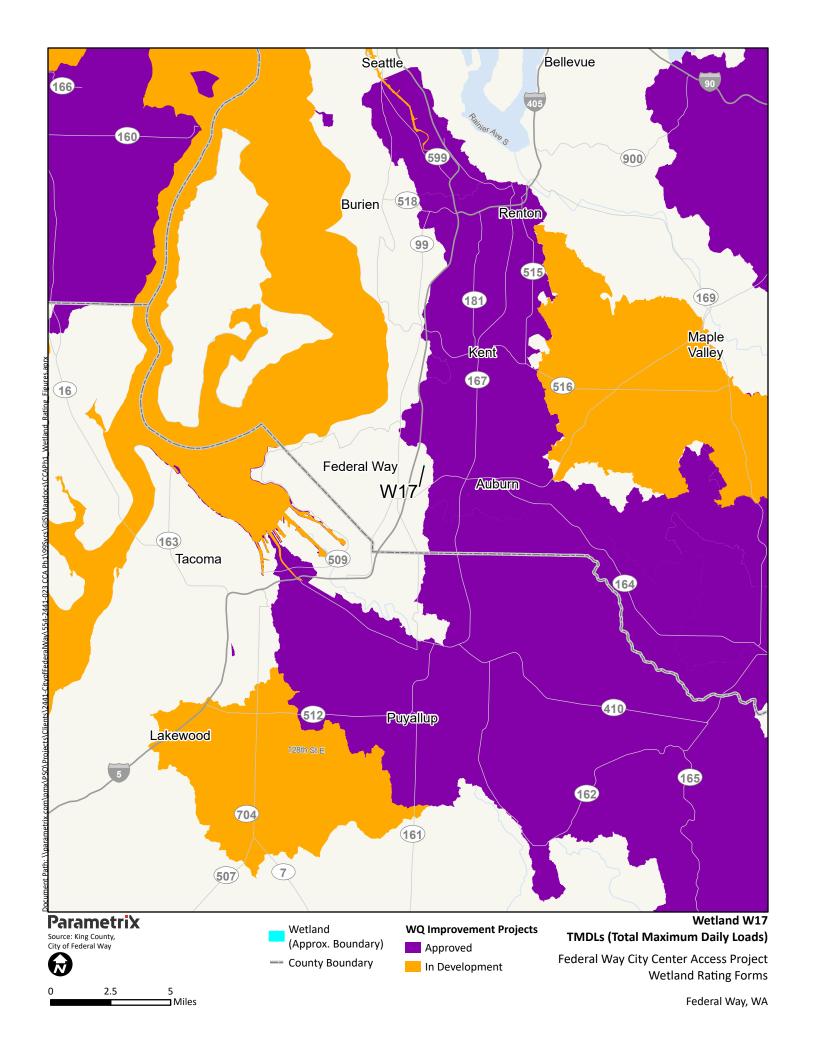
Low/moderate

Undisturbed

Land Use Intensity

Federal Way City Center Access Project **Wetland Rating Forms**





Value

Ratings

Score Based on

RATING SUMMARY – Western Washington

Name of wetland (or	D#): W18					Date of site visit:	1/7/2021
Rated by Josh Wozi	niak	Tr	rained by E	cology?⊡	Yes □ No	Date of training	Jun-14
HGM Class used for	rating Depressi	onal & Flats		Wetlan	d has multip	ole HGM classes? ☑	Yes □ No
	rm is not comple Source of base a		_	equested	(figures car	be combined).	
	Source or base at	енаі ріюсолнар	LOIN				
OVERALL WETLA	ND CATEGORY	' II	(based on	functions	☑ or specia	al characteristics □)	
			•				
1. Category of w	etland based o	n FUNCTION	S				
	Category	/ I - Total score	= 23 - 27			Score for each	
•	X Category	/ II - Total scor	e = 20 - 22			function based	
•	Category	/ III - Total sco	re = 16 - 19)		on three	
•	Category	/ IV - Total sco	re = 9 - 15			ratings	
•						(order of ratings	
FUNCTION	Improving	Hydrologic	Habitat			is not	
FUNCTION	Water Quality					important)	
	List ap	propriate rating	g (H, M, L)				
Site Potential	M	М	Н			9 = H, H, H	
Landscape Potential	Н	Н	L			8 = H, H, M	

Н

7

Total

22

1

2. Category based on SPECIAL CHARACTERISTICS of wetland

7

Н

8

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	Х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are th	ne water levels in the entire unit usual	y controlled by tides except during floods?
√	NO - go to 2	□ YES - the wetland class is Tidal Fringe - go to 1.1
1.1	Is the salinity of the water during per	iods of annual low flow below 0.5 ppt (parts per thousand)?
		a Freshwater Tidal Fringe use the forms for Riverine wetlands. Estuarine wetland and is not scored. This method cannot be
	ntire wetland unit is flat and precipitativater and surface water runoff are NO	on is the only source (>90%) of water to it. T sources of water to the unit.
4	NO - go to 3 If your wetland can be classified as	☐ YES - The wetland class is Flats a <i>Flats</i> wetland, use the form for Depressional wetlands.
		on the shores of a body of permanent open water (without any the year) at least 20 ac (8 ha) in size;
	NO - go to 4	☑ YES - The wetland class is Lake Fringe (Lacustrine Fringe)
		n be very gradual), in one direction (unidirectional) and usually comes from seeps. , or in a swale without distinct banks.
V	NO - go to 5	☐ YES - The wetland class is Slope
		type of wetlands except occasionally in very small and shallow as are usually <3 ft diameter and less than 1 ft deep).
	the entire wetland unit meet all of the The unit is in a valley, or stream cha from that stream or river, The overbank flooding occurs at least	nnel, where it gets inundated by overbank flooding
V	NO - go to 6	☐ YES - The wetland class is Riverine
NOTE: T	he Riverine unit can contain depressi	ons that are filled with water when the river is not flooding.

Wetland	name	or numbe	r W18	

☑ NO - go to 8

6. Is the entire wetland unit in a topographic depressio some time during the year? This means that any outle	on in which water ponds, or is saturated to the surface, at et, if present, is higher than the interior of the wetland.
□ NO - go to 7	YES - The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with the unit does not pond surface water more than a few groundwater in the area. The wetland may be ditched,	, ,

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

☐ YES - The wetland class is Depressional

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

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

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

NOTES and FIELD OBSERVATIONS:

Wetland has both depressional and lake fringe HGM classes, therefore rated as depressional

DEPRESSIONAL AND FLATS WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression (QUESTION 7 on key)	
with no surface water leaving it (no outlet). points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly	0
constricted permanently flowing outlet. points = 2	2
☐ Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1	
☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is	
a permanently flowing ditch. points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic	0
(use NRCS definitions). Yes = 4 No = 0	
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or	
Forested Cowardin classes):	
Wetland has persistent, ungrazed, plants > 95% of area points = 5	5
Wetland has persistent, ungrazed, plants > ½ of area points = 3	Ü
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area points = 1	
Wetland has persistent, ungrazed plants $< \frac{1}{10}$ of area points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:	
This is the area that is ponded for at least 2 months. See description in manual.	
Area seasonally ponded is > ½ total area of wetland points = 4	2
Area seasonally ponded is > 1/4 total area of wetland points = 2	
Area seasonally ponded is < 1/4 total area of wetland points = 0	
Total for D 1 Add the points in the boxes above	9
Rating of Site Potential If score is: \Box 12 - 16 = H \Box 6 - 11 = M \Box 0 - 5 = L Record the rating on	the first page
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that	1
generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are	
not listed in questions D 2.1 - D 2.3?	1
not listed in questions D 2.1 - D 2.3? Source <u>Waterfowl</u> Yes = 1 No = 0	
not listed in questions D 2.1 - D 2.3? Source Waterfowl Yes = 1 No = 0 Total for D 2 Add the points in the boxes above	3
not listed in questions D 2.1 - D 2.3? Source Waterfowl Yes = 1 No = 0	3
not listed in questions D 2.1 - D 2.3? Source Waterfowl Yes = 1 No = 0 Total for D 2 Add the points in the boxes above	3
not listed in questions D 2.1 - D 2.3? Source Waterfowl Total for D 2 Rating of Landscape Potential If score is: ☑ 3 or 4 = H □ 1 or 2 = M □ 0 = L Record the rating on	3 the first page
not listed in questions D 2.1 - D 2.3? Source Waterfowl Total for D 2 Rating of Landscape Potential If score is: □ 3 or 4 = H □ 1 or 2 = M □ 0 = L Record the rating on D 3.0. Is the water quality improvement provided by the site valuable to society?	3
not listed in questions D 2.1 - D 2.3? Source Waterfowl Total for D 2 Add the points in the boxes above Rating of Landscape Potential If score is: □ 3 or 4 = H □ 1 or 2 = M □ 0 = L Record the rating on D 3.0. Is the water quality improvement provided by the site valuable to society? D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,	3 the first page
not listed in questions D 2.1 - D 2.3? Source Waterfowl Yes = 1 No = 0 Total for D 2 Add the points in the boxes above Rating of Landscape Potential If score is: ☑ 3 or 4 = H □ 1 or 2 = M □ 0 = L Record the rating on D 3.0. Is the water quality improvement provided by the site valuable to society? D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	3 the first page
not listed in questions D 2.1 - D 2.3? Source Waterfowl Total for D 2 Rating of Landscape Potential If score is: ☑ 3 or 4 = H □ 1 or 2 = M □ 0 = L Record the rating on D 3.0. Is the water quality improvement provided by the site valuable to society? D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	3 the first page
not listed in questions D 2.1 - D 2.3? Source Waterfowl Yes = 1 No = 0 Total for D 2 Add the points in the boxes above Rating of Landscape Potential If score is: ☑ 3 or 4 = H ☐ 1 or 2 = M ☐ 0 = L Record the rating on D 3.0. Is the water quality improvement provided by the site valuable to society? D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0 D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0 D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in	3 the first page
not listed in questions D 2.1 - D 2.3? Source Waterfowl Yes = 1 No = 0 Total for D 2 Add the points in the boxes above Rating of Landscape Potential If score is: ☑ 3 or 4 = H ☐ 1 or 2 = M ☐ 0 = L Record the rating on D 3.0. Is the water quality improvement provided by the site valuable to society? D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0 D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0 D 3.3. Has the site been identified in a watershed or local plan as important	3 the first page 0
not listed in questions D 2.1 - D 2.3? Source Waterfowl Yes = 1 No = 0 Total for D 2 Add the points in the boxes above Rating of Landscape Potential If score is: ☑ 3 or 4 = H ☐ 1 or 2 = M ☐ 0 = L Record the rating on D 3.0. Is the water quality improvement provided by the site valuable to society? D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0 D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in	3 the first page 0

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

Wetland Rating System for Western WA: 2014 Update Rating Form - Effective January 1, 2015

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 □ Emergent 3 structures: points = 2 ☑ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☑ Forested (areas where trees have > 30% cover) 1 structure: points = 0If the unit has a Forested class, check if: ☑ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). ☑ Permanently flooded or inundated 4 or more types present: points = 3 ☑ Seasonally flooded or inundated 3 types present: points = 2 2 □ Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☑ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 3 **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number	
of points.	
☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)	
☑ Standing snags (dbh > 4 in) within the wetland	
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends	
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at	
least 33 ft (10 m)	5
☑ Stable steep banks of fine material that might be used by beaver or muskrat for dennir	
(> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees	
that have not yet weathered where wood is exposed)	
☑ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in area	
that are permanently or seasonally inundated (structures for egg-laying by amphibians	
☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see	•
H 1.1 for list of strata)	
Total for H 1 Add the points in the boxes above	
Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 - 6 = L Record the rating	on the first page
1100 D	
H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit).	
Calculate:	
7 % undisturbed habitat + (4 % moderate & low intensity land uses / 2) = 9%	
If total accessible habitat is:	0
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points =	3
20 - 33% of 1 km Polygon points =	2
10 - 19% of 1 km Polygon points =	1
< 10 % of 1 km Polygon points =	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate:	
17 % undisturbed habitat + (30 % moderate & low intensity land uses / 2) = 32%	
	_ 1
Undisturbed habitat > 50% of Polygon points =	3
Undisturbed habitat 10 - 50% and in 1-3 patches points =	2
Undisturbed habitat 10 - 50% and > 3 patches points =	1
Undisturbed habitat < 10% of 1 km Polygon points =	0
H 2.3 Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-	2) -2
≤ 50% of 1km Polygon is high intensity points =	0
Total for H 2 Add the points in the boxes above	re -1
Rating of Landscape Potential If Score is: 4-6=H 1-3=M <	on the first page
[
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose</i>	
only the highest score that applies to the wetland being rated.	
Site meets ANY of the following criteria: points =	2
☐ It has 3 or more priority habitats within 100 m (see next page)	
☐ It provides habitat for Threatened or Endangered species (any plant	
or animal on the state or federal lists)	
☐ It is mapped as a location for an individual WDFW priority species	2
☐ It is a Wetland of High Conservation Value as determined by the	
Department of Natural Resources	
☐ It has been categorized as an important habitat site in a local or	
regional comprehensive plan, in a Shoreline Master Plan, or in a	
watershed plan	
Site has 1 or 2 priority habitats (listed on next page) with in 100m points =	
Site does not meet any of the criteria above points =	
Rating of Value If Score is: \square 2 = H \square 1 = M \square 0 = L Record the rating	on the first page

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

J	Aspen Stands : Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
v	Old-growth/Mature forests: Old-growth west of Cascade crest — Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha > 32 in (81 cm) dbh or > 200 years of age. Mature forests — Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158</i> – see web link above).
	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page</i>).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
V	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category	
Check off	f any criteria that apply to the wetland. List the category when the appropriate criteria are met.		
	Estuarine Wetlands		
	Does the wetland meet the following criteria for Estuarine wetlands?		
	The dominant water regime is tidal,		
	Vegetated, and		
	With a salinity greater than 0.5 ppt		
	☐ Yes - Go to SC 1.1 ☐ No = Not an estuarine wetland		
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary		
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?		
	☐ Yes = Category I ☐ No - Go to SC 1.2		
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?		
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are		
	Spartina, see page 25)		
	At least $\frac{3}{4}$ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland.		
	The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.		
	☐ Yes = Category I ☐ No = Category II		
	Wetlands of High Conservation Value (WHCV)		
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list		
	of Wetlands of High Conservation Value?		
00.00	✓ Yes - Go to SC 2.2 □ No - Go to SC 2.3		
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?		
CC 2.2	☐ Yes = Category I ☐ No = Not WHCV		
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf		
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV		
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation		
00 2.4.	Value and listed it on their website?		
	☐ Yes = Category I ☐ No = Not WHCV		
SC 3.0. I			
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below. If you answer YES you will still need to rate the wetland based on its functions.		
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,		
30 3.1.	that compose 16 in or more of the first 32 in of the soil profile?		
00.00	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2		
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?		
	$\Box \text{ Yes - Go to SC 3.3} \qquad \Box \text{ No = Is not a bog}$		
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?		
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4		
	NOTE: If you are uncertain about the extent of mosses in the understory, you may		
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.		
SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,			
33 3. 1.	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species)		
	listed in Table 4 provide more than 30% of the cover under the canopy?		
	☐ Yes = Is a Category I bog ☐ No = Is not a bog		

SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? If you	
	answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
	200 years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	Use Cotogory I. E. No - Not a forested watland for this costion	
SC 5.0	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons Doos the wetland most all of the following criteria of a wetland in a coastal lagoon?	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
_	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>	
	be measured near the bottom)	
	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon	
SC 5.1.	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,	
_	grazing), and has less than 20% cover of aggressive, opportunistic plant species (see	
	list of species on p. 100).	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland is larger than $\frac{1}{10}$ ac (4350 ft ²)	
	☐ Yes = Category I ☐ No = Category II	
SC 6.0.	Interdunal Wetlands	
	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland	
	based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating	
SC 6.1.		
	(rates H,H,H or H,H,M for the three aspects of function)?	
	□ Yes = Category I □ No - Go to SC 6.2	
SC 6.2.	3 ,	
	☐ Yes = Category II ☐ No - Go to SC 6.3	
SC 6.3.	·	
	1 ac?	
	☐ Yes = Category III ☐ No = Category IV	
_	ry of wetland based on Special Characteristics	
If you ar	nswered No for all types, enter "Not Applicable" on Summary Form	



Parametrix
Source: King County,
City of Federal Way



Wetland (Approx.Boundary)

150-ft Buffer

Aquatic Bed (AB)

Palustrine Scrub Shrub (PSS) Palustrine Forested (PFO)

Cowardin Plant Classes

Federal Way City Center Access Project **Wetland Rating Forms**

0 50100 Feet



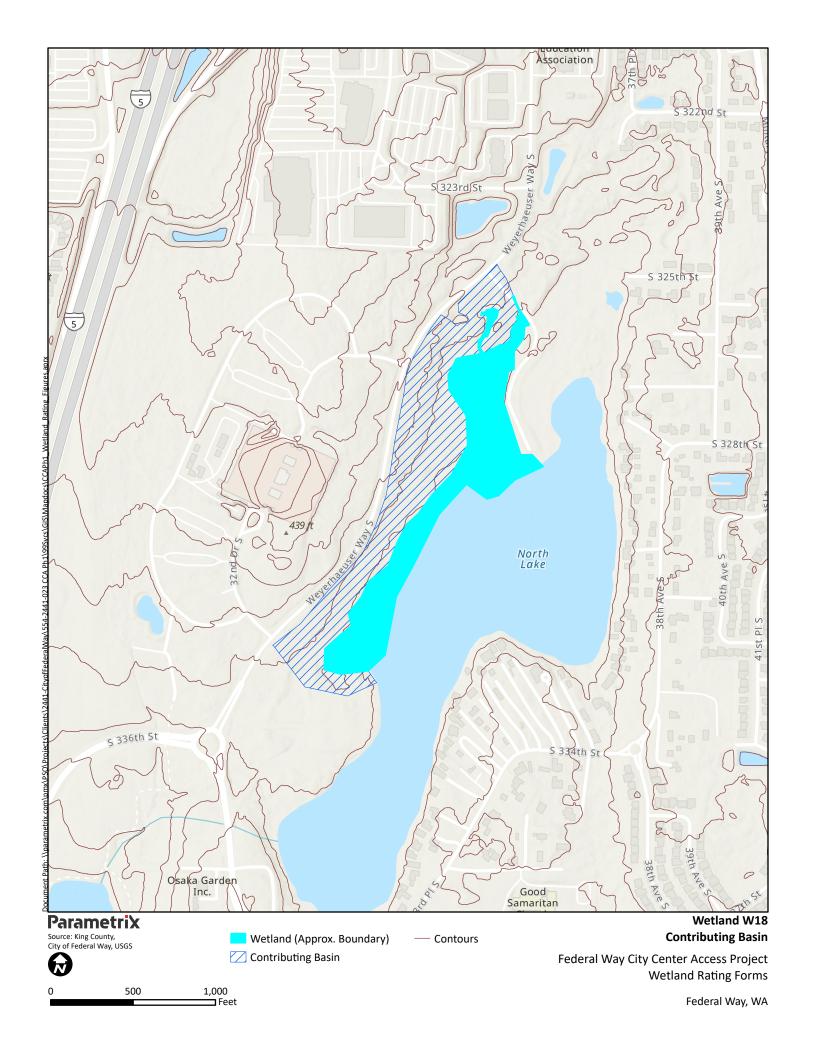


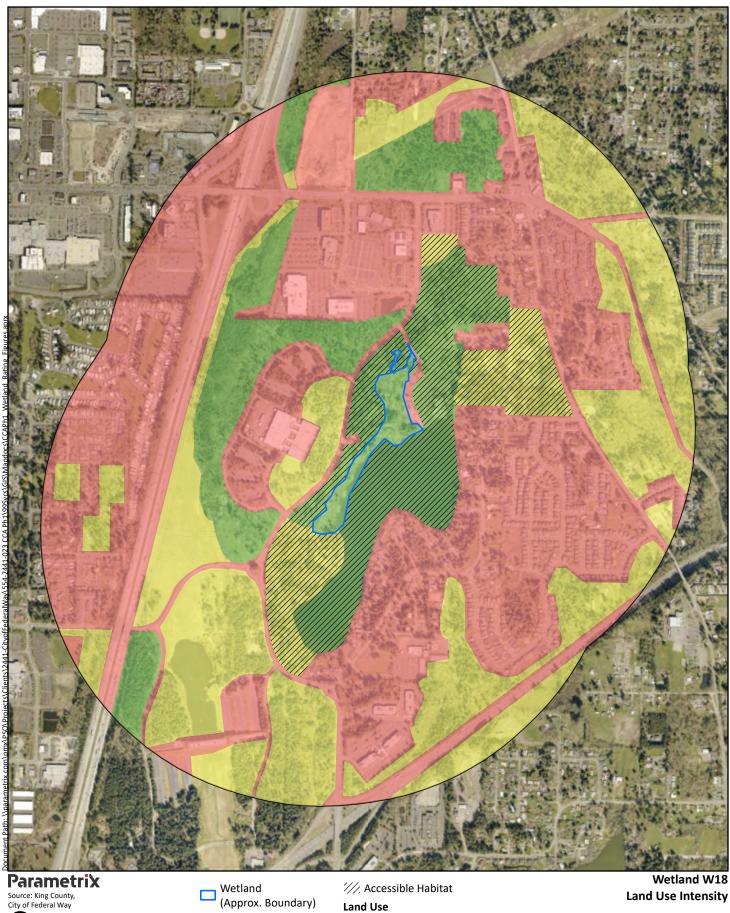
0 50100 Feet

150-ft Buffer

Seasonally flooded Permanently flooded

Federal Way City Center Access Project Wetland Rating Forms





1,000 Feet

Wetland (Approx. Boundary)

☐ 1-km Polygon

Land Use

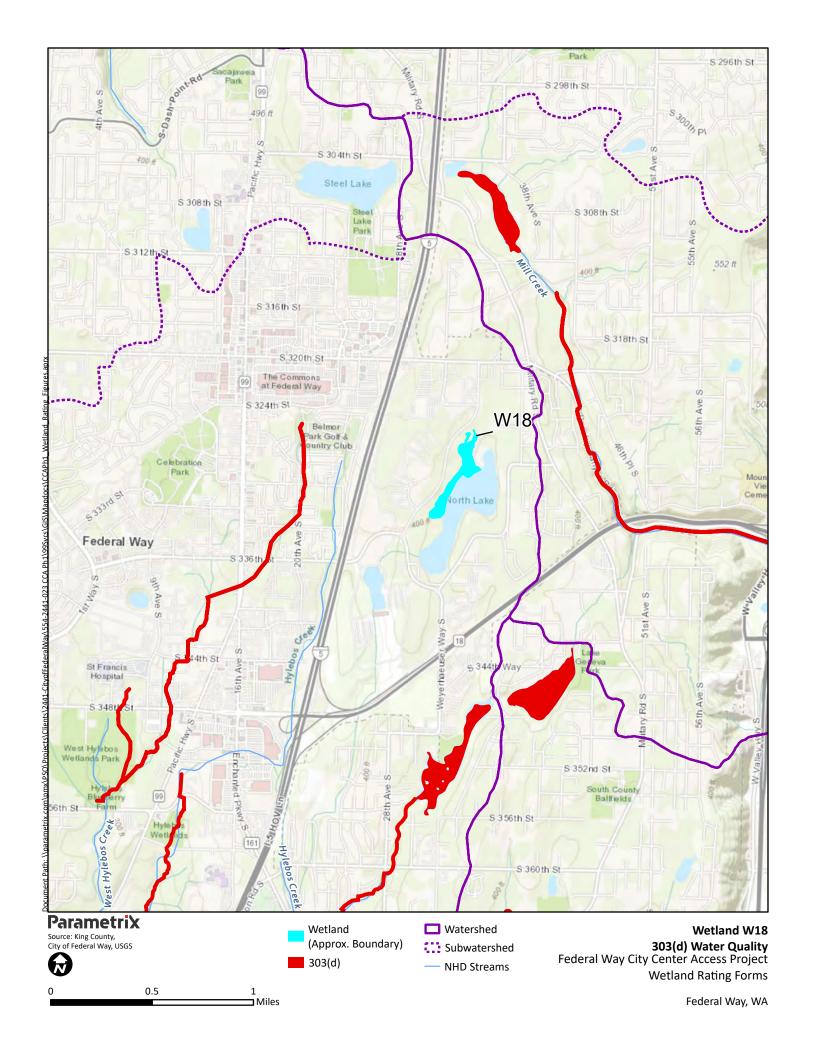
High

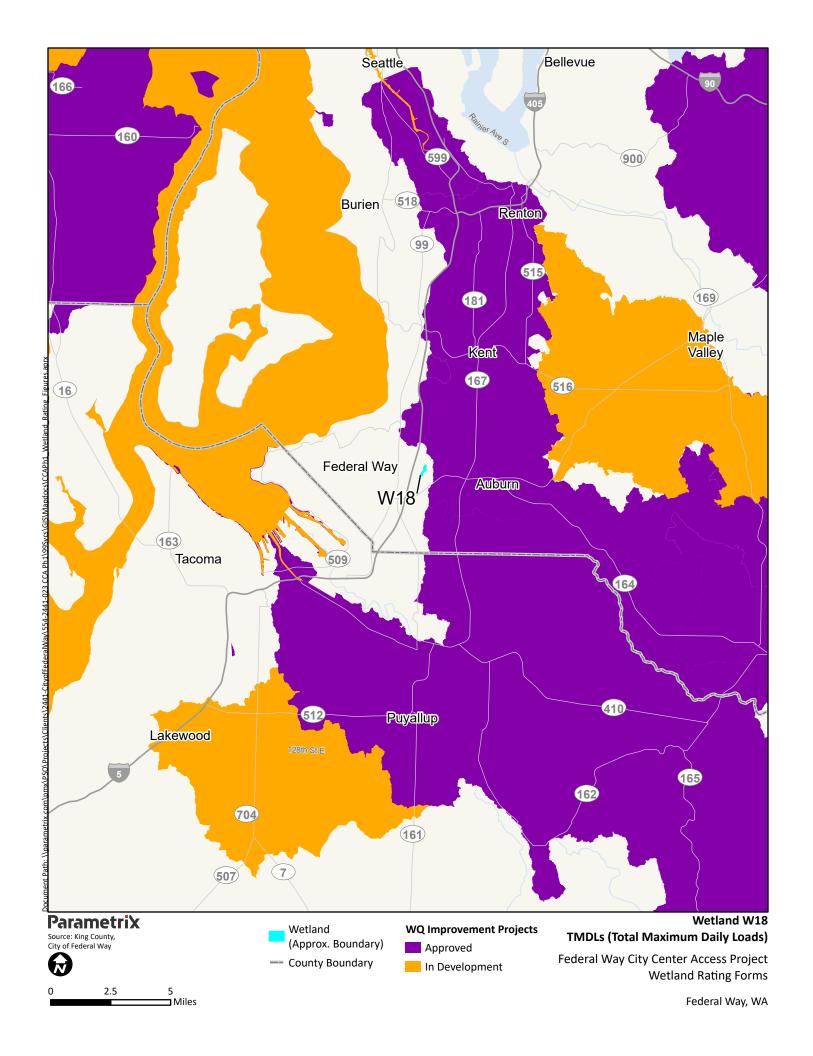
Low/moderate

Undisturbed

Land Use Intensity

Federal Way City Center Access Project Wetland Rating Forms





RATING SUMMARY – Western Washington

Name of wetland (or ID #):	W19		Date of site visit:	1/7/2021
Rated by _Jsh Wozniak		Trained by Ecology?☑ Yes	□ No Date of training	Jun-14
HGM Class used for ratin	g Depressional & Flats	Wetland ha	s multiple HGM classes? ☑	Yes □ No
NOTE: Form is	not complete with out	the figures requested (figu	res can be combined).	
Source	ce of base aerial photo/r	nap ESRI	_	-
OVERALL WETLAND C		`	r special characteristics D)
1. Category of wetlar	nd based on FUNCTI	ONS		-
	Category I - Total so	ore = 23 - 27	Score for each	
Х	Category II - Total s	core = 20 - 22	function based	
	Category III - Total :	score = 16 - 19	on three	
	Category IV - Total	score = 9 - 15	ratings (order of ratings	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	ropriate rating	g (H, M, L)	
Site Potential	M	M	Н	
Landscape Potential	Н	Н	L	
Value	M	Н	Н	Total
Score Based on Ratings	7	8	7	22

Score for each function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are th	 Are the water levels in the entire unit usually controlled by tides except during floods? 				
V	NO - go to 2	☐ YES - the wetland of	class is	s Tidal Fringe - go to 1.1	
1.1	Is the salinity of the water during peri	ods of annual low flow	below	0.5 ppt (parts per thousand)?	
	NO - Saltwater Tidal Fringe (Estual If your wetland can be classified as a If it is Saltwater Tidal Fringe it is an used to score functions for estuarine	n Freshwater Tidal Frin Estuarine wetland and	ge use		
	ntire wetland unit is flat and precipitation vater and surface water runoff are NO				
V	NO - go to 3 If your wetland can be classified as a		_	The wetland class is Flats for Depressional wetlands.	
	the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of t At least 30% of the open water area	on the shores of a bodhe year) at least 20 ac	(8 ha)		
	NO - go to 4	☑ YES - The wetland	class i	s Lake Fringe (Lacustrine Fringe)	
	the entire wetland unit meet all of the The wetland is on a slope (<i>slope can</i> The water flows through the wetland It may flow subsurface, as sheetflow, The water leaves the wetland withou	be very gradual), in one direction (unidir or in a swale without of			
V	NO - go to 5		YES -	The wetland class is Slope	
	turface water does not pond in these to ons or behind hummocks (depression				
	the entire wetland unit meet all of the The unit is in a valley, or stream char from that stream or river, The overbank flooding occurs at leas	nnel, where it gets inun	dated	by overbank flooding	
V	NO - go to 6		YES -	The wetland class is Riverine	
NOTE: T	he Riverine unit can contain depression	ons that are filled with v	vater v	when the river is not flooding.	

Wetland	name	or	number	W19	
Welland	Hallie	UΙ	Hullibel	VV 19	

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface some time during the year? This means that any outlet, if present, is higher than the interior of the wetland.				
□ NO - go to 7	☑ YES - The wetland class is Depressional			
The unit does not pond surface water mo	ery flat area with no obvious depression and no overbank flooding? are than a few inches. The unit seems to be maintained by high by be ditched, but has no obvious natural outlet.			
□ NO - go to 8	☐ VFS - The wetland class is Denressional			

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

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

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

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

NOTES and FIELD OBSERVATIONS:

Wetland has two HGM classes - depressional and lake fringe, therefore it is rated as depressional.

DEPRESSIONAL AND FLATS WETLANDS			
Water Quality Functions - Indicators that the site functions to im	prove water quality		
D 1.0. Does the site have the potential to improve water quality?			
D 1.1. Characteristics of surface water outflows from the wetland:			
Wetland is a depression or flat depression (QUESTION 7 on key)			
with no surface water leaving it (no outlet).	points = 3		
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	points = 2	1	
☑ Wetland has an unconstricted, or slightly constricted, surface outlet	pointo – 2	·	
that is permanently flowing	points = 1		
☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is			
a permanently flowing ditch.	points = 1		
D 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic (use NRCS definitions).	V 4 N- 0	4	
D 1.3. <u>Characteristics and distribution of persistent plants</u> (Emergent, Scrub-sh	Yes = 4 No = 0		
Forested Cowardin classes):	irub, ariu/or		
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	_	
Wetland has persistent, ungrazed, plants > ½ of area	points = 3	5	
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area	points = 1		
Wetland has persistent, ungrazed plants < 1/10 of area	points = 0		
D 1.4. Characteristics of seasonal ponding or inundation:			
This is the area that is ponded for at least 2 months. See description			
Area seasonally ponded is > ½ total area of wetland	points = 4	0	
Area seasonally ponded is > 1/4 total area of wetland	points = 2		
Area seasonally ponded is < 1/4 total area of wetland Total for D 1 Add the points	points = 0 in the boxes above	10	
Rating of Site Potential If score is: 12 - 16 = H 6 - 11 = M 0 - 5 = L	Record the rating on		
	rtooora uio raung on	aro mot pago	
D 2.0. Does the landscape have the potential to support the water quality funct	ion of the site?		
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	1	
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that		1	
generate pollutants?	Yes = 1 No = 0		
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0	
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3?		1	
Source <u>Waterfowl</u>	Yes = 1 No = 0	•	
	in the boxes above	3	
Rating of Landscape Potential If score is: \square 3 or 4 = H \square 1 or 2 = M \square 0 = L	Record the rating on	the first page	
D 3.0. Is the water quality improvement provided by the site valuable to society	?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river,			
lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	0	
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the	ne 303(d) list?	1	
	Yes = 1 No = 0	'	
D 3.3. Has the site been identified in a watershed or local plan as important		_	
for maintaining water quality (answer YES if there is a TMDL for the basin in		0	
which the unit is found)?	Yes = 2 No = 0		
Total for D 3 Add the points Rating of Value If score is: □ 2-4=H □ 1=M □ 0=L	in the boxes above	the first nage	
Taking of value is score is. Li 2-4=11 Li 1=W Li U=L	Record the rating on	uie iiisi paye	

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

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 ☑ Emergent 3 structures: points = 2 ☑ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☑ Forested (areas where trees have > 30% cover) 1 structure: points = 0If the unit has a Forested class, check if: ☑ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). ☑ Permanently flooded or inundated 4 or more types present: points = 3 ☑ Seasonally flooded or inundated 3 types present: points = 2 3 □ Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☑ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 2 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 3 **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 2.3 Land use intensity in 1 km Polygon: If		
> 50% of 1 km Polygon is high intensity land use	points = (-2)	-2
≤ 50% of 1km Polygon is high intensity	points = 0	
Total for H 2 Add the points in the b	oxes above	0
Rating of Landscape Potential If Score is: 4-6=H 1-3=M <	I the rating on	the first page
H 3.0. Is the habitat provided by the site valuable to society?		
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies	? Choose	
only the highest score that applies to the wetland being rated.		
Site meets ANY of the following criteria:	points = 2	
☑ It has 3 or more priority habitats within 100 m (see next page)		
☐ It provides habitat for Threatened or Endangered species (any pla	nt	
or animal on the state or federal lists)		
☐ It is mapped as a location for an individual WDFW priority species		2
☐ It is a Wetland of High Conservation Value as determined by the		2
Department of Natural Resources		
☐ It has been categorized as an important habitat site in a local or		
regional comprehensive plan, in a Shoreline Master Plan, or in a		
watershed plan		
Site has 1 or 2 priority habitats (listed on next page) with in 100m	points = 1	

points = 1

points = 0

points = 0

Record the rating on the first page

Undisturbed habitat 10 - 50% and > 3 patches

Undisturbed habitat < 10% of 1 km Polygon

Site does not meet any of the criteria above

Wetland	name	or number	W19	

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).

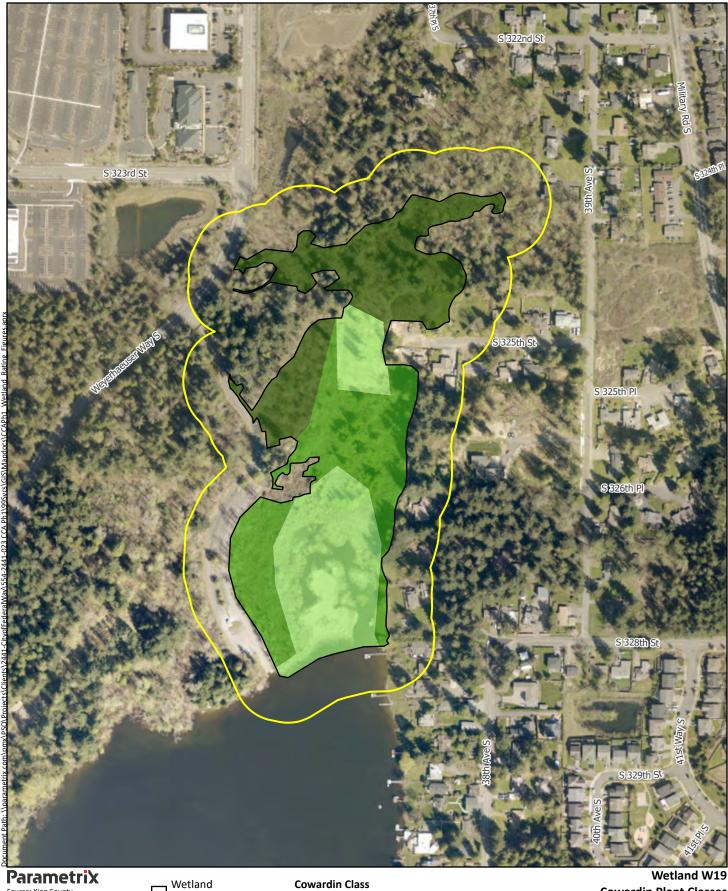
	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
V	Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158 – see web link above</i>).
7	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page</i>).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
7	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
Check off	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
SC 1.0. E	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☐ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
	□ Yes = Category I □ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25)	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	
	☐ Yes = Category I ☐ No = Category II	
	Vetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list	
	of Wetlands of High Conservation Value?	
0000	☑ Yes - Go to SC 2.2 □ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
SC 2.2	☐ Yes = Category I ☐ No = Not WHCV Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
SC 2.3.	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
30 2.4.	Value and listed it on their website?	
	☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. E		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation	
	in bogs? Use the key below. If you answer YES you will still need to rate the	
	wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
	that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?	
	☐ Yes - Go to SC 3.3 ☐ No = Is not a bog	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4?	
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4	
	NOTE : If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
	the wetland is a bog.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,	
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann	
	spruce, or western white pine, AND any of the species (or combination of species)	
	listed in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
	200 years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
_	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>	
	be measured near the bottom)	
00.5.4	☐ Yes - Go to SC 5.1 ☑ No = Not a wetland in a coastal lagoon	
	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,	
	grazing), and has less than 20% cover of aggressive, opportunistic plant species (see	
	list of species on p. 100).	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or un-mowed grassland.	
	The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²) \square Yes = Category I \square No = Category II	
SC 6.0	Interdunal Wetlands	
30 0.0.	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland	
	based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
	☐ Yes - Go to SC 6.1 ☑ No = Not an interdunal wetland for rating	
SC 6.1.	Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form	
	(rates H,H,H or H,H,M for the three aspects of function)?	
	☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.2.	Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	
	☐ Yes = Category II ☐ No - Go to SC 6.3	
SC 6.3.	Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and	
	1 ac?	
	☐ Yes = Category III ☐ No = Category IV	
Catego	ry of wetland based on Special Characteristics	
_	nswered No for all types, enter "Not Applicable" on Summary Form	



Parametrix
Source: King County,
City of Federal Way



0 50 100 Feet

Wetland (Approx.Boundary)

150-ft Buffer

Palustrine Emergent (PEM)

Palustrine Scrub Shrub (PSS) Palustrine Forested (PFO)

Cowardin Plant Classes

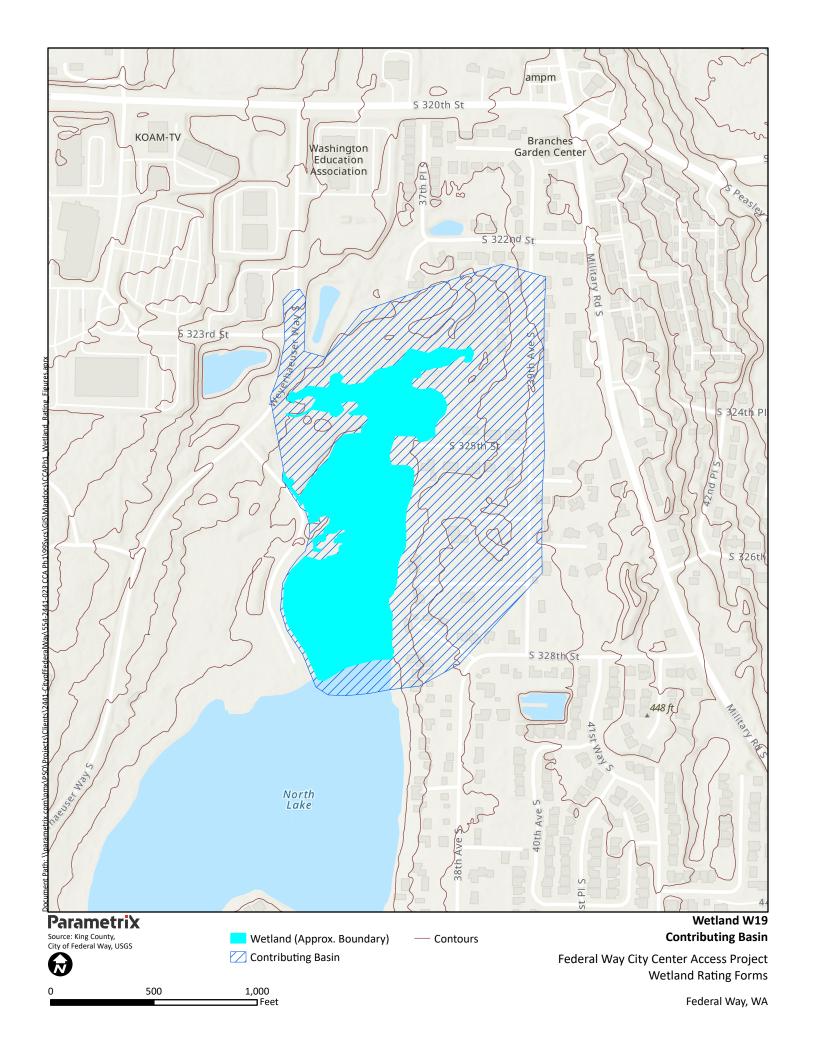
Federal Way City Center Access Project **Wetland Rating Forms**

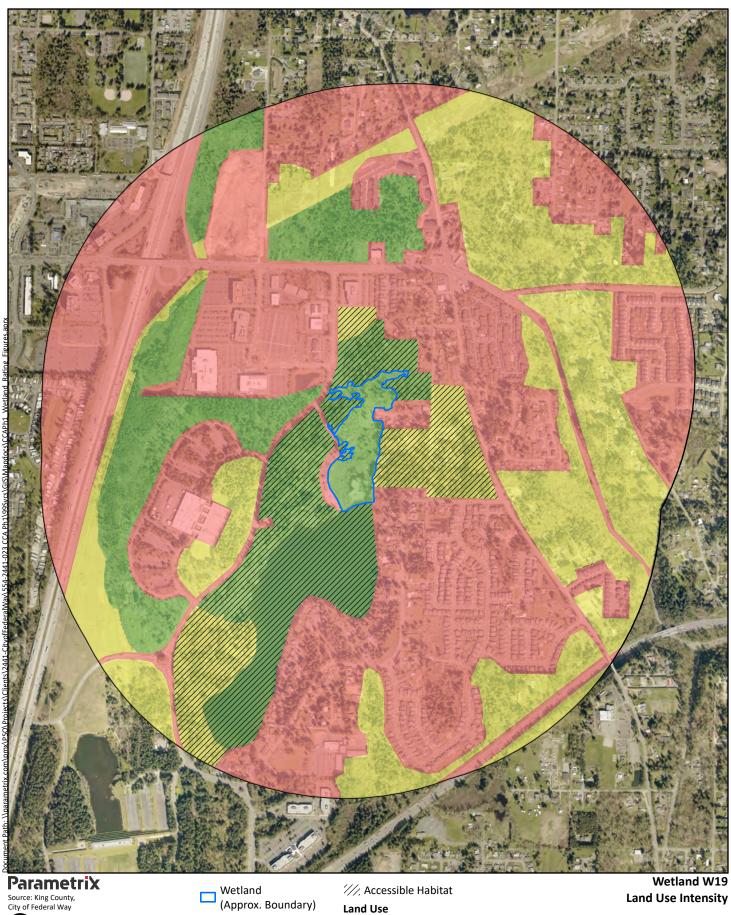


150-ft Buffer

Saturated only Seasonally flooded Permanently flooded

Federal Way City Center Access Project **Wetland Rating Forms**







1,000 Feet 500

Wetland (Approx. Boundary)

☐ 1-km Polygon

Land Use

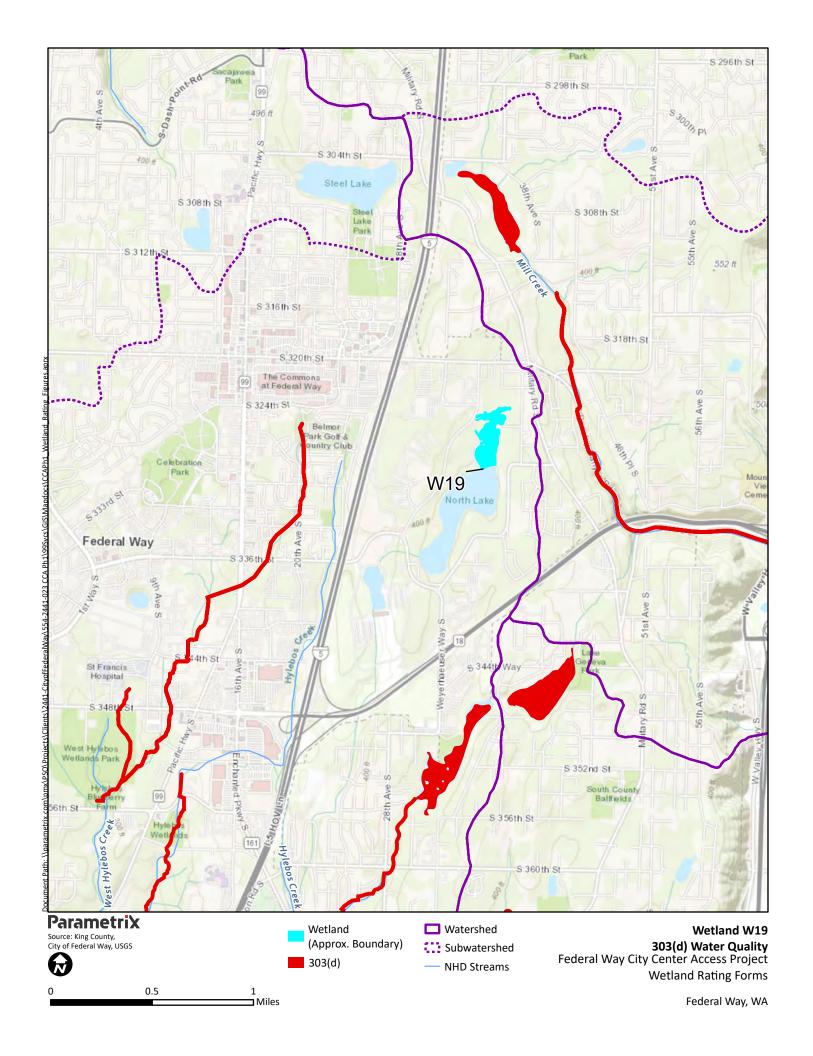
High

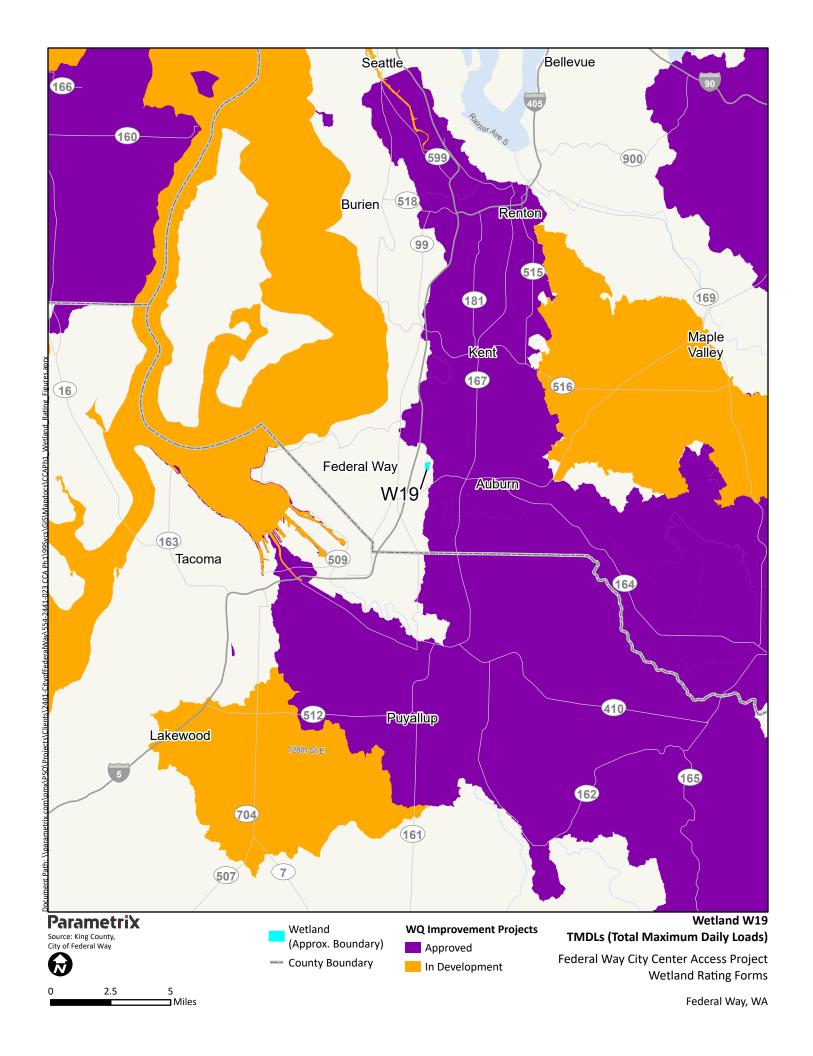
Low/moderate

Undisturbed

Federal Way City Center Access Project Wetland Rating Forms

Federal Way, WA





				14100	
Wetland	name	α r	number	W20	

RATING SUMMARY – Western Washington

Name of wetland (or	ID #): W20					Date of site visit:	5/3/2021
Rated by Amanda V	Veiss	_ Tr	ained by Ed	cology?	s □ No	Date of training	2020
HGM Class used for rating Slope Wetland has multiple				HGM classes? □	Yes ☑ No		
NOTE: Fo	orm is not complet Source of base ae			equested (fig	gures can	be combined).	
OVERALL WETLA	OVERALL WETLAND CATEGORY (based on functions ☑ or special characteristics □)						
1. Category of v	wetland based o	n FUNCTION	NS				
	Category	I - Total score	e = 23 - 27		S	core for each	
	Category	II - Total scor	e = 20 - 22		fu	unction based	
Category III - Total score = 16 - 19 on three							
			atings				
						order of ratings	
FUNCTION	Improving	Hydrologic	Habitat		,	s not	
FUNCTION	Water Quality				ir	mportant)	
	Listann	ronriato ratino	7 (H M I)				

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List appropriate rating (H, M, L)			
Site Potential	M	L	L	
Landscape Potential	M	М	L	
Value	M	Н	L	Total
Score Based on Ratings	6	6	3	15

Score for each function based on three ratings (order of ratings is not important) 9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	Х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense , rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to another figure)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland in Western Washington

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

1. Are th	ne water levels in the entire unit usua	Illy controlled by tides except during floods?	
V	NO - go to 2	☐ YES - the wetland class is Tidal Fringe - go to 1.1	
1.1	Is the salinity of the water during pe	riods of annual low flow below 0.5 ppt (parts per thousand)?	
		a Freshwater Tidal Fringe use the forms for Riverine ge it is an Estuarine wetland and is not scored. This method	ı
	ntire wetland unit is flat and precipita vater and surface water runoff are NO	tion is the only source (>90%) of water to it. OT sources of water to the unit.	
V	NO - go to 3 If your wetland can be classified as	☐ YES - The wetland class is Flats a <i>Flats wetland, use the form for</i> Depressional wetlands.	
		on the shores of a body of permanent open water (without arthe year) at least 20 ac (8 ha) in size;	ıy
V	NO - go to 4	☐ YES - The wetland class is Lake Fringe (Lacustrine Fring	je)
\ \		n be very gradual), d in one direction (unidirectional) and usually comes from seep v, or in a swale without distinct banks.	os.
	NO - go to 5	☑ YES - The wetland class is Slope	
		type of wetlands except occasionally in very small and shallowns are usually <3 ft diameter and less than 1 ft deep).	w
	the entire wetland unit meet all of the The unit is in a valley, or stream cha flooding from that stream or river, The overbank flooding occurs at lea	annel, where it gets inundated by overbank	
	NO - go to 6	☐ YES - The wetland class is Riverine	
NOTE: T	The Riverine unit can contain depress	sions that are filled with water when the river is not flooding.	

	epression in which water ponds, or is saturated to the surface, t any outlet, if present, is higher than the interior of the
□ NO - go to 7	☐ YES - The wetland class is Depressional
	at area with no obvious depression and no overbank flooding? an a few inches. The unit seems to be maintained by high ditched, but has no obvious natural outlet.

Wetland name or number <u>W20</u>

□ NO - go to 8

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

☐ YES - The wetland class is Depressional

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

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

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

SLOPE WETLANDS				
Water Quality Functions - Indicators that the site functions to ir	nprove wate	r quality		
S 1.0. Does the site have the potential to improve water quality?				
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a	1 ft vertical	drop		
in elevation for every 100 ft of horizontal distance)				
Slope is 1% or less	po	ints = 3	2	
Slope is > 1% - 2%	po	ints = 2	2	
Slope is > 2% - 5%	po	ints = 1		
Slope is greater than 5%	ро	ints = 0		
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true			0	
organic (use NRCS definitions):	Yes = 3	No = 0	0	
S 1.3. Characteristics of the plants in the wetland that trap sediments and po	llutants:			
Choose the points appropriate for the description that best fits the plants in the				
means you have trouble seeing the soil surface (>75% cover), and uncut me	ans not graz	ed or		
mowed and plants are higher than 6 in.				
Dense, uncut, herbaceous plants > 90% of the wetland area	-	ints = 6	6	
Dense, uncut, herbaceous plants > ½ of area	· ·	ints = 3		
Dense, woody, plants > ½ of area	-	ints = 2		
Dense, uncut, herbaceous plants > 1/4 of area	•	ints = 1		
Does not meet any of the criteria above for plants		ints = 0		
Total for S 1 Add the points			8	
Rating of Site Potential If score is: 12 = H 6 - 11 = M 0 - 5 = L	Record the I	rating on	the first page	
S 2.0. Does the landscape have the potential to support the water quality fun	ction of the s	site?		
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in				
land uses that generate pollutants?	Yes = 1	No = 0	1	
S 2.2. Are there other sources of pollutants coming into the wetland that are				
not listed in question S 2.1?			1	
Other Sources I-5	Yes = 1	No = 0		
Total for S 2 Add the points	in the boxes	above	2	
Rating of Landscape Potential If score is: ☑ 1 - 2 = M □ 0 = L			the first page	
		Ü	, 0	
S 3.0. Is the water quality improvement provided by the site valuable to socie	ty?			
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream,			0	
river, lake, or marine water that is on the 303(d) list?	Yes = 1	No = 0	0	
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue?			1	
At least one aquatic resource in the basin is on the 303(d) list.	Yes = 1	No = 0	ı	
S 3.3. Has the site been identified in a watershed or local plan as important				
for maintaining water quality? Answer YES if there is a TMDL for the basin			0	
in which the unit is found?	Yes = 2	No = 0		
Total for S 3 Add the points	in the boxes	above	1	
Rating of Value If score is: \Box 2 - 4 = H \Box 1 = M \Box 0 = L	Record the I	rating on	the first page	

SLOPE WETLANDS				
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion				
S 4.0. Does the site have the potential to reduce flooding and stream erosion 5 4.1. Characteristics or plants that reduce the velocity of surface nows during				
the points appropriate for the description that best fits conditions in the wetla				
should be thick enough (usually > $^{1}/_{8}$ in), or dense enough, to remain erect flows	during surface	0		
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1			
All other conditions	points = 0			
Rating of Site Potential If score is: □ 1 = M ☑ 0 = L	Record the rating on	the first page		
S 5.0. Does the landscape have the potential to support hydrologic functions	of the site?			
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land		1		
uses or cover that generate excess surface runoff?	Yes = 1 No = 0	'		
Rating of Landscape Potential If score is: ☑ 1 = M ☐ 0 = L	Record the rating on	the first page		
S 6.0. Are the hydrologic functions provided by the site valuable to society?				
S 6.1. Distance to the nearest areas downstream that have flooding problem	s:			
The sub-basin immediately down-gradient of site has flooding				
problems that result in damage to human or natural resources		2		
(e.g., houses or salmon redds)	points = 2	2		
Surface flooding problems are in a sub-basin farther down-gradien	t points = 1			
No flooding problems anywhere downstream	points = 0			
S 6.2. Has the site been identified as important for flood storage or flood		0		
conveyance in a regional flood control plan?	Yes = 2 No = 0	U		
Total for S 6 Add the points	in the boxes above	2		
Rating of Value If score is: 2-4=H 1=M 0=L	Record the rating on	the first page		

NOTES and FIELD OBSERVATIONS:

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 1/4 ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. □ Aquatic bed 4 structures or more: points = 4 Λ ☑ Emergent 3 structures: points = 2 ☐ Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points - 1 ☐ Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☐ Seasonally flooded or inundated 3 types present: points = 2 1 ☑ Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle n If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. Λ **None** = 0 points Low = 1 pointModerate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 3.0. Is the habitat provided by the site valuable to society?

H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated.

Site meets ANY of the following criteria:

It has 3 or more priority habitats within 100 m (see next page)

It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)

It is mapped as a location for an individual WDFW priority species

It is a Wetland of High Conservation Value as determined by the Department of Natural Resources

It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan

Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1

Site does not meet any of the criteria above

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

Record the rating on the first page

Wetland	name	or numbe	er W20	

WDFW Priority Habitats

<u>Priority habitats listed by WDFW</u> (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf_or access the list from here: http://wdfw.wa.gov/conservation/phs/list/

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.

Ш	Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	Old-growth/Mature forests: Old-growth west of Cascade crest — Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests — Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
	Oregon White Oak : Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158</i> – see web link above).
	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page</i>).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Type	<u>Category</u>	
	f any criteria that apply to the wetland. List the category when the appropriate criteria are met.		
SC 1.0.	Estuarine Wetlands		
	Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal,		
	Vegetated, and		
	With a salinity greater than 0.5 ppt		
	☐ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland		
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary		
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or		
	Scientific Reserve designated under WAC 332-30-151?		
SC 1.2.	□ Yes = Category I □ No - Go to SC 1.2 Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?		
3C 1.2.	The wetland unit at least 1 ac in size and meets at least two of the following three conditions? The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,		
	grazing, and has less than 10% cover of non-native plant species. (If non-native		
	species are Spartina, see page 25)		
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or		
	un-grazed or un-mowed grassland.		
	The wetland has at least two of the following features: tidal channels, depressions with		
	open water, or contiguous freshwater wetlands.		
0000	☐ Yes = Category I ☐ No = Category II		
	Wetlands of High Conservation Value (WHCV) Has the WA Department of Natural Resources updated their website to include the list		
00 2.1.	of Wetlands of High Conservation Value?		
	☑ Yes - Go to SC 2.2 □ No - Go to SC 2.3		
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value		
	□ Yes = Category I		
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?		
	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf		
SC 2.4.	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation		
30 2.4.	Value and listed it on their website?		
	☐ Yes = Category I ☐ No = Not WHCV		
SC 3.0.	Bogs		
	Does the wetland (or any part of the unit) meet both the criteria for soils and		
	vegetation in bogs? Use the key below. If you answer YES you will still need to		
00 2 4	rate the wetland based on its functions.		
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?		
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2		
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that		
	are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or		
	volcanic ash, or that are floating on top of a lake or pond?		
	$\Box \text{ Yes - Go to SC 3.3} \qquad \Box \text{ No = Is not a bog}$		
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground		
	level, AND at least a 30% cover of plant species listed in Table 4? □ Yes = Is a Category I bog □ No - Go to SC 3.4		
	NOTE: If you are uncertain about the extent of mosses in the understory, you may		
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at		
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are		
	present, the wetland is a bog.		
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,		
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann		
spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?			
	☐ Yes = Is a Category I bog ☐ No = Is not a bog		

SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? If	
	you answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
	200 years old OR the species that make up the canopy have an average diameter	
	(dbh) exceeding 21 in (53 cm).	
	D. Ver. October V. D. Net a few at advertised for this continu	
SC F O	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons Does the wetland most all of the following criteria of a wetland in a coastal lagoon?	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less	
	frequently, rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs</i>	
	to be measured near the bottom)	
	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon	
SC 5.1.	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation,	
	grazing), and has less than 20% cover of aggressive, opportunistic plant species (see	
	list of species on p. 100).	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or	
	un-grazed or un-mowed grassland.	
	The wetland is larger than $^1/_{10}$ ac (4350 ft ²)	
	☐ Yes = Category I ☐ No = Category II	
SC 6.0.	Interdunal Wetlands	
	Is the wetland west of the 1889 line (also called the Western Boundary of Upland	
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland	
	based on its habitat functions.	
	In practical terms that means the following geographic areas:	
	Long Beach Peninsula: Lands west of SR 103	
	Grayland-Westport: Lands west of SR 105	
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109	
SC 6 1	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form	
SC 6.1.	(rates H,H,H or H,H,M for the three aspects of function)?	
	$\Box \text{ Yes} = \textbf{Category I} \qquad \Box \text{ No - Go to } \textbf{SC 6.2}$	
SC 6.2.	Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	
0.2.	$\Box \text{ Yes} = \textbf{Category II} \qquad \Box \text{ No - Go to } \textbf{SC 6.3}$	
SC 6.3.		
0.0.	and 1 ac?	
	□ Yes = Category III □ No = Category IV	
Catego	ry of wetland based on Special Characteristics	
_	nswered No for all types, enter "Not Applicable" on Summary Form	

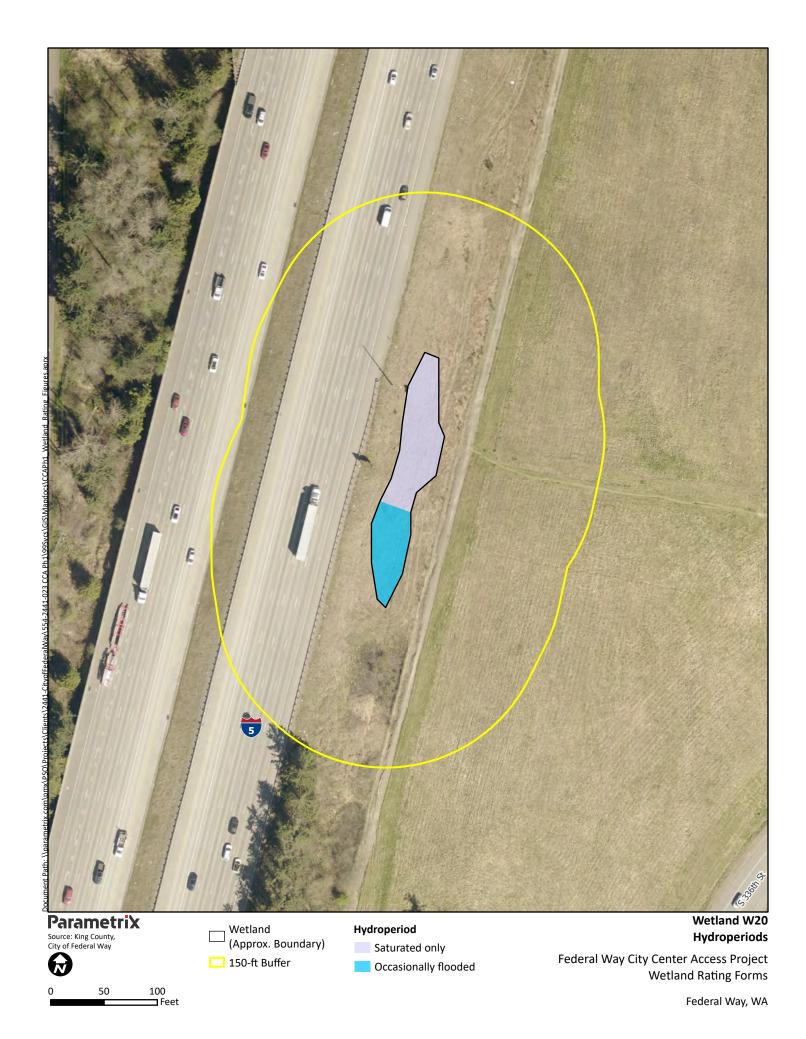


150-ft Buffer

Palustrine Emergent (PEM)

Cowardin Plant Classes

Federal Way City Center Access Project **Wetland Rating Forms**







1,000 Feet 500

Wetland (Approx. Boundary)

☐ 1-km Polygon

Land Use

High

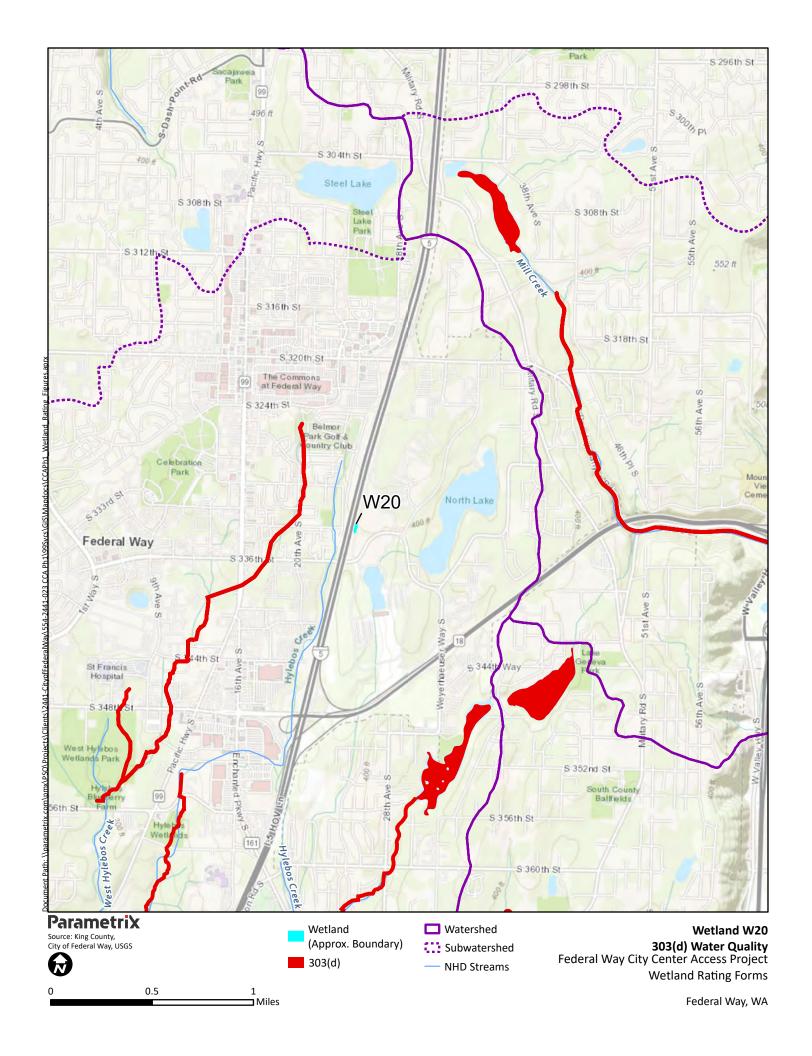
Low/moderate

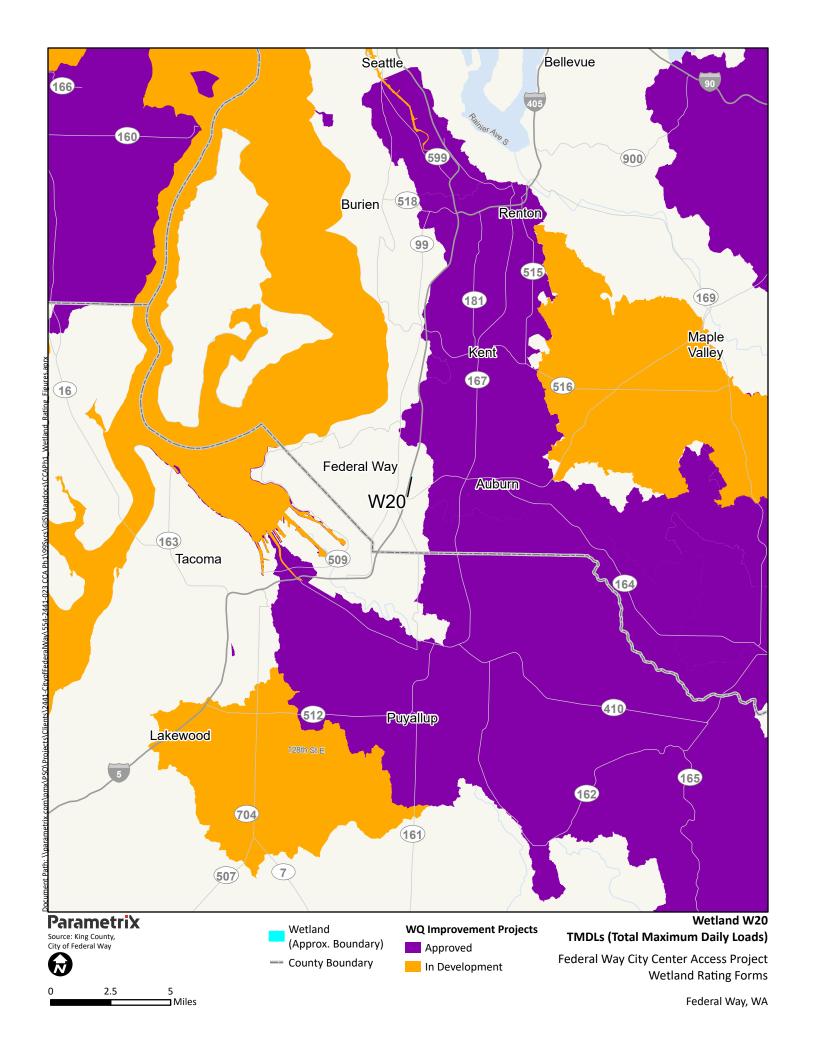
Undisturbed

Land Use Intensity

Federal Way City Center Access Project **Wetland Rating Forms**

Federal Way, WA





Appendix E

Photolog



Photo 1. Wetland W1, emergent wetland vegetation transitioning to upland vegetation, facing east. July 2020.



Photo 2. Wetland W2, scrub-shrub habitat, facing north. July 2020



Photo 3. Wetland W3, north of S 320th St, emergent habitat, facing east. July 2020.



Photo 4. Wetland W5, looking down into the lagg on the east side of the bog. March 2024.



Photo 5. W5 interior at the north end; photo taken at SP-8. August 2020.



Photo 6. Wetland W5, bog with Sphagnum moss, bog labrador tea (Ledum groenlandicum), and Western hemlock (Tsuga heterophylla). March 2024

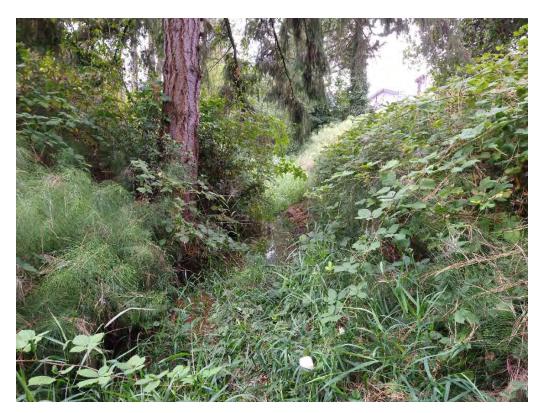


Photo 7. Wetland W6 and East Hylebos Creek Tributary 0016A. July 2020.



Photo 8. Wetland W7 adjacent to southbound I-5, looking north. July 2020.



Photo 9. Wetland W9, slope wetland within to I-5 cloverleaf at 320th St, facing west. July 2020.



Photo 10. Wetland W10, interior showing emergent and forested wetland habitat. March 2024.



Photo 11. Wetland W11, interior showing aquatic bed, emergent and scrub-shrub habitat, facing northeast. August 2020.



Photo 12. Wetland W11, facing north. March 2024.



Photo 13. Wetland W12, between southbound I-5 south and the on-ramp at S 320th St, facing south. June 2024.



Photo 14. Wetland W13, emergent and scrub-shrub habitat, woolgrass (*Scirpus cyperinus*) in the foreground. September 2020.



Photo 15. Wetland W14, forested and scrub-shrub habitat showing hardhack (*Spiraea douglasii*) and red alder (*Alnus rubra*), looking north. September 2020.



Photo 16. Wetland W15, showing emergent and scrub-shrub habitat, facing north. August 2020.



Photo 17. Wetland W17 interior, showing forest habitat with dense understory, facing south. January 2021.



Photo 18. Wetland W18 interior, forested habitat. January 2021.



Photo 19. Wetland W19 interior, forest habitat. January 2021.



Photo 20. Wetland W20, emergent habitat adjacent to southbound I-5, water drainages visible, facing north. May 2021.



Photo 21. Wetland W22 and the East Fork Hylebos Creek Tributary 0016A, forested habitat, looking southwest. June 2024.



Photo 22. Wetland W23 and the East Fork Hylebos Creek Tributary 0016A, forested habitat. May 2021.



Photo 23. Wetland W28, dominated by invasive species, Himalayan blackberry (*Rubus armeniacus*). Photo shared from Sound Transit OMF South project. July 2023.



Photo 24. Wetland W29, located within the Federal Way Park and Ride parking lot. Photo shared from Sound Transit OMF South project. April 2023.



Photo 25. East Fork Hylebos Creek Tributary 0016A near the outlet in W5. August 2020.



Photo 26. Young upland forest habitat within proposed S 324th Street extension, east of I-5. January 2021



Photo 27. Mature upland forest habitat, east of Weyerhaeuser Way South. January 2021.



Photo 28. Young upland forest habitat, north of W5, facing south.