WETLAND DELINEATION

Meyers Way Remainder Property Seattle, Washington

July 15, 2011

RAEDEKE ASSOCIATES, INC.

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1.0 INTRODUCTION

1.1 PURPOSE

Raedeke Associates, Inc. was retained by the City of Seattle to conduct field investigations and delineation of the wetlands within their property known as the Meyers Way Remainder, hereafter referred to as MWR. The objective of our study is to provide baseline biological information for the existing conditions of wetlands located within the project site.

Mr. Emmett Pritchard, Mr. Christopher Wright, and Mr. Joel Merriman of Raedeke Associates, Inc. visited the site on three occasions during the period from May 3 to May 13, 2011 to investigate the property and its vicinity for the presence of wetlands. Raedeke Associates, Inc. (2001) staff had previously conducted a wetland reconnaissance of the site in March 2001.

1.2 PROJECT LOCATION

The City of Seattle Myers Way Remainder Property is located at 9501 Meyers Way South (Parcel B), 9701 Meyers Way South (Parcel C), and 9600 Meyers Way South (Parcel D) in Seattle, Washington (Figures 1, 2, and 6). The Myers Way Remainder Property, encompass 10 King County tax parcels (322404982, 0523049012, 0523049013, 0523049024, 0523049052, 0523049057, 0523049058, 0523049059, 0623049001, and 0623049053) totaling approximately 38.5 acres. The study area is located within Sections 31 and 32, Township 24 North, Range 4 East, W.M. and Sections 5 and 6, Township 23 North, Range 4 East, W.M., in the City of Seattle, King County, Washington.

Parcels B and C are located on the west side of Meyers Way South and Parcel D is located on the east side (Figure 6). The study area is adjacent to and south of the Seattle Fire Department and Public Utilities Joint Training Facilities (JTF). The western and southern limits of the study area extend to the top of steep slopes that form the property boundaries. The King County Housing Authority Greenbridge Development abuts the west property boundary. The eastern limit of the study area abuts the State Route (SR) 509. A Seattle City Light power line right-of-way lies between Parcels B and C and bisects Parcel D. Our study area included all areas within 200 feet of the property boundaries that could be observed from within the project site or from public access areas, in order to assess potential buffers of off-site wetland buffers that may extend into the property.

1.3 SITE DESCRIPTION

The majority of the site (Parcels B and C) consists of an abandoned sand and gravel mine operated from approximately 1920 until the early 1990's (City of Seattle 1986, 1991). Mining has removed several hundred feet of material leaving an east-sloping grade overlooking the Lower Duwamish alluvial plain (WDOE 2007). Permits to mine the site expired in 1991; however, mining and reclamation activities occurred within the property as recently as 2001, resulting in a grading violation that was investigated and resolved by the City of Seattle in April 2001 (City of Seattle 1991, 2001). Some localized grading within the northernmost portion of Parcel B occurred in 2005 during construction of the Seattle JTF (City of Seattle 2004). As a result of the previous mining activities, most of the site soils are disturbed, including large areas of compaction, fill material, mining spoils, and gravel pads. The site contains many water

collection and conveyance features (ditches, culverts, and infiltration areas) that appear to have been excavated during mining or reclamation activities.

Steep, east-facing slopes created during previous mining operations form the western boundary of Parcel B (Figure 6, Photo 1). The majority of Parcel B is flat or slopes gently to the east and northeast with the exception of an approximately 4-acre, square-shaped, excavated depression located at the toe of the steep slopes in the southwest corner of the parcel (Photo 2). The western portion of Parcel C consists of a ravine that opens to become a shallow swale near Meyers Way South. Moderate to very steep slopes created during site mining form the south boundary of Parcel C. Parcel D consists nearly entirely of steep slopes that extend down from Meyers Way South to the SR-509 right-of-way.

Vegetation within the majority of the site west of Meyers Way South is dominated by species that are adapted to disturbance and are well suited to both wetland and upland environments. Slopes that form the southern boundary of the site and slopes that make up the majority of Parcel D are forested, dominated by a mix of native and non-native tree and shrub species (Photos 3 and 4).

1.4 WEATHER CONDITIONS

The weather had been unseasonably wet during the 60 days prior to our investigation. More than 169% of the normal rainfall for the combined months of March and April was recorded at the National Weather Service station at Seattle-Tacoma International Airport (Seattle Times 2011a, 2011b). In addition, measurable precipitation was recorded for nine consecutive days, totaling more than 1.5 inches, prior to our initial site visit on May 3, 2011 and precipitation continued to occur periodically over the ten day-period of our investigation (Seattle Times 2011a, 2011b). As a result, puddles were present in shallow depressions and in tire ruts throughout much of the upland in the mined portion of the property west of Meyers Way South.

2.0 METHODS

2.1 DEFINITIONS AND METHODOLOGIES

Wetlands and streams are protected by federal law as well as by state and local regulations. Federal law (Section 404 of the Clean Water Act) prohibits the discharge of dredged or fill material into "Waters of the United States", including certain wetlands, without a permit from the U.S. Army Corps of Engineers (COE 2007). The COE makes the final determination as to whether an area meets the definition of a wetland and whether the wetland is under their jurisdiction.

We based our investigation upon the guidelines of the U. S. Army Corps of Engineers (COE) Wetlands Delineation Manual (Environmental Laboratory 1987) and subsequent amendments and clarifications provided by the COE (1991a, 1991b, 1992, 1994), as updated for this area by the regional supplement to the COE wetland delineation manual for the Western Mountains, Valleys, and Coast Region (COE 2010). The COE wetlands manual is required by state law (WAC 173-22-035, as revised) for all local jurisdictions. Delineation of the ordinary high water mark (OHWM) of streams found within the project site was based upon the Washington State Shorelines Management Act of 1971 definitions found in RCW 90.58.030(2) (b) and WAC173-22-030(6).

Although the site conditions have been disturbed historically as a result of mining and reclamation activities, the most recent activities appear to have taken place more than six years ago. These occurred within the northern portion of the property during construction of the City of Seattle JTF site in 2005. Mining and reclamation activities within the remainder of the property ended more than ten years ago in 2001 (City of Seattle 2001). We used the "Routine Determination" method as described in Section D of the COE (Environmental Laboratory 1987) wetland delineation manual to identify on-site wetlands. A previous wetland investigation within the northern portion of the property conducted by Herrera Environmental Consultants, Inc. (2008) during April and May 2008 utilized the "Atypical Situations" method as described in Section F of the COE (Environmental Laboratory 1987) wetland delineation manual. This was likely the appropriate method to use at the time of their study because much of the area encompassed by their investigation had been disturbed within three to six years prior to their investigation. However, due to the length of time that has elapsed since the most recent mining of the property, it is our opinion that the "normal circumstance" now exist within the property as defined under U.S. Army Corps of Engineers Regulatory Guidance Letters 82-2, 86-09, and 90-07 and that the "Routine Determination" method is appropriate to be used for wetland determinations within the site.

The COE wetland definition was used to determine if any portions of the project area could be classified as wetland. A wetland is defined as an area "inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Federal Register 1986:41251).

As outlined in the 1987 wetland delineation manual, wetlands are distinguished by three diagnostic characteristics: hydrophytic vegetation (wetland plants), hydric soil (wetland soil),

and wetland hydrology. Hydrophytic vegetation is defined as "macrophytic plant life growing in water, soil or substrate that is at least periodically deficient in oxygen as a result of excessive water content" (Environmental Laboratory 1987). The U.S. Fish and Wildlife Service (USFWS) Wetland Indicator Status (WIS) ratings were used to make this determination (Reed 1988, 1993). The WIS ratings "reflect the range of estimated probabilities (expressed as a frequency of occurrence) of a species occurring in wetland versus non-wetland across the entire distribution of the species" (Reed 1988:8). Plants are rated, from highest to lowest probability of occurrence in wetlands, as obligate (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), and upland (UPL), respectively. In general, hydrophytic vegetation is present when the majority of the dominant species are rated OBL, FACW, and FAC.

A hydric soil is defined as "a soil that is formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (Federal Register 1995: 35681). The morphological characteristics of the soils in the study area were examined to determine whether any could be classified as hydric.

According to the 1987 methodology, wetland hydrology could be present if the soils were saturated (sufficient to produce anaerobic conditions) within the majority of the rooting zone (usually the upper 12 inches) for at least 5% of the growing season, which in this area is usually at least 2 weeks (COE 1991a). It should be noted, however, that areas having saturation to the surface between 5% and 12% of the growing season may or may not be wetland (COE 1991b). Depending on soil type and drainage characteristics, saturation to the surface would occur if water tables were shallower than about 12 inches below the soil surface during this time period.

Positive indicators of wetland hydrology include direct observation of inundation or soil saturation, as well as indirect evidence such as driftlines, watermarks, surface encrustations, and drainage patterns (Environmental Laboratory 1987). Hydrology was further investigated by noting drainage patterns and surface water connections between wetlands and streams within and adjacent to the project area.

In May 2010, the U.S. Army Corps of Engineers released the Regional Supplement to the Corps of Engineers Delineation Manual: Western Mountains, Valleys, and Coasts Region (COE 2010; referred to from here forward as the "Regional Supplement"). The purpose for developing this Regional Supplement as well as regional supplements for other regions of the U.S. was to provide region-specific hydrophytic vegetation, hydric soil, and hydrology indicators, as well as to address issues and technical problems that are specific to the region. We used the indicators and methodologies outlined in the Regional Supplement to make our wetland determination, as the Regional Supplement is required by the Army Corps of Engineers and reflects the latest in scientific consensus regarding the determination of wetland boundaries.

2.2 BACKGROUND RESEARCH

We collected and analyzed background information available for the site prior to the on-site investigation. We collected maps and information from the U.S. Fish and Wildlife Service National Wetland Inventory (USFWS NWI 2011), the City of Seattle Department of Planning and Development on-line Critical Areas Inventory (2011b) the U.S.D.A. Soil Conservation

Service (SCS; Snyder et al. 1973), the U.S.D.A Natural Resources Conservation Service Web Soil Survey (2011), and the Washington State Department of Natural Resources (WDNR 2011) Forest Practice Activity Map. We reviewed aerial photographs (Google Maps 2011, Microsoft Bing Maps 2011) to assist in the definition of existing plant communities, drainage patterns, and land use.

We also reviewed information presented in previous studies for the site including the following documents:

- Final Environmental Impact Statement for Central Heights Business Park. City of Seattle Document C6.95. April 1986;
- Wetland Reconnaissance for the Nintendo-Meyers Way South Property, Seattle, Washington. Raedeke Associates, Inc. Report submitted to Mr. Alan N. Safer, Property Counselors. March 30, 2001;
- Drainage Routes from the Joint Training Facility, Seattle, Washington. AMEC. Technical Memorandum for JTF project managers, Shiels Obletz Johnson, Inc. February 7, 2007;
- Investigation CELP Complaint Dated August 29, 2007 Regarding Seattle Joint Training Facility (JTF)). Washington Department of Ecology. Technical Memorandum to Mr. Dan Swenson. September 20, 2007;
- Wetland Delineation for the Seattle Fleets and Facilities Department Meyers Way SW Excess Property (Site #1). Hererera Environmental Consultants, Inc. Draft Report prepared for City of Seattle Fleets and Facilities Department, Real Estate Services Division. June 4, 2008.

2.3 FIELD SAMPLING PROCEDURES

During our field investigation, we inventoried, classified, and described representative areas of plant communities, soil profiles, and hydrologic conditions in both uplands and wetlands. We searched specifically for areas with positive indicators of hydrophytic vegetation, hydric soil, and wetland hydrology.

Vegetation, soils, and hydrology were examined in representative portions of the study area according to the procedures described in the Regional Supplement (COE 2010). Plant communities were inventoried, classified, and described during our field investigation. We estimated the percent coverage of each species. Plant identifications were made according to standard taxonomic procedures described in Hitchcock and Cronquist (1976), with nomenclature as updated by USDA NRCS (2011). Wetland classification follows the USFWS wetland classification system (Cowardin et al. 1992). We determined the presence of a hydrophytic vegetation community using the procedure described in the Regional Supplement (COE 2010), which requires the use of the dominance test, unless positive indicators of hydric soils and wetland hydrology are also present, in which case the prevalence index or the use of other indicators of a hydrophytic vegetation community as described in the Regional Supplement (COE 2010) may also be required.

We excavated pits to at least 18 inches below the soil surface, where possible, in order to describe the soil and hydrologic conditions throughout the study area. We sampled soil at locations that corresponded with vegetation sampling areas and potential wetland areas. Soil colors were determined using the Munsell Soil Color Chart (Munsell Color 2000) or the EarthColors Soil Color Book (Color Communications 1997). We used the indicators described in the Regional Supplement (COE 2010) to determine the presence of hydric soils and wetland hydrology.

Our evaluation of the wetland boundaries was based on the presence of hydric soil, hydrophytic vegetation, and indicators of wetland hydrology. Topographic changes within the context of the landscape were used to aid in our delineation of the wetland boundaries. Our delineation was professionally surveyed by Goldsmith and Associates, Inc. and is depicted on maps received in our office from them on June 9, 2011.

3.0 EXISTING CONDITIONS

3.1 RESULTS OF BACKGROUND INVESTIGATION

3.1.1 National Wetland Inventory

The USFWS (2011, Figure 3) NWI, depicts three freshwater emergent and freshwater forested/shrub wetlands within the north portion of the project site, west of Meyers Way South. The NWI also depicts a freshwater forest/shrub and a riverine wetland in the northeast corner of the project site, east of Meyers Way South. In addition, several freshwater emergent and freshwater forested/shrub wetlands are depicted off-site within the City of Seattle JTF property, within 200 feet of the Myers Way Remainder Property.

Wetlands shown on the NWI are general in terms of location and extent, as they are determined primarily from aerial photographs. Thus, the number and areal extent of existing wetlands located within the project area may differ from those marked on an NWI map.

3.1.2 City of Seattle DPD GIS Maps

The City of Seattle (2011b; Figure 4) Department of Planning and Development GIS on-line map depicts wetlands in the same locations as those depicted in the USFWS (2011) NWI.

3.1.3 Soil Conservation Service Maps

Background information regarding the soils of the study area was unavailable, as the Soil Survey of the King County Area (Snyder et al. 1973, Poulson and Miller 1952) and the U.S.D.A. Natural Resources Conservation Service (2011) On-line Web Soil Survey does not map units within the City of Seattle or in the urbanized vicinity.

3.1.4 WDNR Forest Practice Base Map

The WDNR (2011) Forest Practice Activity Map for the study depicts one stream within the eastern portion of the study area, east of Meyers Way South (Figure 5). The on-site portion of the mapped stream is depicted as non-fish-bearing (map symbol N) in its westernmost mapped extent and is depicted as fish-bearing (map symbol F) as it nears SR 509. The stream is depicted as meandering in an easterly direction on the east side of SR 509.

The water type classifications currently in use for the WDNR Forest Practice Base Map are described in the forest practices rules WAC 222-16 (See section 031) (Washington State Forest Practices Board 2008). The current WDNR definitions are provided in Table 1.

3.2 DELINEATED WETLANDS

Raedeke Associated, Inc. staff identified four wetlands within the MWR property and an additional three wetlands that are located within 200 feet of the property (Figures 6 and 7). Data forms for identified wetlands and upland areas investigated during our May 2011 site visits are found in Appendix A and a summary of sample plot data is found in Table 3. Completed rating

forms per the Washington Department of Ecology (WDOE) Wetland Rating System for Western Washington (Hruby 2004, as revised 2006, and WDOE 2008) are provided in Appendix B.

3.2.1 Wetland 1

Wetland 1 is located in the north portion of the property, near the intersection of the entrance to the City of Seattle JTF and Meyers Way South (Figure 6, Photo 5). The wetland is situated on a slight slope that drains north to a man-hole drain located just south of the JTF entrance. The wetland extends off-site to the east into the Meyers Way South right-of-way where it abuts the road shoulder. The area of the on-site portion of the wetland totals approximately 2,058 square feet. The total area of the wetland, including the off-site portion, appears to approximately 0.25 acres.

Wetland 1 receives water from seeps and sheet flow from Meyers Way South and surrounding uplands. The wetland flows south to north to a storm drain which conveys water beneath Meyers Way South and into Durham Creek located north of the Meyers Way Remainder Property (Herrara Environmental Consultants, Inc. 2008).

Vegetation

Wetland 1 consists of a forested vegetation community dominated by red alder (*Alnus Rubra*, FAC) and black cottonwood (*Populus balsamifera*, FAC) (Sample Plots SP1-2 and SP1-3). The shrub and herb layers were relatively sparse, dominated by red alder saplings, reed canarygrass (*Phalaris arundinacea*, FACW), and Kentucky bluegrass (*Poa pratensis*, FAC). Other species present within Wetland 1 included Himalayan blackberry (*Rubus armeniacus*, FACU), California blackberry (*Rubus ursinus*, FACU), field horsetail (*Equisetum arvense*, FAC), common rush (*Juncus effusus*; FACW), bird's-foot trefoil (*Lotus corniculatus*, FAC), colonial bentgrass (*Agrostis capillaris*, FAC), curly dock (*Rumex crispus*, FAC), and creeping buttercup (*Ranunculus repens*, FACW). Greater than 50% of the dominant species within the delineated portion of the wetland are hydrophytic; thus, the delineated area meets the hydrophytic vegetation criteria of the COE Wetland Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement (COE 2010).

Soils and Hydrology

Soils within the on-site portion of the wetland consist of 6 to 8 inches of dark gray (10YR 4/1) gravelly sandy loam over dark gray (N 4/1) loamy sand (Sample Plots SP1-2 and SP1-3). This satisfies the requirements for Hydric Soil Indicator F3 (depleted matrix) of the Regional Supplement (COE 2010).

At the time of our May 2011 site investigation, the wetland was saturated starting at 4 to 6 inches below the surface with several small areas where water was flowing across the surface from seeps (Sample Plots SP1-2 and SP1-3). A small, ponded area approximately 300 square feet in size was located near the outlet of the wetland. In areas where soils were saturated, the zone of saturation extended down to a water table that was present at a depth of 9 to 10 inches below the

surface. Soil saturation and groundwater within 12 inches of the surface and areas of inundation meet criteria for wetland hydrology (Environmental Laboratory 1987, COE 2010).

Adjacent Uplands

The vegetation within the uplands adjacent to the wetland boundary (red alder, Himalayan blackberry, common rush, and Kentucky bluegrass) met criteria to be considered hydrophytic, and soils either clearly met criteria to be considered hydric or were marginally non-hydric (Sample Plot, SP1-1 and SP1-4). Therefore uplands were differentiated from wetlands primarily by the absence of indicators of wetland hydrology. In both upland sample plots adjacent to the wetland, indicators of surface water were absent and soils were not saturated within a depth of 17 inches from the surface.

Wetland Determination and Classification

Based on our observations, positive indicators for each of the three wetland parameters were present at the time of our site investigation; therefore, the area delineated as Wetland 1 meets the necessary criteria for designation as a wetland according to the guidelines of the COE (Environmental Laboratory 1987) wetland delineation manual as updated by the regional supplement (COE 2010).

Wetland 1 consists of a palustrine, forested (PFO) vegetation class according to the USFWS wetland classification system (Cowardin et al. 1992).

Wetland Rating

For regulatory purposes, the City of Seattle (2011) code requires wetlands be rated using the Washington Department of Ecology's (WDOE) Wetland Rating System for Western Washington (Hruby 2004, as revised 2006, and WDOE 2008). Wetland 1 meets Category III wetland criteria. The wetland scored a total of 35 points (with 19 points for habitat functions). The completed WDOE wetland rating form is provided in Appendix B.

3.2.2 Wetland 2

Wetland 2 is located in the south portion of the property, beginning just south of the Seattle City Light power line right-of-way and extending up a moderate slope towards the south property boundary (Figure 6, Photo 6). The wetland drains to a man-made drainage swale that routes water to an infiltration pit. The wetland is contained entirely within the Meyers Way South Remainder property and is approximately 36,851 square feet in area.

Wetland 2 receives water from seeps and sheet flow from surrounding uplands. The wetland flows northeasterly to stormwater facilities beneath the Seattle City Light porwer line corridor. The stormwater facilities do not have an outlet and all flow from Wetland 2 is infiltrated.

Vegetation

Wetland 2 includes areas of forested and scrub-shrub vegetation communities dominated by black cottonwood, Scouler's willow (*Salix scouleriana*, FAC), Sitka willow (*Salix sitchensis*,

FACW), Himalayan blackberry, colonial bentgrass, moss (*Musci spp.*, NI), velvetgrass (*Holcus lanatus*, FAC), field horsetail, creeping buttercup, and reed canarygrass (Sample Plot SP2-1 and SP2-3). Greater than 50% of the dominant species within the delineated portion of the wetland are hydrophytic; thus, the delineated area meets the hydrophytic vegetation criteria of the COE Wetland Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement (COE 2010).

Soils and Hydrology

Soils within the wetland consist of 6 to 8 inches of black (10YR 2/1) to very dark gray brown (2.5Y 3/2) loam over dark gray brown (10YR 4/2) gravely sandy loam to gray (2.5Y 5/1) fine sandy loam (Sample Plot SP2-1 and SP2-3). Approximately 10% redoximorphic concentrations were present below 6 to 8 inches in the soil profiles. An odor of hydrogen sulfide also was present within soils at Sample Plot SP2-3. These satisfy the requirements for Hydric Soil Indicators F3 and A4 (depleted matrix) of the Regional Supplement (COE 2010).

At the time of our May 2011 site investigation, soils in a majority of the wetland were saturated within 6 inches of the surface and saturation extended down to a water table at a depth of 8 inches (Sample Plot (SP2-1). In several small depressions situated on the slope, soils were saturated to the surface or the depression was inundated to a depth of up to 2 inches (Sample Plot SP2-3). Soil saturation and groundwater within 12 inches of the surface and areas of inundation meet criteria for wetland hydrology (Environmental Laboratory 1987, COE 2010).

Adjacent Uplands

The vegetation within the uplands adjacent to the wetland boundary was dominated by a mix of hydrophityc and non-hydrophytic species including red alder, Himalayan blackberry, Scouler's willow, Douglas fir (*Pseudotsuga menziesii*, FACU), sword fern (*Polystichum munitum*, FACU), Robert geranium (*Geranium robertianum*, UPL), and common tansy (*Tanacetum vulgare*, NI) and did not meet criteria to be considered a hydrophytic vegetation community (Sample Plots SP2-2 and SP2-4). Soils varied from areas that exhibited hydric characteristics such as low matrix chroma with redoximorphic features below a depth of 4 inches (Sample PlotSP2-4) to areas where soils were bright and the hydric soils criteria clearly were not met (Sample Plot SP2-2). The upland areas were most clearly differentiated from wetlands by the absence of indicators of wetland hydrology (Sample Plots SP2-2 and SP2-4). Areas that lacked hydrology were determined to be uplands.

Wetland Determination and Classification

Based on our observations, positive indicators for each of the three wetland parameters were present at the time of our site investigation; therefore, the area delineated as Wetland 2 meets the necessary criteria for designation as a wetland according to the guidelines of the COE (Environmental Laboratory 1987) wetland delineation manual as updated by the regional supplement (COE 2010).

Wetland 2 consists of palustrine, forested (PFO) and palustrine, scrub-shrub vegetation classes according to the USFWS wetland classification system (Cowardin et al. 1992).

Wetland Rating

Wetland 2 meets Category III wetland criteria. The wetland scored a total of 30 points (with 16 points for habitat functions) on the WDOE Wetland Rating System for Western Washington (Hruby 2004, as revised 2006, and WDOE 2008). The completed WDOE wetland rating form is provided in Appendix B.

3.2.3 Wetland **3**

Wetland 3 is located in the north portion of the portion of the property east of Meyers Way South (Figure 6, Photo 7). The wetland is on a steep, forested slope that extends down from Meyers Way South to the SR-509 right-of-way. The wetland receives water from seeps and also from a 30-inch pipe near the base of the slope (Goldsmith and Associates, Inc. 2011). Water discharged from the pipe flows eastward within a stream channel (Stream 3) through the wetland to a manhole within the SR-509 right-of-way (Goldsmith and Associates, Inc. 2011). Previous watershed analysis by WDOE (2007), AMEC (2007), and The Watershed Company (2003) indicate that Stream 3 may constitute the day-lighted headwaters of the North Fork of Hamm Creek. Upon entering the manhole at SR 509, Stream 3 drops down approximately 20 feet to allow it to be conveyed to the east side of SR-509 (Goldsmith and Associates, Inc. 2011, WDOE 2007). The area of the on-site portion of the wetland is approximately 65,762 square feet. The entire wetland area including the off-site area appears to be less than 2 acres.

Vegetation

Wetland 3 consists of a forested vegetation community dominated by red alder and western red cedar (*Thuja plicata*, FAC) (Sample Plot SP3-1). The shrub and herb layers are dominated by salmonberry (*Rubus spectablis*, FAC), common ladyfern (*Athyrium filix-femina*, FAC), and climbing nightshade (*Solanum dulcamara*, FAC). Greater than 50% of the dominant species within the delineated portion of the wetland are hydrophytic; thus, the delineated area meets the hydrophytic vegetation criteria of the COE Wetland Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement (COE 2010).

Soils and Hydrology

Soils within the on-site portion of the wetland consist of 8 inches of very dark brown (10YR 2/2) loam over dark gray (10YR 4/1) fine sandy loam (Sample Plot SP3-1). This satisfies the requirements for Hydric Soil Indicator F3 (depleted matrix) of the Regional Supplement (COE 2010).

At the time of our May 2011 site investigation, soils within the wetland were saturated to the surface and a groundwater table also was at the surface. We observed numerous areas where water was flowing across the surface from seeps (Sample Plot SP3-1). Water was also flowing within Stream 3 at a rate of greater than approximately 5 cubic feet per second (cfs). Soil saturation and groundwater within 12 inches of the surface and areas of inundation meet criteria for wetland hydrology (Environmental Laboratory 1987, COE 2010).

Adjacent Uplands

The vegetation within the uplands adjacent to the wetland boundary was dominated by a mix of hydrophitic and non-hydrophitic species including red alder, western red cedar, Indian plum (*Oemlaria cerasiformis*, FACU), red elderberry (*Sambucus racemosa*, FACU), sword fern, and stinging nettle (*Urtica dioica*, FAC) and did not meet criteria to be considered a hydrophytic vegetation community (Sample Plot SP3-2). Soils in the adjacent uplands were bright and did not exhibit redoximorphic features and, therefore, were not hydric (Sample Plot SP3-2). We did not observe indicators of wetland hydrology within the adjacent uplands at the time of our May 2011 site investigation (Sample Plot SP3-2).

Wetland Determination and Classification

Based on our observations, positive indicators for each of the three wetland parameters were present at the time of our site investigation; therefore, the area delineated as Wetland 3 meets the necessary criteria for designation as a wetland according to the guidelines of the COE (Environmental Laboratory 1987) wetland delineation manual as updated by the regional supplement (COE 2010).

Wetland 3 consists of a palustrine, forested (PFO) vegetation class according to the USFWS wetland classification system (Cowardin et al. 1992).

Wetland Rating

Wetland 3 meets Category III wetland criteria. The wetland scored a total of 32 points (with 16 points for habitat functions) on the WDOE Wetland Rating System for Western Washington (Hruby 2004, as revised 2006, and WDOE 2008). The completed WDOE wetland rating form is provided in Appendix B.

3.2.4 Wetland 4

Wetland 4 is located in the south portion of the portion of the property east of Meyers Way South (Figure 6, Photo 8). The wetland is situated near the base of a steep, forested slope that extends down from Meyers Way South to the SR-509 right-of-way. The wetland extends off-site to the east into the SR-509 right-of-way where it drains to a storm drain manhole. We were not able to determine the location of the outfall of the pipe on the east side of SR-509 from either our background review of watershed analysis documents or our site investigation. The wetland receives water from seeps along the western boundary and a small stream (Stream 4) that originates at a seep approximately 50 feet west of the wetland near Meyers Way South (Figure 6). The wetland also appears to receive sheet flow from Meyers Way South. The area of the onsite portion of the wetland totals approximately 606 square feet. The total area of the wetland, including the off-site portion, appears to be less than 0.25 acres.

Vegetation

Wetland 4 consists of a forested vegetation community dominated by red alder a (Sample Plot SP4-1). The shrub and herb layers are dominated by salmonberry and skunk cabbage (*Lysichiton americanum*, OBL). Greater than 50% of the dominant species within the delineated portion of the wetland are hydrophytic; thus, the delineated area meets the hydrophytic vegetation criteria

of the COE Wetland Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement (COE 2010).

Soils and Hydrology

Soils within the on-site portion of the wetland consist of 10 inches of black (10YR 2/1) loam over dark gray (10YR 4/1) sandy loam (Sample Plot SP4-1). This satisfies the requirements for Hydric Soil Indicator F3 (depleted matrix) of the Regional Supplement (COE 2010).

At the time of our May 2011 site investigation, soils within the wetland were saturated to the surface and a groundwater table also was at the surface. Wetland hydrology is fed by several seeps. Soil saturation and groundwater within 12 inches of the surface meet criteria for wetland hydrology (Environmental Laboratory 1987, COE 2010).

Adjacent Uplands

The vegetation within the uplands adjacent to the wetland boundary was dominated by a mix of hydrophitic and non-hydrophitic species including red alder, bigleaf maple (*Acer macrophyllum*, FACU), Indian plum, salmonberry, sword fern, and stinging nettle and did not meet criteria to be considered a hydrophytic vegetation community (Sample Plot SP4-2). Soils in the adjacent uplands were bright and did not exhibit redoximorphic features and, therefore, determined to be non-hydric (Sample Plot SP4-2). We did not observe indicators of wetland hydrology within the adjacent uplands at the time of our May 2011 site investigation (Sample Plot SP4-2).

Wetland Determination and Classification

Based on our observations, positive indicators for each of the three wetland parameters were present at the time of our site investigation; therefore, the area delineated as Wetland 4 meets the necessary criteria for designation as a wetland according to the guidelines of the COE (Environmental Laboratory 1987) wetland delineation manual as updated by the regional supplement (COE 2010).

Wetland 4 consists of a palustrine, forested (PFO) vegetation class according to the USFWS wetland classification system (Cowardin et al. 1992).

Wetland Rating

Wetland 4 meets Category III wetland criteria. The wetland scored a total of 32 points (with 16 points for habitat functions) on the WDOE Wetland Rating System for Western Washington (Hruby 2004, as revised 2006, and WDOE 2008). The completed WDOE wetland rating form is provided in Appendix B.

3.2.5 Wetland 5 / Drainage Ditch

Wetland 5 is located within an excavated drainage ditch in the northern portion of the property (Figure 5, Photo 9). The drainage ditch was constructed as part of a site drainage facility to convey stormwater out of the property (City of Seattle 1986, WDOE 2007). The majority of the stormwater facility was dry at the time of our site investigation and did not meet criteria to be

delineated as wetland; however, groundwater seeps into the ditch just north of a culverted road crossing at the approximate mid-point of the ditch length. The portion of the ditch that conveys groundwater was delineated because it may be regulated by the COE as a "water of the U.S." However, the delineated portion of the stormwater ditch may be exempted from regulation as wetland by the City of Seattle under Section 25.09.020.C. of the City of Seattle (2011a) municipal code which exempts constructed stormwater ditches. Wetland 5 drains to a storm drain manhole that conveys water to the east side of Meyers Way and into Durham Creek (Herrera Environmental Consultants, Inc. 2008). The wetland is entirely on-site and confined to the bottom portion of the ditch. The wetland totals approximately 4,128 square feet in area.

Vegetation

Wetland 5 consists primarily of a scrub-shrub vegetation community with an approximately 1,500 square-foot area dominated by emergent species located near the ditch terminus at the north end. The scrub-shrub community is dominated by Sitka willow, Himalayan blackberry, filed horsetail, watercress (*Nasturtium officinale*, OBL), and panicled bulrush (*Scirpus microcarpus*, OBL) (Sample Plot SP5-1). The emergent area at the north end of the ditch is dominated by nearly monotypic watercress. All of the dominant species within the delineated portion of the wetland are hydrophytic; thus, the delineated area meets the hydrophytic vegetation criteria of the COE Wetland Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement (COE 2010).

Soils and Hydrology

Soils within the on-site portion of the wetland consist of 6 inches of very dark brown (10YR 2/2) sandy loam over dark gray (5Y 4/1) loamy sand (Sample Plot SP5-1). This satisfies the requirements for Hydric Soil Indicator F3 (depleted matrix) of the Regional Supplement (COE 2010).

At the time of our May 2011 site investigation, the edges of the wetland were saturated to the surface with a water table present at 2 inches. The bottom of the ditch was flowing at a rate of approximately 2 cfs (Sample Plot SP5-1). A small, ponded area approximately 200 square feet in size was located near the outlet of the wetland at the north terminus of the ditch. Soil saturation and groundwater within 12 inches of the surface and areas of inundation meet criteria for wetland hydrology (Environmental Laboratory 1987, COE 2010).

Adjacent Uplands

Uplands were defined by the topographic change between the adjacent upland and the 4- to 6-foot-deep ditch that contained Wetland 5. Vegetation within the uplands adjacent to the wetland boundary was dominated by facultative species, primarily non-native grasses. Patches of facultative upland invasive shrubs were also present within the upland. The area adjacent to the ditch was dominated by Himalayan blackberry, Scotch broom (*Cytisus scoparius*, UPL), black cottonwood saplings, colonial bentgrass, and quackgrass (*Elymus repens*, FAC) (Sample Plot UPL-15). Soils were very compacted below six inches. Aerial photos of the site reviewed prior to our investigation indicated that much of the area in the vicinity of Wetland 5 had been used for equipment parking or used as an access to the northwest portion of the property (Figure 5).

Water was ponded to a depth of an inch within several tire ruts in the adjacent uplands (Sample Plot UPL-15); however, it was our best professional judgement that this did not indicate wetland hydrology criteria because the surface water was not linked to groundwater and was likely to be the result of recent and higher than normal rainfall during the previous month.

Wetland Determination and Classification

Based on our observations, positive indicators for each of the three wetland parameters were present at the time of our site investigation; therefore, the area delineated as Wetland 5 meets the necessary criteria for designation as a wetland according to the guidelines of the COE (Environmental Laboratory 1987) wetland delineation manual as updated by the regional supplement (COE 2010).

Wetland 5 consists of palustrine, scrub-shrub (PSS) and palustrine, emergent (PEM) vegetation classes according to the USFWS wetland classification system (Cowardin et al. 1992).

Wetland Rating

Wetland 5 meets Category IV wetland criteria. The wetland scored a total of 23 points (with 19 points for habitat functions) on the WDOE Wetland Rating System for Western Washington (Hruby 2004, as revised 2006, and WDOE 2008). The completed WDOE wetland rating form is provided in Appendix B.

3.3 OFF-SITE WETLANDS

We reviewed recent aerial photos (Google Maps 2011, Microsoft Bing Maps 2011) of the project site and vicinity in conjunction with the background resource inventory maps (City of Seattle DPD GIS on-line maps, U.S. Fish and Wildlife Service National Wetland Inventory (USFWS NWI 2011) to determine whether off-site wetlands were located within 200 feet of the project site. In addition, we walked roads and other public access areas in the vicinity of property to verify the presence of any off-site wetland areas that had been identified during our background review and to determine whether other wetland areas were present that may not have been identified by the resource inventory maps and aerial photos. We observed three off-site wetlands within 200 feet of the MWR property.

Off-site Wetland 1 is located within the western portion of the JTF property at the base of the former gravel pit wall (Figure 7). Off-site Wetland 1 is fed by seeps and drains to a grated pipe at the north end of the wetland. The wetland is within two parallel trenches that appear to be part of the mine drainage facilities. Quarry spalls separate the eastern trench into three separate cells. The wetland consists of a forested vegetation class dominated by red alder, western red cedar, and salmonberry. Off-site Wetland 1 meets Category II wetland criteria. The wetland scored a total of 51 points (with 19 points for habitat functions) on the WDOE Wetland Rating System for Western Washington (Hruby 2004, as revised 2006, and WDOE 2008). The completed WDOE wetland rating form is provided in Appendix B.

Off-site Wetland 2 is a shallow stormwater detention pond located in the eastern portion of the JTF property, approximately 100 feet north of the MWR property (WDOE 2007) (Figure 7). Off-site Wetland 2 was previously classified as wetland by the U.S. Army Corps of Engineers

(WDOE 2007). Off-site Wetland 2 was expanded as part of the wetland mitigation for the JTF project (WDOE 2007). The wetland consists of emergent and aquatic bed vegetation communities dominated by broadleaf cattail (*Typha latifolia*, OBL), hardstem bulrush (*Schoenoplectus acutus*, OBL), and an unidentified aquatic species. Hydrology to Off-site Wetland 2 is provided by groundwater and surface water runoff from paved areas and roof tops (WDOE 2007). Off-site Wetland 2 meets Category III wetland criteria. The wetland scored a total of 40 points (with 10 points for habitat functions) on the WDOE Wetland Rating System for Western Washington (Hruby 2004, as revised 2006, and WDOE 2008). The completed WDOE wetland rating form is provided in Appendix B.

Off-site Wetland 3 is located in the vicinity of the eastern boundary of the JTF property within a swale adjacent to Meyers Way South, approximately 100 feet from the MWR property (Figure 7). The wetland consists of emergent and scrub-shrub vegetation classes and appears to have been planted with native shrub and emergent species within the past 5 years. The wetland is dominated by broadleaf cattail, Pacific willow (*Salix lucida*, FACW), and Sitka willow. Hydrology to Off-site Wetland 3 is provided by overflow from Off-site Wetland 2 (WDOE 2007). Off-site Wetland 3 meets Category II wetland criteria. The wetland scored a total of 51 points (with 13 points for habitat functions) on the WDOE Wetland Rating System for Western Washington (Hruby 2004, as revised 2006, and WDOE 2008). The completed WDOE wetland rating form is provided in Appendix B.

3.4 STREAMS

Five streams were identified within the MWR property. For regulatory purposes, the City of Seattle (2011) code regulates streams as Riparian Corridors, which are the riparian watercourse and the riparian management area. The riparian watercourse is the watercourse of Type 2-5 waters defined in WAC 222-16-031 that have fish or wildlife habitat. A summary of stream type definitions per WAC 222-16-031 are provided in Table 2. A conversion table for the Washington State Forest Practices Board (2008) water typing system currently used by the WDNR and the stream type definitions required under City of Seattle (2011a) code is provided in Table 3.

Stream 1 and Stream 2 are located within scoured channels adjacent to an access road in the southern portion of the site. Both streams are seasonal and appear to be ditches that convey storm run-off to stormwater facilities in the Seattle City Light Powerline Corridor where their discharge is infiltrated. Neither stream was flowing at the time of our May 2011 site investigation and neither are connected to other wetlands or streams; therefore, neither Stream 1 or Stream 2 would be typed streams per City of Seattle (2011a) stream definitions.

Stream 3 flows within Wetland 3 and is described above in Section 3.2.3. Stream 3 was flowing at a rate of approximately 5 cfs at the time of our May 2011 site investigation. Given the observed rate of flow and ground water source, it is likely that the stream flows year-round. Stream 3 meets the Type 4 stream definition per City of Seattle (2011a) stream definitions because it does not appear to be accessible to fish due to a fish-impassible culvert beneath SR 509.

Stream 4 is within Wetland 4 and is described above in Section 3.2.4. Stream 4 was flowing at a rate of approximately 1 cubic feet per second (cfs) at the time of our May 2011 site investigation. Given the observed rate of flow and groundwater source, it is likely that the stream flows year-round. Stream 4 meets the Type 4 stream definition per City of Seattle (2011) stream definitions because it does not appear to be accessible to fish due to a fish-impassible culvert beneath SR 509.

Stream 5 is within the drainage ditch encompassed by Wetland 5. Stream 5 flows from a seep in the bottom of the drainage ditch to a manhole at the northern terminus of the wetland. The drainage ditch is part of the mine stormwater facilities constructed to convey water out of the sand and gravel mine (Herrera Environmental Consultants 2008, WDOE 2007). Stream 5 was flowing at a rate of approximately 3 cfs at the time of our May 2011 site investigation. Given the observed rate of flow and ground water source, it is likely that the stream flows year-round. Stream 5 meets the Type 4 stream definition per WAC 222-16-031 because it does not appear to be accessible to fish due to a fish-impassible culvert beneath Meyers Way South.

3.5 GENERAL UPLANDS

The portion of the MWR Property located west of Meyers Way South was mined for sand and gravel for decades. Mining activities ended in 2001 and a limited area adjacent to the City of Seattle JTF site was re-graded in 2005. As a result of previous mining, soils within a majority of the property on the west side of Meyers Way South have been disturbed. We also found soils throughout most of the site to consist of low chroma sandy loams and loamy sands that were highly mixed within the upper 12 to 15 inches of the soil profile. The low chroma of most of the surface soils within the site is probably a reflection of their origin from deep below the original ground surface where anaerobic, reducing soil conditions existed. We also found vegetation throughout most of the site to be dominated by invasive, facultative species that are adapted to disturbance and are found with nearly equal frequency in either uplands or wetlands. As a result, in most areas that had been mined, neither the dominant vegetation community or soils provided a clear indication of whether an area was wetland or upland.

Therefore, our determination of whether an area met criteria to be considered jurisdictional wetland was weighted heavily with regard to the presence of indicators of wetland hydrology. Due to the unseasonably wet weather prior to our investigation described above in Section 1.4, we observed numerous areas throughout the site where small depressions or tire ruts contained up to an inch of surface water. In other areas, soils were saturated within a two- to three-inch-deep zone at the surface. However, in both of these circumstances, we found that the soils below the shallow inundation or zones of saturation to be relatively dry. Therefore the criterion used to determine the presence of wetland hydrology required that areas of inundation or surface saturation must be linked by a continuous zone of soil saturation to a groundwater table. None of the upland areas met this criterion. Sample plots that were determined to be upland based on this criterion included UPL-7, UPL-8, UPL-9, UPL-10, UPL-11, UPL-15, UPL-16, and UPL-18.

We also determined that several of the on-site stormwater facilities did not meet criteria to be considered wetland based on an absence of evidence that these areas were either inundated or saturated to the surface for more than 5% (approximately 12 consecutive days) during the

growing season, as is required by the COE (Environmental Laboratory 1987) wetland delineation manual. These included an area located southwest of Wetland 5 (Figure 6) that is identified as wetland on the USFWS (2011) NWI and the City of Seattle Critical Areas Inventory (2011b). In this area we found that the surface was dry and there were no evidence such as drift lines, water stained vegetation, sediment deposits, or algal mats to indicate that surface water had been present earlier in the growing season (Sample Plot UPL-5, Figure 6). We found that soils were saturated beginning at a depth of 15 inches below the surface and that a groundwater table was present at a depth of 17 inches. The depth to soil saturation and groundwater table corresponded to the depth of a dark gray (5Y 4/1) loamy sand layer. We found that this sandy loam layer is located at the ground surface approximately 200 feet to the north and downslope from this area and was the source of the surface water within the ditch that contained Wetland 5.

Other areas where stormwater facilities were determined not to meet wetland criteria included areas in the vicinity of Sample Plots UPL-15 and UPL-20 (Figure 6). In both of these areas, we found evidence such as drift lines, water stained vegetation, and sediment deposits, to indicated that water likely had been present earlier in the year; however, at the time of our site investigation we did not find groundwater or soil saturation within greater than 20 inches of the surface, and it appeared that water that had been present within the facilities had infiltrated within the very coarse, sandy soils found in the bottoms of the facilities. Given the above normal rainfall prior to our site investigation and the observed shallow puddles in many other upland areas throughout the site caused by the recent rain, we determined that it was very unlikely that the stormwater facilities would be inundated or saturated to the surface for greater than 5% of the growing season.

4.0 REGULATORY CONSIDERATIONS

Wetlands and streams are protected by Section 404 of the Federal Clean Water Act and other state and local policies and ordinances including the City of Seattle (2011a) municipal code. Regulatory considerations pertinent to wetlands identified within the study area are discussed below; however, this discussion should not be considered comprehensive. Additional information may be obtained from agencies with jurisdictional responsibility for, or interest in, the site. A brief review of the U.S. Army Corps of Engineers regulations and City of Seattle policy, relative to wetlands and streams, is presented below.

4.1 FEDERAL CLEAN WATER ACT (COE AND WDOE)

Federal law (Sections 404 and 401 of the Clean Water Act) discourages the discharge of dredged or fill material into the nation's waters, including most wetlands and streams, without a permit from the U.S. Army Corps of Engineers (COE) and, in most cases, certification by the WDOE in the State of Washington.

We note that certain wetlands, including many that are hydrologically isolated from "Waters of the U.S.," may not be regulated by the COE. As a result of the 2006 Supreme Court *Rapanos* decision, the COE and the U.S. Environmental Protection Agency (U.S. EPA) have updated guidance regarding wetlands that are regulated under federal law including Sections 404 and 401 of the Clean Water Act. Regulated wetlands now include those that are adjacent to traditionally navigable waters, those that abut relatively permanent tributaries of traditionally navigable waters, and those that are considered to have a "significant nexus" with a traditional navigable water (U.S. EPA 2008). Agency determination of what constitutes a significant nexus is complex and includes consideration of hydrologic and ecologic factors (U.S. EPA 2008). These include flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters" (U.S. EPA 2008).

The COE makes the final determination as to whether an area meets the definition of "Waters of the U.S." as defined by the federal government (Federal Register 1986:41251), and thus, if it is under their jurisdiction. We should caution that the placement of fill within wetlands or other "Waters of the U.S." without authorization from the COE is not advised, as the COE makes the final determination regarding whether any permits would be required for any proposed alteration (COE 2007). Therefore, we recommend requesting a jurisdictional determination from the COE prior to any construction activities, if any modification of wetlands is proposed. A jurisdictional determination would also provide evaluation and confirmation of our wetland delineation by the COE.

4.2 CITY OF SEATTLE

4.2.1 Wetland and Stream Regulations

The City of Seattle (2011a) regulates wetlands and streams as critical areas. Alterations of wetlands or streams and their buffers are generally prohibited, except as allowed under certain conditions. All direct wetland impacts must be mitigated through wetland creation and restoration, or through wetland enhancement. The City of Seattle has the final authority to

determine ratings, buffers, and allowed uses of wetlands and other critical areas that are under their jurisdiction. Tables 5 and 6 summarize the likely regulatory status and buffers that may be required per City of Seattle (2011a) municipal code for each wetland and stream identified within the study area.

The City of Seattle (2011a) determines wetland buffer widths based on wetland category, as determined by the WDOE (Hruby 2004, as revised 2006, and WDOE 2008) wetland rating system. Wetland buffer widths are measured perpendicular from the wetland boundary as surveyed in the field. In instances where wetland and stream buffers overlap, the widest (most restrictive) of the two buffers is usually applied. In general, the City of Seattle (2011a) provides the widest buffers for high quality wetlands and those wetlands that provide high wildlife habitat function. The widest buffers (200 feet) are provided for Category I and Category II wetlands that provide a high level of habitat function. Conversely, the City of Seattle (2011a) does not require a buffer for Category IV wetlands that are less than 1,000 square feet in area and do not abut other wetlands and are not connected to Type 1-5 waters.

The City of Seattle (2011a) regulates streams as "Riparian Corridors", which are the riparian watercourse and its riparian management area. The riparian management area is the area within 100 feet measured horizontally landward from the top of each bank of the watercourse, or from the ordinary high water mark of the watercourse as surveyed in the field, if the top of the bank cannot be determined. In general, development or removal of vegetation within the riparian management area is prohibited, except in limited circumstances.

4.2.2 Regulatory Jurisdiction for Wetlands and Streams Within the Study Area

Wetlands 1, 2, 3, 4, and Off-site Wetlands 1, 2, and 3 are likely to be regulated as wetlands under SMC 25.09. Wetland 5 may be exempt from regulation under SMC 25.09.020.C because it was constructed as a stormwater facility for the property.

Streams 3, 4, and 5 meet criteria to be considered Type 4 streams and are likely to be regulated as streams under SMC 25.09. Streams 1 and 2 may be exempt from regulation under SMC 25.09.020.D.5 because they do not meet criteria to be considered Type 2-5 streams.

We should caution that wetlands and streams that are not regulated by the City of Seattle may be regulated by the COE, WDOE, or other regulatory agencies.

4.2.3 Buffers for Wetlands Within the Study Area

Wetlands 1, 2, 3, and 4 and Off-site Wetland 2 meet Category III wetland criteria based on the Washington State Wetland Rating System for Western Washington, (Hruby 2004; as revised 2006, and WDOE 2008). In addition, each of these wetlands scored less than 20 habitat points on the WDOE rating form and would be considered to provide relatively low habitat function. Under City of Seattle (2011a) code, Category III wetlands that score less than 20 points for habitat function are provided a 60-foot native vegetation buffer.

Off-site Wetlands 1 and 3 meet Category II wetland criteria based on the Washington State Wetland Rating System for Western Washington, (Hruby 2004; as revised 2006, and WDOE

2008). In addition, both of these wetlands scored less than 20 habitat points on the WDOE rating form and would be considered to provide relatively low habitat function. Under City of Seattle (2011a) code, Category II wetlands that score less than 20 points for habitat function are provided a 100-foot native vegetation buffer.

5.0 LIMITATIONS

We have prepared this report for the exclusive use the City of Seattle and their consultants. No other person or agency may rely upon the information, analysis, or conclusions contained herein without permission from the City of Seattle.

The determination of ecological system classifications, functions, values, and boundaries is an inexact science, and different individuals and agencies may reach different conclusions. With regard to wetlands, the final determination of their boundaries for regulatory purposes is the responsibility of the various agencies that regulate development activities in wetlands. We cannot guarantee the outcome of such determinations. Therefore, the conclusions of this report should be reviewed by the appropriate regulatory agencies.

We warrant that the work performed conforms to standards generally accepted in our field, and prepared substantially in accordance with then-current technical guidelines and criteria. The conclusions of this report represent the results of our analysis of the information provided by the project proponent and their consultants, together with information gathered in the course of the study. No other warranty, expressed or implied, is made.

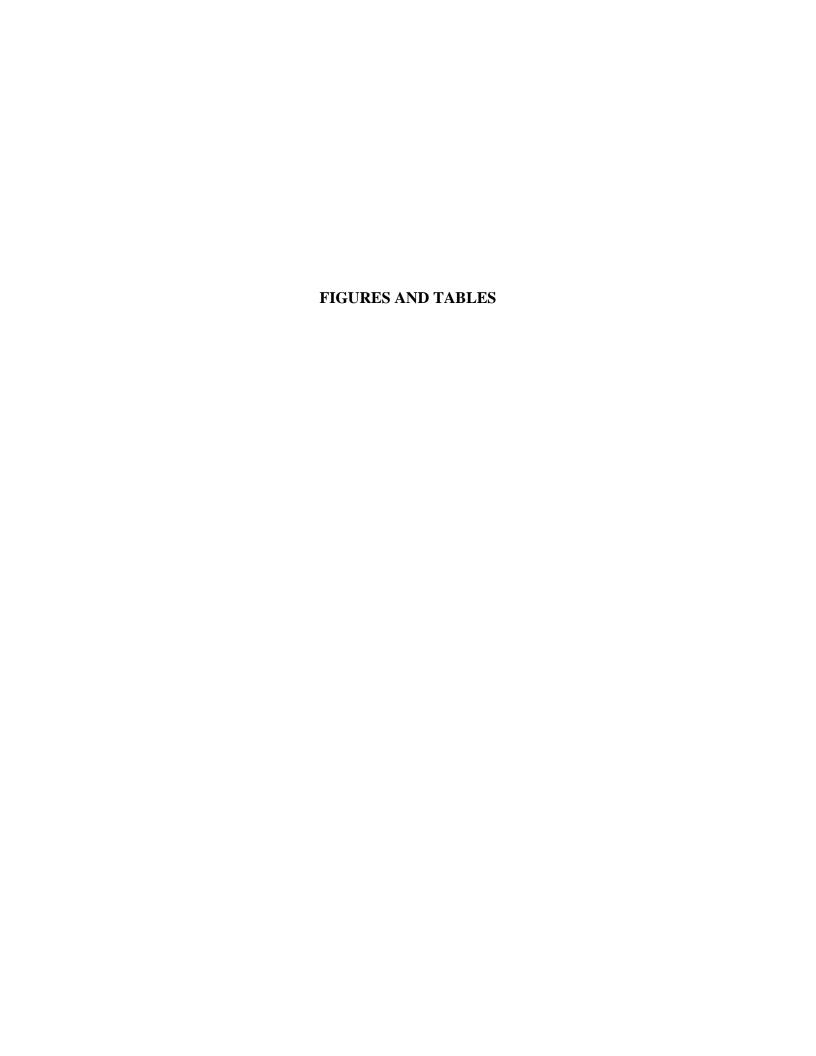
6.0 LITERATURE CITED

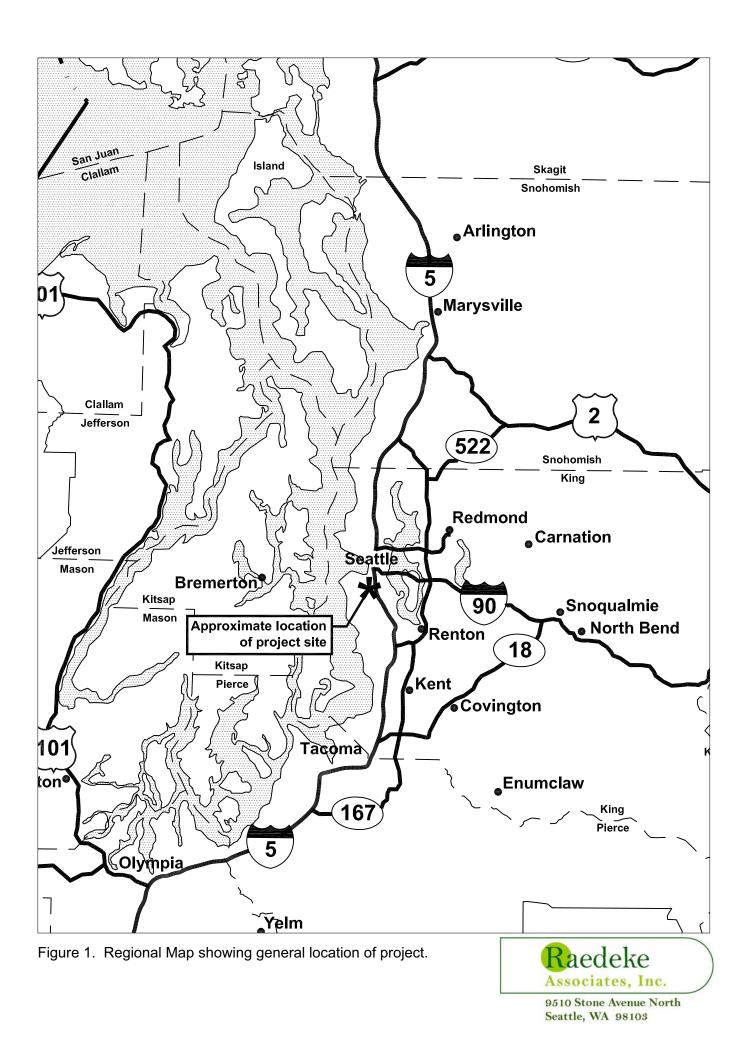
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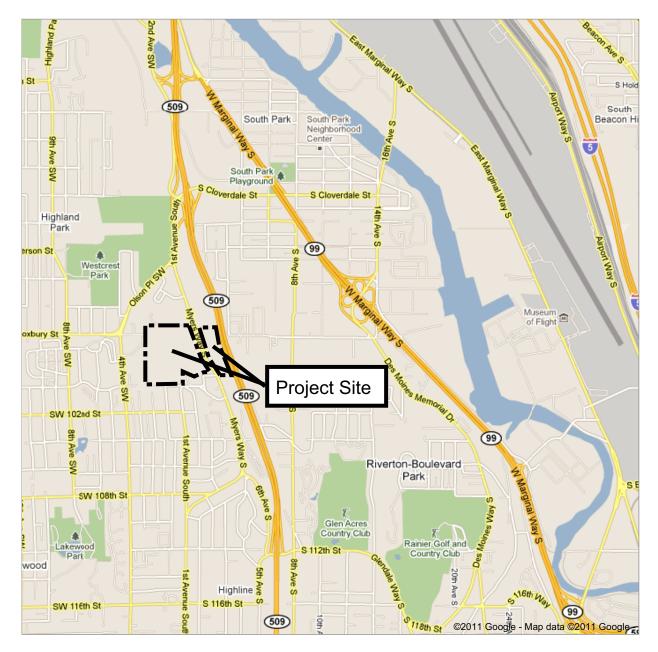


Figure 2. Vicinity map showing approximate boundaries of project site.





Figure 3. US Fish and Wildlife Service National Wetlands Inventory Map showing approximate boundaries of project site and surroundings.

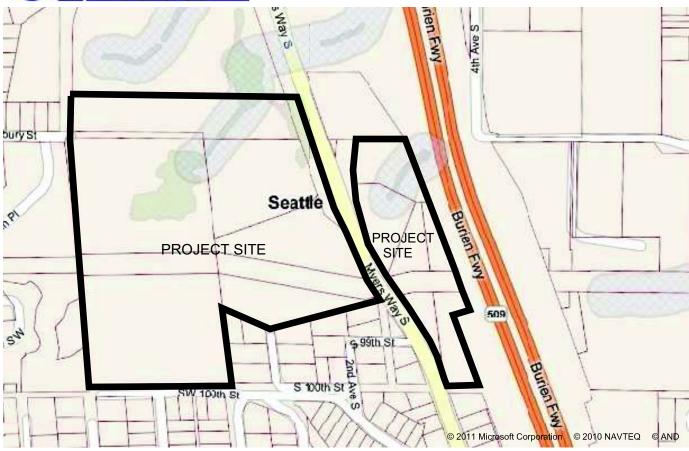
Wetlands





9510 Stone Avenue North Seattle, WA 98103





Displaying layers:

Parcels Wetlands Riparian Corridors

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Figure 4: City of Seattle (2011) Department of Planning and Development GIS Map showing wetlands and riparian areas for the Meyers Way Remainder Property.

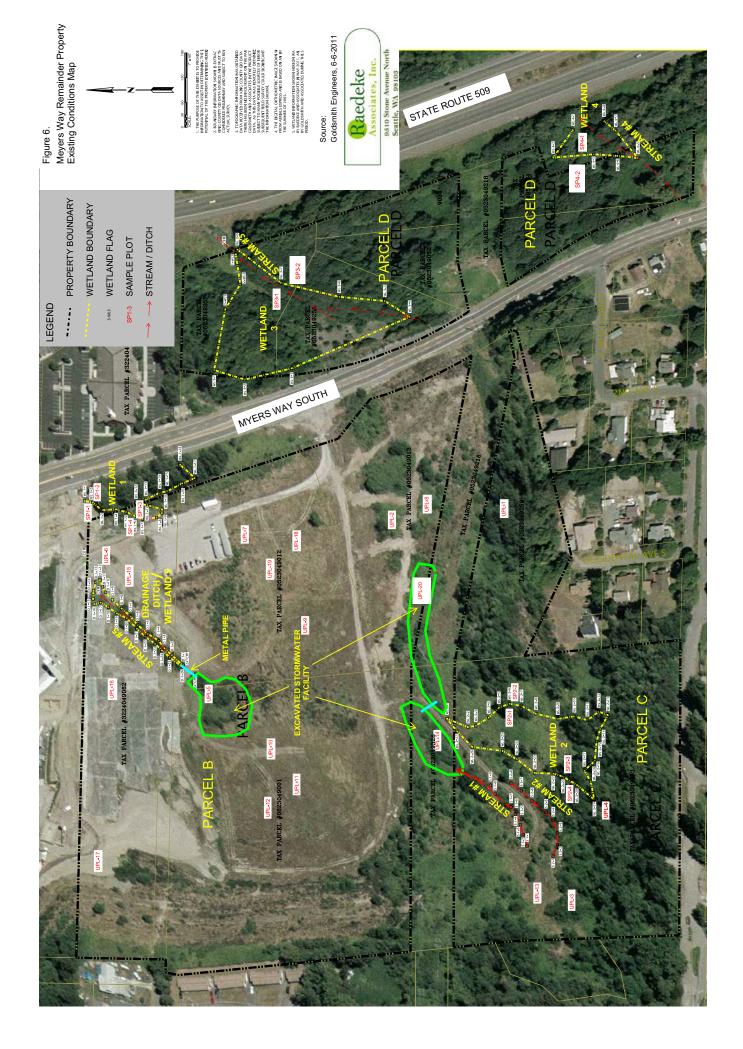


FOREST PRACTICE ACTIVITY MAP



Figure 5: Washington Dept. of Natural Resources (2011) Forest Practice Activity Map for Project Site.





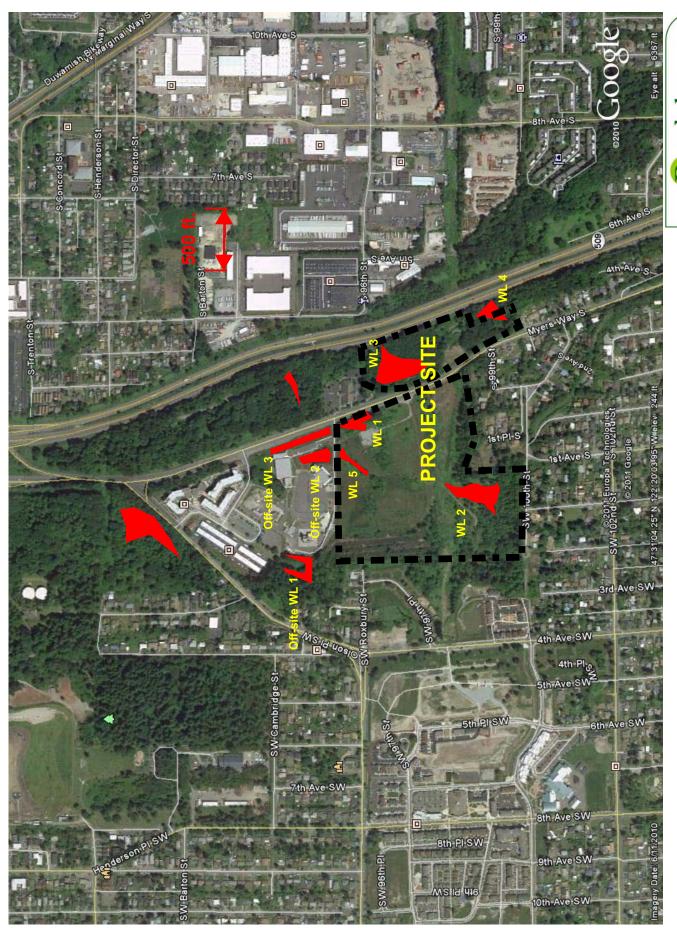


Figure 7. Meyers Way Remander Property. Distrubution of on-site delineated wetlands and off-site NWI mapped wetlands.



Table 1. Summary of definitions of water types found on Washington Department of Natural Resources Forest Practice Base Maps (See Washington State Forest Practices Board [2008] for complete definitions).

- (1) "**Type S Water**" means all waters, within their bankfull width, as inventoried as "shorelines of the state" under chapter 90.58 RCW and the rules promulgated pursuant to chapter 90.58 RCW including periodically inundated areas of their associated wetlands.
- (2) "Type F Water" means segments of natural waters other than Type S Waters, which are within the bankfull widths of defined channels and periodically inundated areas of their associated wetlands, or within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water and which in any case contain fish habitat or are described by one of the following four categories:
 - (a) Waters, which are diverted for domestic use by more than 10 residential or camping units or by a public accommodation facility licensed to serve more than 10 persons, where such diversion is determined by the department to be a valid appropriation of water and the only practical water source for such users. Such waters shall be considered to be Type F Water upstream from the point of such diversion for 1,500 feet or until the drainage area is reduced by 50 percent, whichever is less;
 - (b) Waters, which are diverted for use by federal, state, tribal or private fish hatcheries. Such waters shall be considered Type F Water upstream from the point of diversion for 1,500 feet, including tributaries if highly significant for protection of downstream water quality. The department may allow additional harvest beyond the requirements of Type F Water designation provided the department determines after a landowner-requested on-site assessment by the department of fish and wildlife, department of ecology, the affected tribes and interested parties that:
 - (i) The management practices proposed by the landowner will adequately protect water quality for the fish hatchery; and
 - (ii) Such additional harvest meets the requirements of the water type designation that would apply in the absence of the hatchery;
 - (c) Waters, which are within a federal, state, local, or private campground having more than 10 camping units: Provided, That the water shall not be considered to enter a campground until it reaches the boundary of the park lands available for public use and comes within 100 feet of a camping unit, trail or other park improvement;

- (d) Riverine ponds, wall-based channels, and other channel features that are used by fish for off-channel habitat. These areas are critical to the maintenance of optimum survival of fish. This habitat shall be identified based on the following criteria:
 - (i) The site must be connected to a fish habitat stream and accessible during some period of the year; and
 - (ii) The off-channel water must be accessible to fish.
- (3) "Type Np Water" means all segments of natural waters within the bankfull width of defined channels that are perennial nonfish habitat streams. Perennial streams are waters that do not go dry any time of a year of normal rainfall. However, for the purpose of water typing, Type Np Waters include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow. If the uppermost point of perennial flow cannot be identified with simple, nontechnical observations (see board manual, section 23), then Type Np Waters begin at a point along the channel where the contributing basin area is:
 - (a) At least 13 acres in the Western Washington coastal zone (which corresponds to the Sitka spruce zone defined in Franklin and Dyrness, 1973);
 - (b) At least 52 acres in other locations in Western Washington;
 - (c) At least 300 acres in Eastern Washington.
- (4) "Type Ns Water" means all segments of natural waters within the bankfull width of the defined channels that are not Type S, F, or Np Waters. These are seasonal, nonfish habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from any stream reach that is a Type Np Water. Ns Waters must be physically connected by an above-ground channel system to Type S, F, or Np Waters.
- (5) For purposes of this section:
 - (a) "Residential unit" means a home, apartment, residential condominium unit or mobile home, serving as the principal place of residence.
 - (b) "Camping unit" means an area intended and used for:
 - (i) Overnight camping or picnicking by the public containing at least a fireplace, picnic table and access to water and sanitary facilities; or
 - (ii) A permanent home or condominium unit or mobile home not qualifying as a "residential unit" because of part time occupancy.

- (c) "Public accommodation facility" means a business establishment open to and licensed to serve the public, such as a restaurant, tavern, motel or hotel.
- (d) "Natural waters" only excludes water conveyance systems which are artificially constructed and actively maintained for irrigation.
- (e) "Seasonal low flow" and "seasonal low water" mean the conditions of the 7-day, 2-year low water situation, as measured or estimated by accepted hydrologic techniques recognized by the department.
- (f) "Channel width and gradient" means a measurement over a representative section of at least 500 linear feet with at least 10 evenly spaced measurement points along the normal stream channel but excluding unusually wide areas of negligible gradient such as marshy or swampy areas, beaver ponds and impoundments. Channel gradient may be determined utilizing stream profiles plotted from United States geological survey topographic maps (see board manual section 23).
- (g) "Intermittent streams" means those segments of streams that normally go dry.
- (h) "Fish habitat" means habitat which is used by any fish at any life stage at any time of the year, including potential habitat likely to be used by fish which could be recovered by restoration or management and includes off-channel habitat.

Table 2. Summary of stream definitions used by the City of Seattle to regulate Fish and Wildlife Habitat Conservation Areas. These are based on WAC 222-16-031.

- All waters, within their ordinary high-water mark, as inventoried as "shorelines of the state" under chapter 90.58 RCW.
- All segments of natural waters and periodically inundated areas of their associated wetlands, which are not classified as Type 1 Water and have a high fish, wildlife, or human use, including use for or by:
 - (a) Domestic water supplies (>100 units), including 1,500 ft. upstream;
 - (b) Fish hatcheries, including 1,500 ft. upstream if significant for water quality;
 - (c) Campgrounds (>30 units);
 - (d) Substantial numbers of fish for spawning, rearing, or migration or wildlife;
 - (i) Stream segments having a defined channel 20 feet or greater within the bankfull width and having a gradient of less than 4 percent.
 - (ii) Lakes, ponds, or impoundments having a surface area of 1 acre or greater at seasonal low water.
 - (e) Salmonids for off-channel habitat,
 - (i) site must be connected to a stream bearing salmonids and accessible during some period of the year; and
 - (ii) off-channel water must be accessible to juvenile salmonids through a drainage with less than 5 percent gradient.
- All segments of natural waters and periodically inundated areas of their associated wetlands which are not classified as Type 1 or 2 and have a moderate to slight fish, wildlife, or human use, including use for or by:
 - (a) Domestic water supplies (>10 units), including 1,500 ft. upstream;
 - (b) Significant numbers of fish for spawning, rearing, or migration.

If fish use has not been determined:

- (i) Waters having following characteristics are presumed to have fish use:
 - (A) stream segments having a defined channel of ≥2 ft. within bankfull width in W. Wash. (≥3 ft in E. Wash.); and having a gradient of 16 percent or less:
 - (B) stream segments having a defined channel ≥2 ft. within bankfull width in W. Wash. (≥3 ft. in E. Wash.), with a gradient of >16-20 percent, and ≥50 ac. in contributing basin in W. Wash. (≥175 ac. in E. Wash.);

- (C) ponds or impoundments having < 1 ac. surface area at seasonal low water and having an outlet to a fish stream;
- (D) ponds or impoundments having > 0.5 ac. surface area at seasonal low water.
- (ii) Dept. shall waive or modify characteristics in (i) above where:
 - (A) water quality confirmed to be incapable of supporting such fish;
 - (B) flow cycle of stream is too short to support life history phases of such fish (i.e., snowmelt streams with no typical winter flow and dry by June 1); or
 - (C) sufficient information about geographic region is available to support departure from criteria in (i) as determined in consultation with WDFW, WDOE, affected tribes, and interested parties.
- 4 All segments of natural waters within bankfull width of defined channels that are not classified as Type 1, 2, or 3 Waters and which are perennial waters of nonfish-bearing streams. Perennial waters means waters downstream from a perennial initiation point.
- All segments of natural waters within bankfull width of defined channels that are not Type 1, 2, 3 or 4 Waters and which are seasonal nonfish-bearing streams. "Seasonal streams" means those streams that are not perennial but are physically connected by a defined channel system to downstream waters so that water or sediment initially delivered to these waters may eventually be delivered to a Type 1, 2, 3 or 4 Water.

Table 3. WAC 222-16-31 Interim Water Typing System conversion table.

Permanent Water Typing	Interim Water Typing
Type "S"	Type 1 Water
Type "F"	Type 2 and 3 Water
Type "Np"	Type 4 Water
Type "Ns"	Type 5 Water

Table 4. Summary of data collected at sample plots at the Seattle Meyers Way Remainder property.

Sample Plot	Hydrophytic Vegetation Present	Hydric Soils Present	Wetland Hydrology Present	Meets Wetland Criteria
SP1-1	YES	YES	NO	NO
SP1-2	YES	YES	YES	YES
SP1-3	YES	YES	YES	YES
SP1-4	YES	NO	NO	NO
SP2-1	YES	YES	YES	YES
SP2-2	NO	NO	NO	NO
SP2-3	YES	YES	YES	YES
SP2-4	NO	YES	NO	NO
SP3-1	YES	YES	YES	YES
SP3-2	NO	NO	NO	NO
SP4-1	YES	YES	YES	YES
SP4-2	NO	NO	NO	NO
SP5-1	YES	YES	YES	YES
UPL-1	NO	NO	NO	NO
UPL-2	NO	NO	NO	NO
UPL-3	YES	YES	NO	NO
UPL-4	NO	NO	NO	NO
UPL-5	NO	YES	NO	NO
UPL-6	NO	YES	NO	NO
UPL-7	NO	NO	NO	NO
UPL-8	YES	NO	NO	NO
UPL-9	NO	NO	NO	NO
UPL-10	YES	YES	NO	NO
UPL-11	YES	YES	NO	NO
UPL-12	NO	NO	NO	NO
UPL-13	YES	YES	NO	NO
UPL-14	YES	NO	NO	NO
UPL-15	YES	NO	NO	NO
UPL-16	YES	NO	NO	NO
UPL-17	YES	NO	NO	NO
UPL-18	NO	NO	NO	NO
UPL-19	YES	NO	NO	NO
UPL-20	YES	NO	NO	NO

Table 5. Probable Wetland Ratings per revised WDOE (Hruby 2004, WDOE 2008) ratings form, corresponding City Seattle (2011) buffer standards, and likely regulatory jurisdiction.

Wetland	On-site Area (sf)	Cowardin Classification	HGM Classification	WDOE Rating (Total Score)	Habitat Function Score	Regulated by City of Seattle ¹	Buffer (ft)
1	2,058	PFO	Slope	III (34)	18	YES	60
2	36,851	PFO / PSS	Slope	III (31)	15	YES	60
3	65, 762	PFO	Slope	III (34)	18	YES	60
4	606	PFO	Slope	III (33)	17	YES	60
5	4,128	PEM / PSS	Riverine	IV (22)	18	NO	None
Off-site 1	10,000 ²	PFO	Depressional	II (51)	19	YES	100
Off-site 2	10,000 ²	PEM / PAB	Depressional	III (40)	10	YES	60
Off-site 3	$20,000^2$	PEM / PSS	Depressional	II (51)	13	YES	100

Notes:

¹ The City of Seattle, WDOE, and COE have the final authority to determine whether a wetland or stream would be regulated under their jurisdiction.

Area is approximate based on field measurements.

Table 6. Probable WDNR (2000) Water Type for on-site streams, corresponding City Seattle (2011) buffer standards, and likely regulatory jurisdiction.

Stream	WDNR Water Type	Regulated by City of Seattle ¹	Riparian Management Zone (ft)
Stream 1	N/A ¹	NO	None
Stream 2	N/A ¹	NO	None
Stream 3	4	YES	100
Stream 4	4	YES	100

Notes:

The stream does not have characteristics of Type 1, 2, 3, or 4 waters and is not physically connected by a defined channel system to downstream waters so that water or sediment initially delivered to these waters may eventually be delivered to a Type 1, 2, 3 or 4 Water.



Photo 1 Property overview. South portion of Parcel B. North-facing view.



Photo 3 Property overview. East portion of Parcel C. South-facing view.



Photo 2 Property overview. West side of Parcel B. East-facing view.



Photo 4 Property overview. North portion of Parcel D. West-facing view.

Photo Plate 1



Photo 5 Wetland 1. Located in the NE corner of Parcel B.



Photo 7 Wetland 3. Located in the northern portion of Parcel D. Hamm Creek is in foreground.



Photo 6 Wetland 2. Located in the west-central portion of Parcel C.



Photo 8 Wetland 4. Located in southern portion of Parcel B.

Photo Plate 2



Photo 9 Stormwater conveyance ditch in the northeast portion of parcel B.



Photo 11 Stormwater infiltration facility in PSE powerline right-of-way at north boundary of Parcel C.



Photo 10 Roadside channel routing run-off to stormwater infiltration facility in PSE powerline right-of-way.



Photo 12 Example of upland found throughout the mined portion of the site with puddles in tire ruts from recent rains.

Photo Plate 3

APPENDIX A

Field Survey Data

Project/Site: City of Seattle Meyers Way Remainder Propert	у	City/County	y: <u>Seattle</u>		Sampling Date: 05/03/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: SP1-1
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	ownship, Range: <u>S32, T24</u>	N, R4EWM
Landform (hillslope, terrace, etc.): hillslope		Local relie	ef (concave,	, convex, none): convex	Slope (%): <u>5%</u>
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable					<u> </u>
Are climatic / hydrologic conditions on the site typical for this					-
Are Vegetation, Soil, or Hydrology sign	-			ormal Circumstances" pres	sent? Yes⊠ No □
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in	
SUMMARY OF FINDINGS – Attach site map					
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes ⊠ No □			e Sampled		_
Wetland Hydrology Present? Yes ☐ No ☒		with	in a Wetlar	nd? Yes □ N	0 ⊠
Remarks: March and April 2011 have been unseasonably	rainy with 1	69% of nor	mal rainfall	for the two months combin	ned. This amounts to 4.42
additional inches of precipitation during March and April. S		_		=	=
Area of sample plot is in area that was mined prior to 2002	. Appears t	to nave bee	en reciaimed	d more than 10 years ago	Dased on Size of trees.
VEGETATION – Use scientific names of plan	ts.				
Tree Stratum (Plot size: 5m)	Absolute			Dominance Test works	
1. Alnus rubra		Species?		Number of Dominant Sp	pecies or FAC: <u>3</u> (A)
2					
3				Total Number of Domina Species Across All Strat	
4.				,	,
Sapling/Shrub Stratum (Plot size: 3m)		= Total C		Percent of Dominant Sp That Are OBL, FACW, o	ecies or FAC: <u>75</u> (A/B)
1. Rubus armeniacus	5	<u>Y</u>	<u>FACU</u>	Prevalence Index work	sheet:
2					Multiply by:
3					x 1 =
4					x 2 =
5					x 3 =
Herb Stratum (Plot size: 1.5m)	5	= Total C	cover		x 4 = x 5 =
1. Juncus effusus	30	Υ	FACW		
2. Poa pratensis		Υ	FAC	Column Totals.	(A) (D)
3. Phalaris arundinacea	5	N	FACW	Prevalence Index	= B/A =
4. Equisetum arvense	2	<u>N</u>	FAC	Hydrophytic Vegetatio	
5. Agrostis capillaris	5	<u>N</u>	FAC	1 - Rapid Test for Hy	, , ,
6. Cirsium vulgare				□ 2 - Dominance Test □ 3 - Dominance Test □ 3 - Dominance Test □ 4 - Dominance Test □ 5 - Dominance Test □ 6 - Dominance Test □ 7 - Dominance Test □ 8 - Domina	
7				3 - Prevalence Index	
8					daptations ¹ (Provide supporting or on a separate sheet)
9				5 - Wetland Non-Vas	scular Plants ¹
10				☐ Problematic Hydropl	hytic Vegetation ¹ (Explain)
11	62				and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	<u> </u>	i otai C		be present, unless distu	rbed or problematic.
1				Hydrophytic	
2				Vegetation	
% Para Cround in Harb Stratum 40	0	= Total C	over	Present? Yes	s⊠ No □
% Bare Ground in Herb Stratum <u>40</u> Remarks:					

Profile Desc	cription: (Describe	e to the c	lepth ne	eded to docu	ment the i	ndicator	or confirn	the ab	sence	of indicate	ors.)	
Depth	Matrix				x Feature							
(inches)	Color (moist)	%	Colo	r (moist)	<u></u> %	Type ¹	Loc ²	Textu	re		Remarks	
<u>0-8</u>	<u>5Y 3/1</u>	100						sandy	loam			
8-22	N 4/	95	7.5Y	R 4/4	5	С	M	clay lo	am			
	-											
										-		
					_							
1Type: C=C	oncentration, D=De	nletion F	- M-Pad	uced Matrix C	S=Covere	d or Coat	ed Sand G	raine	² l oc	ation: DI =	Pore Lining	g, M=Matrix.
	Indicators: (Appli						eu Sanu Gi					ydric Soils ³ :
☐ Histosol				Sandy Redox (,				Muck (A1		,
_	pipedon (A2)			Stripped Matrix						•	terial (TF2)	
☐ Black Hi				_oamy Mucky N	` ') (excep	t MLRA 1)				ark Surface	
☐ Hydroge	n Sulfide (A4)		□ I	oamy Gleyed I	Matrix (F2)			Othe	r (Explain i	n Remarks)
	d Below Dark Surfac	ce (A11)		Depleted Matrix	. ,							
	ark Surface (A12)			Redox Dark Su	` '			³ l		-	phytic vege	
-	lucky Mineral (S1)			Depleted Dark S	,	7)				-	gy must be	•
	lleyed Matrix (S4)		F	Redox Depress	ions (F8)				unles	s disturbed	or problem	iatic.
	Layer (if present):											
								1		5 40	v 🗖	
	ches):		_					Hydr	ic Soil	Present?	Yes ⊠	No 🗆
Remarks:												
HYDROLO	GY											
Wetland Hy	drology Indicators	s:										
Primary Indi	cators (minimum of	one requ	ired; che	eck all that app	ly)				Secon	dary Indica	ators (2 or r	more required)
☐ Surface	Water (A1)			☐ Water-Stai	ined Leave	es (B9) (e	xcept MLF	RA	□ W:	ater-Staine	ed Leaves (I	B9) (MLRA 1, 2,
☐ High Wa	ter Table (A2)				A, and 4B		•			4A, and		, ,
☐ Saturation	on (A3)			☐ Salt Crust	(B11)				☐ Dr	ainage Pa	tterns (B10))
☐ Water M	arks (B1)			☐ Aquatic Inv	vertebrates	s (B13)			☐ Dr	y-Season '	Water Table	e (C2)
☐ Sedimer	nt Deposits (B2)			Hydrogen	Sulfide Oc	lor (C1)			☐ Sa	turation Vi	sible on Ae	rial Imagery (C9)
☐ Drift Dep	oosits (B3)			☐ Oxidized F	Rhizospher	es along	Living Roo	ts (C3)	☐ Ge	eomorphic	Position (D	2)
☐ Algal Ma	t or Crust (B4)			☐ Presence	of Reduce	d Iron (C	4)		☐ Sh	nallow Aqui	tard (D3)	
☐ Iron Dep	osits (B5)			☐ Recent Iro	n Reductio	on in Tille	d Soils (C6)	☐ FA	C-Neutral	Test (D5)	
☐ Surface	Soil Cracks (B6)			☐ Stunted or	Stressed	Plants (D	1) (LRR A))	☐ Ra	aised Ant N	lounds (D6) (LRR A)
☐ Inundation	on Visible on Aerial	Imagery	(B7)	☐ Other (Exp	olain in Re	marks)			☐ Fr	ost-Heave	Hummocks	(D7)
☐ Sparsely	Vegetated Concav	e Surface	e (B8)									
Field Obser	vations:											
Surface Wat	er Present?	Yes 🗌	No 🛛	Depth (inches	s):							
Water Table	Present?	Yes 🛛	No 🗌	Depth (inches	s): <u>19</u>							
Saturation P	resent?	Yes 🛛	No 🗌	Depth (inches	s): <u>17</u>		Wetl	and Hy	drology	/ Present?	Yes 🗌	No ⊠
	pillary fringe)		monitor	امسيا ممتنما	nhotoo nn	ovious in	on options)	if avails	hlai			
Describe Re	corded Data (strea	ıı yauge,	HOHIOI	ing well, aerial	priotos, pr	evious in	spections),	ıı avalla	IDIC.			
Deverant												
Remarks:												
Ī												

Project/Site: City of Seattle Meyers Way Remainder Propert	<u>y</u>	City/County	/: <u>Seattle</u>		Sampling Date: 05/03/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: SP1-2
Investigator(s): E. Pritchard, J. Merriman, C. Wright					
Landform (hillslope, terrace, etc.): hillslope					
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable				=	
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	•		,	ormal Circumstances" pres	ent? Yes⊠ No□
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in	- -
SUMMARY OF FINDINGS – Attach site map				-	
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes ⊠ No □			e Sampled		
Wetland Hydrology Present? Yes ⊠ No □		with	in a Wetlar	nd? Yes ⊠ No) [
Remarks: March and April 2011 have been unseasonably	rainy with 16	69% of nor	mal rainfall	for the two months combin	ed. This amounts to 4.42
additional inches of precipitation during March and April. S		•			•
Area of sample plot is in area that was mined prior to 2002	. Appears t	o nave bee	en reciaime	i more than To years ago t	Jased on size of frees.
VEGETATION – Use scientific names of plant	s.				
Trac Stratum (Diet eine Em)		Dominant		Dominance Test works	
Tree Stratum (Plot size: 5m) 1. Alnus rubra	% Cover			Number of Dominant Sp	ecies r FAC: <u>4</u> (A)
2				That Ale OBL, I ACW, O	(A)
3.				Total Number of Domina Species Across All Strata	
4					、,
Sapling/Shrub Stratum (Plot size: 3m)		= Total C		Percent of Dominant Spe That Are OBL, FACW, or	ecies r FAC: <u>100</u> (A/B)
1. Alnus rubra	15	<u>Y</u>	FAC	Prevalence Index work	sheet:
2. Rubus ursinus				Total % Cover of:	Multiply by:
3. Rubus armeniacus	3	N	FACU	OBL species	x 1 =
4				FACW species	x 2 =
5					x 3 =
Harb Stratum (Plat airs: 1 Em)	21	= Total C	over		x 4 =
Herb Stratum (Plot size: 1.5m) 1. Phalaris arundinacea	15	Υ	FACW	· ·	x 5 =
Pnaiaris arundinacea Equisetum arvense	10		FAC	Column Totals:	(A) (B)
3. Juncus effusus			FACW	Prevalence Index	= B/A =
4. Rumex crispus			FAC	Hydrophytic Vegetation	
5. Agrostis capillaris	3		FAC	☐ 1 - Rapid Test for Hy	drophytic Vegetation
6. Lotus corniculatus			FAC	2 - Dominance Test	is >50%
7. Ranunculs repens			FACW	3 - Prevalence Index	is ≤3.0 ¹
8					aptations ¹ (Provide supporting
9				□ 5 - Wetland Non-Vas	or on a separate sheet)
10				—	nytic Vegetation ¹ (Explain)
11					and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	52	= Total C	over	be present, unless distur	
1. Hedera helix	1	N	NI		
2				Hydrophytic	
		= Total C		Vegetation Present? Yes	⊠ No □
% Bare Ground in Herb Stratum 50			-		
Remarks:					

	-		depth ne		ment the indicator	r or confirm	n the abs	ence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Colo	r (moist)	ox Features % Type ¹	Loc ²	Texture	<u>;</u>	Remarks
0-6	-								· · · · · · · · · · · · · · · · · · ·
6-22	N 4/	<u>100</u>					loamy sa	and_	
							-		
							-		
					S=Covered or Coat	ted Sand Gr			rs for Problematic Hydric Soils ³ :
-	Indicators: (Appl	icable to							•
☐ Histosol	(A1) pipedon (A2)			Sandy Redox (Stripped Matrix					Muck (A10) Parent Material (TF2)
☐ Black Hi					(56) Mineral (F1) (exce p	t MI RA 1)			Shallow Dark Surface (TF12)
	n Sulfide (A4)			Loamy Gleyed		t well (•	er (Explain in Remarks)
	Below Dark Surfa	ce (A11)		Depleted Matrix			_	0 11.10	(2) (2) (2) (2)
•	ark Surface (A12)	, ,		Redox Dark Su			3In	dicato	rs of hydrophytic vegetation and
☐ Sandy M	lucky Mineral (S1)			Depleted Dark	Surface (F7)			wetla	nd hydrology must be present,
-	Sleyed Matrix (S4)			Redox Depress	sions (F8)			unles	s disturbed or problematic.
	Layer (if present):								
Depth (in	ches):						Hydric	Soil	Present? Yes ⊠ No □
Remarks:									
HYDROLO	ic.v								
	drology Indicators								
•	cators (minimum of		iirad: ch	ack all that ann	lv)			Sacor	ndary Indicators (2 or more required)
☐ Surface	•	one requ	illeu, cir			aveent MI D			
	` ,				ined Leaves (B9) (except wilk	KA I	⊔ vv	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
	ter Table (A2)			I, 2, 4/	A, and 4B)			□ n,	rainage Patterns (B10)
☐ Water M	` '				vertebrates (B13)				y-Season Water Table (C2)
	nt Deposits (B2)				Sulfide Odor (C1)				aturation Visible on Aerial Imagery (C9)
	oosits (B3)				Rhizospheres along	Living Roo			eomorphic Position (D2)
	it or Crust (B4)				of Reduced Iron (C	_			nallow Aquitard (D3)
	osits (B5)				n Reduction in Tille	,			AC-Neutral Test (D5)
	Soil Cracks (B6)				Stressed Plants (•	•		aised Ant Mounds (D6) (LRR A)
	on Visible on Aerial	Ilmagery	(B7)		plain in Remarks)) (= :(:() ()	, .		ost-Heave Hummocks (D7)
	Vegetated Concar			- Other (Exp	olam in Homanio)				oot ricave riammoone (21)
Field Obser			- (- /						
Surface Wat		Yes ⊠	No 🗌	Depth (inche	s): 1				
Water Table	Present?	Yes ⊠	No 🗌	Depth (inches	·				
Saturation P		Yes ⊠	No 🗆	Depth (inches	· —	Wetla	and Hvdi	rology	y Present? Yes ⊠ No □
(includes ca	pillary fringe)								,
Describe Re	corded Data (strea	m gauge	monitor	ring well, aerial	photos, previous in	spections),	if availab	le:	
Remarks:									

Project/Site: City of Seattle Meyers Way Remainder Property	/(City/County	y: <u>Seattle</u>		Sampling Date: 05/03/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: SP1-3
Investigator(s): E. Pritchard, J. Merriman, C. Wright					
Landform (hillslope, terrace, etc.): hillslope					
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable				=	
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	•		•	ormal Circumstances" pres	ent? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology natur				ed, explain any answers in	
SUMMARY OF FINDINGS – Attach site map s					
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes ⊠ No □			e Sampled		
Wetland Hydrology Present? Yes ⊠ No □		with	in a Wetlar	nd? Yes⊠ No) [
Remarks: March and April 2011 have been unseasonably r	ainy with 16	69% of nor	mal rainfall	for the two months combin	ed. This amounts to 4.42
additional inches of precipitation during March and April. S Area of sample plot is in area that was mined prior to 2002.		-			•
		o nave bee	en reciaime	u more man 10 years ago t	Jaseu on size of frees.
VEGETATION – Use scientific names of plant	s.				
Tree Stratum (Plot size: 5m)	Absolute % Cover			Dominance Test works	
1. Populus balsamifera	% Cover			Number of Dominant Sp	ecies r FAC: <u>3</u> (A)
2					
3				Total Number of Domina Species Across All Strata	
4.				,	
Sapling/Shrub Stratum (Plot size: 3m)		= Total C		Percent of Dominant Spe That Are OBL, FACW, or	ecies r FAC: <u>75</u> (A/B)
1. Rubus armeniacus	10	<u>Y</u>	FACU	Prevalence Index work	sheet:
2				Total % Cover of:	Multiply by:
3				OBL species	x 1 =
4				FACW species	x 2 =
5					x 3 =
Harb Chraham (Diet eines 4 Fee)	<u>10</u>	= Total C	over		x 4 =
Herb Stratum (Plot size: 1.5m) 1. Phalaris arundinacea	15	V	EACW		x 5 =
Pnalaris arundinacea Poa pratensis	10		FAC	Column Totals:	(A) (B)
3. Agrostis capillaris			FAC	Prevalence Index	= B/A =
Equisetum arvense				Hydrophytic Vegetation	
5. Juncus effusus	_		FACW	☐ 1 - Rapid Test for Hy	drophytic Vegetation
6. Rumex crispus			FAC	2 - Dominance Test	s >50%
7				3 - Prevalence Index	is ≤3.0 ¹
8					aptations ¹ (Provide supporting
9				□ 5 - Wetland Non-Vas	or on a separate sheet)
10				_	nytic Vegetation ¹ (Explain)
11				1.	and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	37	= Total C	Cover	be present, unless distur	
1					
2.				Hydrophytic Vegetation	
		= Total C			⊠ No □
% Bare Ground in Herb Stratum 60					
Remarks:					

Profile Desc	cription: (Describe	e to the d	epth ne	eded to docu	ment the i	ndicator	or confirn	n the ab	sence	of indicators.)
Depth	Matrix				x Feature					
(inches)	Color (moist)	%	Colo	r (moist)	%	Type ¹	Loc ²	Textu	re	Remarks
<u>0-8</u>	10YR 2/2	100						<u>gr. s. l</u>	oam	
8-20+	N 4/	95	7.5Y	R 4/4	5	С	М	loamy	sand	
	-									
		_								
										-
		_								
1Type: C=C	oncentration, D=De	nletion P	M=Pad	uced Matrix C	S=Covered	d or Coate	ad Sand G	raine	² l o	cation: PL=Pore Lining, M=Matrix.
	Indicators: (Appli						eu Sanu Gi			ors for Problematic Hydric Soils ³ :
☐ Histosol				Sandy Redox (,				n Muck (A10)
	oipedon (A2)			Stripped Matrix					_	Parent Material (TF2)
☐ Black Hi			_	_oamy Mucky N	` ') (except	MLRA 1)			Shallow Dark Surface (TF12)
	n Sulfide (A4)			oamy Gleyed I	•		,	Ī		er (Explain in Remarks)
☐ Depleted	Below Dark Surfac	ce (A11)		Depleted Matrix						
☐ Thick Da	rk Surface (A12)		□ F	Redox Dark Su	rface (F6)			³ l	ndicato	ors of hydrophytic vegetation and
-	lucky Mineral (S1)			Depleted Dark S	Surface (F	7)			wetla	and hydrology must be present,
-	leyed Matrix (S4)		F	Redox Depress	ions (F8)				unles	ss disturbed or problematic.
Restrictive	Layer (if present):									
Type:			_							
Depth (in	ches):		_					Hydr	ic Soil	Present? Yes ⊠ No □
Remarks:										
HYDROLO	CV									
-	drology Indicators cators (minimum of		radi abi	and all that ann					Cooo	nder (Indicators (2 or more required)
	•	one requi	rea, che		•	(DO) (-				ndary Indicators (2 or more required)
Surface				☐ Water-Stai			xcept MLF	KA	ШΨ	/ater-Stained Leaves (B9) (MLRA 1, 2,
_	ter Table (A2)				A, and 4B))				4A, and 4B)
⊠ Saturatio	` '			☐ Salt Crust	` '	(D40)				rainage Patterns (B10)
	arks (B1)			Aquatic Inv		. ,			_	ry-Season Water Table (C2)
	t Deposits (B2)			Hydrogen				. (00)		aturation Visible on Aerial Imagery (C9)
	oosits (B3)			Oxidized F		_	_	its (C3)		eomorphic Position (D2)
	t or Crust (B4)			☐ Presence		•	,			hallow Aquitard (D3)
-	osits (B5)			☐ Recent Iro			•	,		AC-Neutral Test (D5)
	Soil Cracks (B6)			☐ Stunted or			1) (LRR A))		aised Ant Mounds (D6) (LRR A)
	on Visible on Aerial			☐ Other (Exp	iain in Rei	marks)			∐ Fi	rost-Heave Hummocks (D7)
	Vegetated Concav	e Surrace	(B8)							
Field Obser		V □	N - 5 7	Double Grabes	- \ -					
Surface Wat			No 🛛	Depth (inches						
Water Table			No 🗌	Depth (inches						
Saturation P		Yes ⊠	No 🗌	Depth (inches	s): <u>6</u>		Wetl	and Hy	drolog	y Present? Yes ⊠ No □
	pillary fringe) corded Data (streaı	m gauge.	monitor	ing well, aerial	photos, pr	evious in:	spections).	if availa	ble:	
	,	- 0 ,					. "			
Remarks:										

Project/Site: City of Seattle Meyers Way Remainder Property	<u>y</u> (City/County	/: <u>Seattle</u>		Sampling Date: 04/29/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: SP1-4
Investigator(s): E. Pritchard, J. Merriman, C. Wright					
Landform (hillslope, terrace, etc.): hillslope					
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable				=	
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	•		•	ormal Circumstances" pres	ent? Yes⊠ No □
Are Vegetation, Soil, or Hydrology natur				ed, explain any answers in	
SUMMARY OF FINDINGS – Attach site map s					
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes ☐ No ☒			e Sampled		
Wetland Hydrology Present? Yes ☐ No ☒		with	in a Wetlar	nd? Yes □ No) 🗵
Remarks: March and April 2011 have been unseasonably	ainy with 16	69% of nor	mal rainfall	for the two months combin	ed. This amounts to 4.42
additional inches of precipitation during March and April. S Area of sample plot is in area that was mined prior to 2002		-		=	=
		o nave bee	en recialine	u more than 10 years ago t	Jaseu on size of frees.
VEGETATION – Use scientific names of plant	s.				
Tree Stratum (Plot size: 5m)	Absolute			Dominance Test works	
1. Alnus rubra	% Cover			Number of Dominant Spe	ecies r FAC: <u>2</u> (A)
2					
3				Total Number of Domina Species Across All Strata	
4				,	
Sapling/Shrub Stratum (Plot size: 3m)		= Total C		Percent of Dominant Spe That Are OBL, FACW, or	ecies r FAC: <u>66</u> (A/B)
1. Alnus rubra	20	Y	FΔC	Prevalence Index work	sheet:
Rubus armeniacus					Multiply by:
3					x 1 =
4					x 2 =
5.				·	x 3 =
		= Total C		FACU species	x 4 =
Herb Stratum (Plot size: 1.5m)				UPL species	x 5 =
1. Musci spp.	60			Column Totals:	(A) (B)
2. Poa pratensis	<u>15</u>	<u>N</u>	FAC	Provolence Index	= B/A =
3. Phalaris arundinacea			FACW_	Hydrophytic Vegetation	
4. Equisetum arvense	_		FAC	☐ 1 - Rapid Test for Hy	
5. Agrostis capillaris			FACU FACU	2 - Dominance Test i	
Cirsium vulgare Hypochaeris radicata			FACU	☐ 3 - Prevalence Index	
8				4 - Morphological Ad	aptations ¹ (Provide supporting
9.					or on a separate sheet)
10				5 - Wetland Non-Vas	
11				1	nytic Vegetation ¹ (Explain)
	92			¹ Indicators of hydric soil be present, unless distur	and wetland hydrology must bed or problematic.
Woody Vine Stratum (Plot size: 3m)				, , , , , , , , , , , , , , , , , , , ,	
1				Hydrophytic	
2				Vegetation Present? Yes	M No I
% Bare Ground in Herb Stratum 10	<u>U</u>	= Total C	over	rieseill? Yes	⊠ No □
Remarks:				1	

Depth (inches) 0-13 13-20+	Matrix			Red	ox Feature	es		n the ab		
	Color (moist)	%	Colo	r (moist)	%	1	Loc ²	Textu	re Rem	arks
13-20+	2.5Y 4/2	100						sandy	loam	
	2.5Y 4/2	75	7.5Y	R 4/4	25	С	М	sandy	loam	
							···	<u>ourray</u>		
	-									
	-									
1Tuno: C=Cr	ancontration D=Do	nlotion [used Matrix C		d or Coot	ad Cond Cr	raina	2l costion: DI =Doro I	ining M-Matrix
•	oncentration, D=De Indicators: (Applicators)						eu Sanu Gi		² Location: PL=Pore L dicators for Problemat	
☐ Histosol (Sandy Redox (,			2 cm Muck (A10)	
	ipedon (A2)			Stripped Matrix					Red Parent Material (TF2)
☐ Black His				oamy Mucky	. ,	1) (excep	t MLRA 1)		Very Shallow Dark Su	•
☐ Hydroger	n Sulfide (A4)		□ I	oamy Gleyed	Matrix (F2	!)			Other (Explain in Rem	arks)
	Below Dark Surfac	e (A11)		Depleted Matri	. ,					
	rk Surface (A12)			Redox Dark Su	. ,			³	ndicators of hydrophytic	-
-	ucky Mineral (S1)			Depleted Dark	,	7)			wetland hydrology mus	
-	leyed Matrix (S4) Layer (if present):			Redox Depres	sions (F8)				unless disturbed or pro	blematic.
Type:	-t \.								!- 0-!! D	
Depth (inc	ches):							Hydr	ic Soil Present? Yes	□ No ⊠
HYDROLO	GY drology Indicators									
-		·•								
Drimon, India		one real	irod: ob	ack all that any	alv)				Coondan/Indicators (or more required)
	•	one requ	iired; che	eck all that app	• •	oo (DO) (e	voont MI E		Secondary Indicators (2	· · · · · · · · · · · · · · · · · · ·
☐ Surface V	Water (A1)	one requ	iired; che	☐ Water-Sta	ained Leav	. , ,	except MLR	RA	☐ Water-Stained Leav	· · · · · · · · · · · · · · · · · · ·
Surface V	Water (A1) ter Table (A2)	one requ	iired; che	☐ Water-Sta	ained Leav	. , ,	xcept MLR	RA	☐ Water-Stained Leav 4A, and 4B)	res (B9) (MLRA 1, 2,
☐ Surface V☐ High Wat	Water (A1) ter Table (A2) on (A3)	one requ	iired; che	☐ Water-Sta 1, 2, 4 ☐ Salt Crusi	ained Leav IA, and 4E t (B11)	3)	xcept MLF	RA	☐ Water-Stained Leaver 4A, and 4B)☐ Drainage Patterns (res (B9) (MLRA 1, 2, B10)
Surface V High Wat Saturation Water Ma	Water (A1) ter Table (A2) on (A3) arks (B1)	one requ	iired; che	☐ Water-Sta 1, 2, 4 ☐ Salt Crusi ☐ Aquatic Ir	ained Leav A, and 4E t (B11) nvertebrate	s) s (B13)	xcept MLR	RA	☐ Water-Stained Leaver 4A, and 4B)☐ Drainage Patterns (☐ Dry-Season Water	res (B9) (MLRA 1, 2, B10) Table (C2)
Surface V High Wat Saturation Water Ma	Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2)	one requ	iired; che	☐ Water-Sta 1, 2, 4 ☐ Salt Crusi ☐ Aquatic Ir ☐ Hydrogen	ained Leav IA, and 4E t (B11) overtebrate Sulfide O	es (B13) dor (C1)	·		☐ Water-Stained Leaver 4A, and 4B) ☐ Drainage Patterns (☐ Dry-Season Water ☐ Saturation Visible o	res (B9) (MLRA 1, 2, B10) Table (C2) n Aerial Imagery (C9)
Surface V High Wat Saturation Water Ma Sediment Drift Depo	Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) oosits (B3)	one requ	iired; che	Water-Sta 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized	ined Leaver And 4E to (B11) Invertebrate Sulfide Or Rhizosphe	es (B13) dor (C1) res along	Living Roo		Water-Stained Leaver 4A, and 4B) □ Drainage Patterns (□ Dry-Season Water □ Saturation Visible o □ Geomorphic Position	res (B9) (MLRA 1, 2, B10) Table (C2) In Aerial Imagery (C9) In (D2)
Surface V High Wat Saturation Water Ma Sediment Drift Depo	Water (A1) ter Table (A2) on (A3) arks (B1) it Deposits (B2) oosits (B3) t or Crust (B4)	one requ	ired; che	Water-Sta 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence	Ained Leaver Ained	s (B13) dor (C1) res along	Living Roo 4)	ts (C3)	Water-Stained Leav 4A, and 4B) □ Drainage Patterns (□ Dry-Season Water □ Saturation Visible o □ Geomorphic Positio □ Shallow Aquitard (D	res (B9) (MLRA 1, 2, B10) Table (C2) In Aerial Imagery (C9) In (D2)
Surface V High Wat Saturation Water Ma Sediment Drift Depo	Water (A1) ter Table (A2) on (A3) arks (B1) it Deposits (B2) oosits (B3) t or Crust (B4) oosits (B5)	<u>one requ</u>	nired; che	Water-Sta 1, 2, 4 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ire	Ained Leaver Ained Leaver Ained Leaver Aine Aine Aine Aine Aine Aine Aine Aine	s (B13) dor (C1) res along ed Iron (Co on in Tille	Living Roo 4) d Soils (C6	ts (C3)	Water-Stained Leav 4A, and 4B) Drainage Patterns (Dry-Season Water Saturation Visible o Geomorphic Positio Shallow Aquitard (FAC-Neutral Test (res (B9) (MLRA 1, 2, B10) Table (C2) In Aerial Imagery (C9) In (D2) (3)
Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S	Water (A1) ter Table (A2) on (A3) arks (B1) it Deposits (B2) oosits (B3) t or Crust (B4)			Water-Sta 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ire Stunted o	ined Leav IA, and 4E t (B11) overtebrate of Sulfide Or Rhizosphe of Reduce on Reducti r Stressed	es (B13) dor (C1) res along ed Iron (Coon in Tille Plants (D	Living Roo 4)	ts (C3)	Water-Stained Leav 4A, and 4B) Drainage Patterns (Dry-Season Water Saturation Visible o Geomorphic Positio Shallow Aquitard (D FAC-Neutral Test (I	res (B9) (MLRA 1, 2, B10) Fable (C2) In Aerial Imagery (C9) In (D2) (3) (D5) (D6) (LRR A)
Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio	Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) oosits (B3) t or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial	Imagery	(B7)	Water-Sta 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ire Stunted o	Ained Leaver Ained Leaver Ained Leaver Aine Aine Aine Aine Aine Aine Aine Aine	es (B13) dor (C1) res along ed Iron (Coon in Tille Plants (D	Living Roo 4) d Soils (C6	ts (C3)	Water-Stained Leav 4A, and 4B) □ Drainage Patterns (□ Dry-Season Water □ Saturation Visible o □ Geomorphic Positio □ Shallow Aquitard (□ □ FAC-Neutral Test (□ □ Raised Ant Mounds	res (B9) (MLRA 1, 2, B10) Fable (C2) In Aerial Imagery (C9) In (D2) (3) (D5) (D6) (LRR A)
Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio	Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) oosits (B3) of or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav	Imagery	(B7)	Water-Sta 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ire Stunted o	ined Leav IA, and 4E t (B11) overtebrate of Sulfide Or Rhizosphe of Reduce on Reducti r Stressed	es (B13) dor (C1) res along ed Iron (Coon in Tille Plants (D	Living Roo 4) d Soils (C6	ts (C3)	Water-Stained Leav 4A, and 4B) □ Drainage Patterns (□ Dry-Season Water □ Saturation Visible o □ Geomorphic Positio □ Shallow Aquitard (□ □ FAC-Neutral Test (□ □ Raised Ant Mounds	res (B9) (MLRA 1, 2, B10) Fable (C2) In Aerial Imagery (C9) In (D2) (3) (D5) (D6) (LRR A)
Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely	Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial vegetated Concav vations:	Imagery e Surface	(B7)	Water-Sta 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ire Stunted o	ained Leav IA, and 4E t (B11) overtebrate Sulfide Or Rhizosphe of Reduce on Reducti r Stressed plain in Re	es (B13) dor (C1) res along ed Iron (Co on in Tille Plants (Demarks)	Living Roo 4) d Soils (C6	ts (C3)	Water-Stained Leav 4A, and 4B) □ Drainage Patterns (□ Dry-Season Water □ Saturation Visible o □ Geomorphic Positio □ Shallow Aquitard (□ □ FAC-Neutral Test (□ □ Raised Ant Mounds	res (B9) (MLRA 1, 2, B10) Fable (C2) In Aerial Imagery (C9) In (D2) (3) (D5) (D6) (LRR A)
Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ	Water (A1) ter Table (A2) on (A3) arks (B1) it Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present?	Imagery e Surfaco Yes □	(B7) e (B8)	Water-Sta 1, 2, 4 I, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o	ained Leav IA, and 4E t (B11) evertebrate Sulfide Or Rhizosphe of Reduce on Reducti r Stressed plain in Re	es (B13) dor (C1) res along ed Iron (C- on in Tille Plants (D- emarks)	Living Roo 4) d Soils (C6	ts (C3)	Water-Stained Leav 4A, and 4B) □ Drainage Patterns (□ Dry-Season Water □ Saturation Visible o □ Geomorphic Positio □ Shallow Aquitard (□ □ FAC-Neutral Test (□ □ Raised Ant Mounds	res (B9) (MLRA 1, 2, B10) Fable (C2) In Aerial Imagery (C9) In (D2) (3) (D5) (D6) (LRR A)
Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water	Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) oosits (B3) ot or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present?	Imagery e Surface Yes Yes	(B7) e (B8) No ⊠ No ⊠	Water-Sta 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted of Other (Ex	ained Leav IA, and 4E I (B11) Invertebrate I Sulfide Or Rehizosphe of Reduce on Reducti or Stressed plain in Re es): es):	es (B13) dor (C1) res along ed Iron (C- on in Tille Plants (D- emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	ts (C3)	Water-Stained Leav 4A, and 4B) □ Drainage Patterns (□ Dry-Season Water □ Saturation Visible o □ Geomorphic Positio □ Shallow Aquitard (□ □ FAC-Neutral Test (□ □ Raised Ant Mounds	res (B9) (MLRA 1, 2, B10) Table (C2) In Aerial Imagery (C9) In (D2) In (D2) In (D6) (LRR A) In (D6) (LRR A)
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Project/Site: City of Seattle Meyers Way Remainder Property	ty	City/County	y: <u>Seattle</u>		Sampling Date: 05/06/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: SP2-1
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	ownship, Range: <u>S06, T23</u>	N, R4EWM
Landform (hillslope, terrace, etc.): hillslope		Local relie	ef (concave	, convex, none): convex	Slope (%): <u>10%</u>
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable					
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	-			ormal Circumstances" pres	sent? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in	
SUMMARY OF FINDINGS – Attach site map					
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes No			ne Sampled		
Wetland Hydrology Present? Yes ⊠ No □		with	in a Wetlar	nd? Yes⊠ N	0 📙
Remarks: March and April 2011 have been unseasonably	rainy with 1	69% of nor	mal rainfall	for the two months combin	ned. This amounts to 4.42
additional inches of precipitation during March and April. 3 Area of sample plot is in area that was mined prior to 2002		_		= -	=
		.o nave bee	en reciaime	u more man to years ago	Jased off size of frees.
VEGETATION – Use scientific names of plan	ts.				
Tree Stratum (Plot size: 5m)	Absolute % Cover			Dominance Test works	
1				Number of Dominant Sp	pecies or FAC: <u>3</u> (A)
2.					
3.				Total Number of Domina Species Across All Strat	
4				,	,
Sapling/Shrub Stratum (Plot size: 3m)	0	= Total C	over	Percent of Dominant Sp That Are OBL, FACW, o	or FAC: 60 (A/B)
1. Salix sitchensis	40	<u>Y</u>	FACW	Prevalence Index work	sheet:
2. Rubus armeniacus	10	<u>Y</u>	FACU		Multiply by:
3					x 1 =
4				1	x 2 =
5					x 3 =
Herb Stratum (Plot size: 1.5m)	50	= Total C	over		x 4 = x 5 =
1. Musci spp	20	Y	NI		(A) (B)
2. Agrostis capillaris	10	<u>Y</u>	FAC		
3. Holcus lanatus	10	<u>Y</u>	FAC		= B/A =
4. Equisetum arvense	5	<u>N</u>	FAC	Hydrophytic Vegetatio	
5. <u>Tanacetum vulgare</u>				1 - Rapid Test for Hy	, , , ,
6				☑ 2 - Dominance Test☐ 3 - Prevalence Index	
7					daptations ¹ (Provide supporting
8					or on a separate sheet)
9 10				5 - Wetland Non-Vas	scular Plants ¹
11				☐ Problematic Hydroph	hytic Vegetation ¹ (Explain)
	50			¹ Indicators of hydric soil be present, unless distu	and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)				be present, unless distul	bed of problematic.
1				Hydrophytic	
2				Vegetation	
% Bare Ground in Herb Stratum 50	0	= Total C	Cover	Present? Yes	s⊠ No □
Remarks:					

Depth	Matrix				dox Featur							
(inches)	Color (moist)	%	Colc	or (moist)	%	Type ¹	Loc ²	Texture	<u>e</u> _		Remarks	
)-8	2.5Y 3/2	100						loam				
3-19+	2.5Y 5/1	90	<u>10Y</u>	R 4/4	10	C	<u>M</u>	f. s. loa	<u>m</u>			
	-											
	-											
							<u> </u>					
	-											
Type: C=Co	oncentration, D=De	epletion,	RM=Red	uced Matrix,	CS=Cover	ed or Coa	ed Sand G	Frains.	² Loc	ation: PL=P	ore Lining	M=Matrix.
	Indicators: (Appl									rs for Probl		
Histosol	` '			Sandy Redox	(S5)] 2 cm	Muck (A10)		
	ipedon (A2)			Stripped Matr	. ,					Parent Mate	, ,	
Black His	, ,			_oamy Mucky	•	, ,	t MLRA 1)		•	Shallow Dar		(TF12)
_ ,	n Sulfide (A4)	(8.4.4)		_oamy Gleye		2)			Othe	r (Explain in	Remarks)	
•	l Below Dark Surfa rk Surface (A12)	ce (A11)		Depleted Mat Redox Dark S	. ,	• \		310	dicato	rs of hydropl	hytia yaqat	otion and
	ucky Mineral (S1)			Depleted Dark	•	•		III		nd hydrology		
	leyed Matrix (S4)			Redox Depres						s disturbed o		
•	Layer (if present):			10001200101	30.0.10 (1.0)	<u>'</u>			u		, p. 65.6	
	, , ,											
								Hydri	o Soil	Present?	Yes ⊠	No □
Depth (ind	ches).							HIVUII	C SUII			
	ches):							Tiyun	C 3011	Tresent:		
Remarks:	GY							Tiyun	C 3011	Tresent:		
Remarks: YDROLO Vetland Hyd		S:		eck all that ap	oply)			Tiyan				ore required)
YDROLO Vetland Hyd	GY drology Indicators cators (minimum of	S:				ves (B9) (except MLI		Secon	dary Indicate	ors (2 or m	
POROLO Vetland Hydrimary India Surface N	GY drology Indicators cators (minimum of	S:		☐ Water-St			except MLI		Secon	dary Indicate	ors (2 or m Leaves (B	ore required) 9) (MLRA 1, 2
PROLO Vetland Hydrimary India Surface V High Wa	GY drology Indicators cators (minimum of Water (A1) ter Table (A2)	S:		☐ Water-St	tained Lea		except MLI	RA	Secon	dary Indicate	ors (2 or m Leaves (B	
POROLO Vetland Hydrimary India Surface V High Wa	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3)	S:		☐ Water-St	tained Lear 4A, and 4 st (B11)	В)	except MLI	RA	Secon Wa	dary Indicate ater-Stained 4A, and 4E ainage Patte	ors (2 or m Leaves (B 3) erns (B10)	9) (MLRA 1, 2
/DROLO /etland Hydrimary India Surface \(\) High War Saturatio \(\) Water Ma	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3)	S:		☐ Water-Si 1, 2, ☐ Salt Crus	tained Lear 4A, and 4 st (B11) nvertebrat	B) es (B13)	except MLI	RA	Secon Wa	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W	ors (2 or m Leaves (B 3) erns (B10) later Table	9) (MLRA 1, 2
YDROLO Vetland Hyd Surface V High War Saturatio Water Ma	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1)	S:		Water-Si 1, 2, Salt Crus Aquatic I Hydroge	tained Lead 4A, and 4 st (B11) Invertebrat In Sulfide C	es (B13) Odor (C1)	except MLI	RA	Secon Wa Dra Dra Sa	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W	ors (2 or m Leaves (B 3) erns (B10) dater Table ble on Aer	9) (MLRA 1, 2 (C2) al Imagery (C9
YDROLO Vetland Hyd Surface V High Wa' Saturatio Water Ma Sedimen Drift Dep	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)	S:		Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized	tained Lead 4A, and 4 st (B11) Invertebrat In Sulfide C	es (B13) Odor (C1) eres along	Living Roc	RA obts (C3)	Secon Wa Dr. Dr. Sa Ge	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W turation Visi	ors (2 or m Leaves (B 3) erns (B10) later Table ble on Aer osition (D2	9) (MLRA 1, 2 (C2) al Imagery (C9
YDROLO Vetland Hydrimary Indic Surface V High War Saturatio Water Mi Sedimen Drift Dep Algal Ma	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3)	S:		Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C Rhizosphi e of Reduc	es (B13) Odor (C1) eres along red Iron (C	Living Roo 4)	RA ots (C3)	Secon Wa Dra Dra Ge Sa Ge	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W turation Visi	ors (2 or m Leaves (B 3) erns (B10) fater Table ble on Aer osition (D2 ard (D3)	9) (MLRA 1, 2 (C2) al Imagery (C9
YDROLO Vetland Hyd Surface V High Wa' Saturatio Water Mi Sedimen Drift Dep Algal Ma	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	S:		Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C Rhizosphe e of Reduction Reduction	es (B13) Odor (C1) eres along eed Iron (C	Living Roo 4)	RA ots (C3)	Secon Wa Dra Dra Ge	dary Indicate ater-Stained 4A, and 4E ainage Pattery-Season W turation Visite comorphic Pallow Aquita	ors (2 or m Leaves (B B) erns (B10) fater Table ble on Aer osition (D2 ard (D3) fest (D5)	9) (MLRA 1, 2 (C2) al Imagery (C9
YDROLO Vetland Hyd Surface V High War Saturatio Water Mar Sedimen Drift Dep Algal Ma	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	s: one req	uired; ch	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C Rhizosphe e of Reduction Reduction	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Roc 4) ed Soils (C6	RA ots (C3)	Secon Wa Dra Dra Sa Ge Sh Ra	dary Indicate ater-Stained 4A, and 4E ainage Pattery-Season W turation Visite comorphic Perallow Aquita	ors (2 or m Leaves (B 3) erns (B10) fater Table ble on Aer osition (D2 ard (D3) est (D5) aunds (D6)	9) (MLRA 1, 2 (C2) al Imagery (CS)
YDROLO Vetland Hyd Surface V High War Saturation Water Mar Sedimen Drift Dep Algal Mar Iron Dep Surface S Inundation	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	s: one req	uired; che	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C Rhizosphe of Reduct ron Reduct or Stresser	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Roc 4) ed Soils (C6	RA ots (C3)	Secon Wa Dra Dra Sa Ge Sh Ra	dary Indicate ater-Stained 4A, and 4E ainage Pattery-Season W turation Visicomorphic Peallow Aquita C-Neutral Tised Ant Mo	ors (2 or m Leaves (B 3) erns (B10) fater Table ble on Aer osition (D2 ard (D3) est (D5) aunds (D6)	9) (MLRA 1, 2 (C2) al Imagery (CS)
YDROLO Vetland Hyd Surface V High War Saturation Water Mar Sedimen Drift Dep Algal Mar Iron Dep Surface S Inundation	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concar	s: one req	uired; che	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C Rhizosphe of Reduct ron Reduct or Stresser	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Roc 4) ed Soils (C6	RA ots (C3)	Secon Wa Dra Dra Sa Ge Sh Ra	dary Indicate ater-Stained 4A, and 4E ainage Pattery-Season W turation Visicomorphic Peallow Aquita C-Neutral Tised Ant Mo	ors (2 or m Leaves (B 3) erns (B10) fater Table ble on Aer osition (D2 ard (D3) est (D5) aunds (D6)	9) (MLRA 1, 2 (C2) al Imagery (CS)
YDROLO Vetland Hydelian Surface Value Migh Water Migh Water Migh Water Migh Sedimen Drift Dep Algal Ma Iron Dep	drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concavations:	s: one req	uired; che	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted	tained Lear 4A, and 4I st (B11) Invertebrat In Sulfide C I Rhizosphi e of Reduct ron Reduct or Stresse xplain in R	es (B13) Ddor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roc 4) ed Soils (C6	RA ots (C3)	Secon Wa Dra Dra Sa Ge Sh Ra	dary Indicate ater-Stained 4A, and 4E ainage Pattery-Season W turation Visicomorphic Peallow Aquita C-Neutral Tised Ant Mo	ors (2 or m Leaves (B 3) erns (B10) fater Table ble on Aer osition (D2 ard (D3) est (D5) aunds (D6)	9) (MLRA 1, 2 (C2) al Imagery (CS)
YDROLO Vetland Hyder Surface Verimary India Saturation Water Mail Sediment Drift Dept Algal Mail Iron Dept Surface Sill Inundation Sparsely Field Observices	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concavations: er Present?	s: one req	uired; che	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stressed xplain in R	es (B13) Ddor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roc 4) ed Soils (C6	RA ots (C3)	Secon Wa Dra Dra Sa Ge Sh Ra	dary Indicate ater-Stained 4A, and 4E ainage Pattery-Season W turation Visicomorphic Peallow Aquita C-Neutral Tised Ant Mo	ors (2 or m Leaves (B 3) erns (B10) fater Table ble on Aer osition (D2 ard (D3) est (D5) aunds (D6)	9) (MLRA 1, 2 (C2) al Imagery (CS)
YDROLO Vetland Hyd Surface V High Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatic	drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present?	Imagery	uired; che / (B7) ce (B8)	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E	tained Lear 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosphi e of Reduct fron Reduct for Stressed explain in R des): ees): 8	es (B13) Ddor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roo 4) d Soils (C6 01) (LRR A	RA (C3)	Secon Wa Dra Dra Sa Ge Sh Ra Fro	dary Indicate ater-Stained 4A, and 4E ainage Pattery-Season W turation Visicomorphic Peallow Aquita C-Neutral Tised Ant Mo	ors (2 or m Leaves (B 3) erns (B10) fater Table ble on Aer osition (D2 ard (D3) est (D5) ounds (D6) ummocks	9) (MLRA 1, 2 (C2) al Imagery (CS)
YDROLO Vetland Hyder Surface Value Saturation Grimary India Grimary India Grimary India Grimary India Grimary India Grift Dep Grift De	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concar vations: er Present? Present? resent? present?	Imagery ve Surface Yes Yes Yes Yes Yes Yes	uired; che (B7) ce (B8) No No No No No No No No No No	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stressed xplain in R es):	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roo 4) ed Soils (C6 01) (LRR A	RA ots (C3) i) land Hyd	Secon Wa Dra Dra Sa Ge Sh FA Fro	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W turation Visi comorphic Pe allow Aquita C-Neutral T ised Ant Mo ost-Heave H	ors (2 or m Leaves (B 3) erns (B10) fater Table ble on Aer osition (D2 ard (D3) est (D5) ounds (D6) ummocks	9) (MLRA 1, 2 (C2) al Imagery (C9) (LRR A) (D7)
YDROLO Vetland Hyder Surface Value Saturation Grimary India Grimary India Grimary India Grimary India Grimary India Grift Dep Grift De	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concar vations: er Present? Present?	Imagery ve Surface Yes Yes Yes Yes Yes Yes	uired; che (B7) ce (B8) No No No No No No No No No No	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stressed xplain in R es):	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roo 4) ed Soils (C6 01) (LRR A	RA ots (C3) i) land Hyd	Secon Wa Dra Dra Sa Ge Sh FA Fro	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W turation Visi comorphic Pe allow Aquita C-Neutral T ised Ant Mo ost-Heave H	ors (2 or m Leaves (B 3) erns (B10) fater Table ble on Aer osition (D2 ard (D3) est (D5) ounds (D6) ummocks	9) (MLRA 1, 2 (C2) al Imagery (C9) (LRR A) (D7)
YDROLO Vetland Hyder Surface Value Saturation Grimary India Grimary India Grimary India Grimary India Grimary India Grift Dep Grift De	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concar vations: er Present? Present? resent? present?	Imagery ve Surface Yes Yes Yes Yes Yes Yes	uired; che (B7) ce (B8) No No No No No No No No No No	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stressed xplain in R es):	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roo 4) ed Soils (C6 01) (LRR A	RA ots (C3) i) land Hyd	Secon Wa Dra Dra Sa Ge Sh FA Fro	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W turation Visi comorphic Pe allow Aquita C-Neutral T ised Ant Mo ost-Heave H	ors (2 or m Leaves (B 3) erns (B10) fater Table ble on Aer osition (D2 ard (D3) est (D5) ounds (D6) ummocks	9) (MLRA 1, 2 (C2) al Imagery (C9) (LRR A) (D7)
YDROLO Vetland Hyd Primary India Surface V High Water Ma Sedimen Drift Dep Algal Ma Iron Dep Surface S Inundatic Sparsely Field Obser Surface Water Table Saturation Princludes cap Describe Rec	GY drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concar vations: er Present? Present? resent? present?	Imagery ve Surface Yes Yes Yes Yes Yes Yes	uired; che (B7) ce (B8) No No No No No No No No No No	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stressed xplain in R es):	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roo 4) ed Soils (C6 01) (LRR A	RA ots (C3) i) land Hyd	Secon Wa Dra Dra Sa Ge Sh FA Fro	dary Indicate ater-Stained 4A, and 4E ainage Patte y-Season W turation Visi comorphic Pe allow Aquita C-Neutral T ised Ant Mo ost-Heave H	ors (2 or m Leaves (B 3) erns (B10) fater Table ble on Aer osition (D2 ard (D3) est (D5) ounds (D6) ummocks	9) (MLRA 1, 2 (C2) al Imagery (C9) (LRR A) (D7)

Project/Site: City of Seattle Meyers Way Remainder Property	<u>y</u> (City/County	/: <u>Seattle</u>		Sampling Date: 05/06/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: SP2-2
Investigator(s): E. Pritchard, J. Merriman, C. Wright					
Landform (hillslope, terrace, etc.): hillslope					
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable					
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	•		•	ormal Circumstances" pres	ent? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in	
SUMMARY OF FINDINGS – Attach site map s			•		,
Hydrophytic Vegetation Present? Yes ☐ No ☒					
Hydric Soil Present? Yes ☐ No ☒			e Sampled		N-7
Wetland Hydrology Present? Yes ☐ No ☒		with	in a Wetlar	nd? Yes □ No	
Remarks: March and April 2011 have been unseasonably	ainy with 16	69% of nor	mal rainfall	for the two months combin	ed. This amounts to 4.42
additional inches of precipitation during March and April. S Area of sample plot is in area that was mined prior to 2002		_		= -	=
		o nave bee	en recialine	u more man 10 years ago t	
VEGETATION – Use scientific names of plant	s.				
Tree Stratum (Plot size: 5m)	Absolute			Dominance Test works	
1. Alnus rubra	% Cover			Number of Dominant Sp	ecies r FAC: <u>1</u> (A)
2					
3				Total Number of Domina Species Across All Strata	
4				,	
Sapling/Shrub Stratum (Plot size: 3m)		= Total C		Percent of Dominant Spe That Are OBL, FACW, or	ecies r FAC: <u>33</u> (A/B)
1. Rubus armeniacus	60	Υ	FACU	Prevalence Index work	sheet:
2				Total % Cover of:	Multiply by:
3					x 1 =
4				FACW species 0	x 2 =
5				FAC species 20	x 3 = <u>60</u>
		= Total C		FACU species 70	x 4 = <u>280</u>
Herb Stratum (Plot size: 1.5m)				UPL species 5	x 5 = <u>25</u>
1. <u>Tanacetum vulgare</u>	30			Column Totals: 95	(A) <u>365</u> (B)
Epilobium angustifolium Cirsium vulgare			FACU	Prevalence Index	= B/Δ = 3.8
Cirsium vulgare Geranium carolinianum			FACU UPL	Hydrophytic Vegetation	<u> </u>
5				☐ 1 - Rapid Test for Hy	
6.				2 - Dominance Test	
7				☐ 3 - Prevalence Index	is $\leq 3.0^{1}$
8				4 - Morphological Ad	aptations ¹ (Provide supporting
9.					or on a separate sheet)
10				5 - Wetland Non-Vas	
11				1	nytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 3m)		= Total C		be present, unless distur	and wetland hydrology must bed or problematic.
1					
2				Hydrophytic Vegetation	
		= Total C			□ No ⊠
% Bare Ground in Herb Stratum <u>55</u>	_ _				
Remarks:					

Profile Des	cription: (Descri	be to the o	depth no	eded to docun	nent the i	ndicator	or confirm	n the absence of indicators.)
Depth	Matrix		<u> </u>	Redo	x Feature			
(inches)	Color (moist)	%	Colo	or (moist)	<u>%</u>	Type ¹	Loc ²	Texture Remarks
0-4	2.5Y 3/2	100			- · <u> </u>			sandy loam
4-16	2.5Y 5/3	100						loamy sand
16-20+	2.5Y 5/1	95	<u>10Y</u>	R 4/4	5	С	M	f.s. loam
			_		-		-	
	-				-			
								
	-				-			
		<u> </u>						
	oncentration, D=D Indicators: (App			•			ed Sand Gr	rains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
-		ilicable to				eu.)		-
☐ Histosol	(A1) pipedon (A2)			Sandy Redox (S Stripped Matrix (☐ 2 cm Muck (A10) ☐ Red Parent Material (TF2)
☐ Black Hi				Loamy Mucky M	. ,) (excen	t MI RA 1)	☐ Very Shallow Dark Surface (TF12)
	n Sulfide (A4)			Loamy Gleyed N			t in Live i j	Other (Explain in Remarks)
	d Below Dark Surfa	ace (A11)		Depleted Matrix		,		
☐ Thick Da	ark Surface (A12)	, ,		Redox Dark Sur	face (F6)			³ Indicators of hydrophytic vegetation and
☐ Sandy M	lucky Mineral (S1))		Depleted Dark S	Surface (F	7)		wetland hydrology must be present,
	Bleyed Matrix (S4)			Redox Depressi	ons (F8)			unless disturbed or problematic.
Restrictive	Layer (if present)):						
· · · ·			_					
Depth (in	ches):		_					Hydric Soil Present? Yes ☐ No ☒
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicato	rs:						
Primary Indi	cators (minimum o	of one requ	ıired; ch	eck all that apply	y)			Secondary Indicators (2 or more required)
☐ Surface	Water (A1)			☐ Water-Stair	ned Leave	es (B9) (e	except MLR	RA Water-Stained Leaves (B9) (MLRA 1, 2,
☐ High Wa	iter Table (A2)			1, 2, 4A	A, and 4B)		4A, and 4B)
☐ Saturation	on (A3)			☐ Salt Crust ((B11)			☐ Drainage Patterns (B10)
☐ Water M	arks (B1)			☐ Aquatic Inv	ertebrates	s (B13)		□ Dry-Season Water Table (C2)
☐ Sedimer	nt Deposits (B2)			☐ Hydrogen S	Sulfide Oc	lor (C1)		☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Dep	oosits (B3)			☐ Oxidized R	hizospher	es along	Living Roo	ots (C3) Geomorphic Position (D2)
☐ Algal Ma	at or Crust (B4)			☐ Presence of	of Reduce	d Iron (C	4)	☐ Shallow Aquitard (D3)
☐ Iron Dep	osits (B5)			☐ Recent Iron	n Reductio	on in Tille	ed Soils (C6	FAC-Neutral Test (D5)
☐ Surface	Soil Cracks (B6)			☐ Stunted or	Stressed	Plants (D	01) (LRR A)	Raised Ant Mounds (D6) (LRR A)
☐ Inundati	on Visible on Aeria	al Imagery	(B7)	☐ Other (Exp	lain in Re	marks)		☐ Frost-Heave Hummocks (D7)
☐ Sparsely	Vegetated Conca	ave Surfac	e (B8)					
Field Obser	vations:							
Surface Wat	ter Present?	Yes 🗌	No 🛛	Depth (inches	s):			
Water Table	Present?	Yes 🗌	No 🛛	Depth (inches	s):			
Saturation F		Yes 🗌	No 🛛	Depth (inches	s):		Wetl	and Hydrology Present? Yes ☐ No ⊠
	pillary fringe) corded Data (stre	am gauge,	monito	ing well, aerial r	ohotos, pr	evious in	spections),	if available:
	,				•		, ,,	
Remarks:								

Project/Site: City of Seattle Meyers Way Remainder Property	<u>y</u> (City/County	/: <u>Seattle</u>		Sampling Date: 05/06/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: SP2-3
Investigator(s): E. Pritchard, J. Merriman, C. Wright					
Landform (hillslope, terrace, etc.): hillslope		Local relie	ef (concave,	convex, none): convex	Slope (%): <u>2%</u>
Subregion (LRR): Northwest Forests and Coasts (LRR A)	_ Lat: 47.30).52		Long: <u>122.20.09</u>	Datum: unknown
Soil Map Unit Name: NRCS Soil Unit is Unavailable				-	
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	•		,	ormal Circumstances" pres	ent? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology natur			(If neede	ed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS – Attach site map s					
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes ⊠ No □			e Sampled		. —
Wetland Hydrology Present? Yes ⊠ No □		with	in a Wetlar	nd? Yes ⊠ No	, 🗆
Remarks: March and April 2011 have been unseasonably in	rainy with 16	69% of nor	mal rainfall	for the two months combin	ed. This amounts to 4.42
additional inches of precipitation during March and April. S Area of sample plot is in area that was mined prior to 2002		•			-
		o nave bee	an recialine	Thore than To years ago t	
VEGETATION – Use scientific names of plant	s.				
Tree Stratum (Plot size: 5m)	Absolute % Cover			Dominance Test works	
				Number of Dominant Spe That Are OBL. FACW. or	ecies r FAC: <u>4</u> (A)
	10				
3				Total Number of Domina Species Across All Strata	
4				·	
Sapling/Shrub Stratum (Plot size: 3m)	90	= Total C	over	Percent of Dominant Spe That Are OBL, FACW, or	r FAC: 100 (A/B)
1				Prevalence Index works	sheet:
2				Total % Cover of:	Multiply by:
3				OBL species	x 1 =
4				FACW species	x 2 =
5					x 3 =
Harb Stratum (Diet eine 1 Em)	0	= Total C	over		x 4 =
Herb Stratum (Plot size: 1.5m) 1. Equisetum arvense	10	v	FAC		x 5 =
Equisetum arvense Phalaris arundinacea	10		FACW	Column Totals:	(A) (B)
Ranunculus repens				Prevalence Index :	= B/A =
4				Hydrophytic Vegetation	
5.				☐ 1 - Rapid Test for Hy	drophytic Vegetation
6				2 - Dominance Test i	s >50%
7				3 - Prevalence Index	is $\leq 3.0^{1}$
8					aptations ¹ (Provide supporting or on a separate sheet)
9				☐ 5 - Wetland Non-Vas	cular Plants ¹
10				☐ Problematic Hydroph	nytic Vegetation ¹ (Explain)
11		= Total C			and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	20	- Total O	OVCI	be present, unless distur	bed or problematic.
1				Hydrophytic	
2				Vegetation	
9/ Para Ground in Horb Stratum 75	0	= Total C	over	Present? Yes	No □
% Bare Ground in Herb Stratum <u>75</u> Remarks:					

Depth	Matrix				dox Featur							
(inches)	Color (moist)	%	Colc	or (moist)	%	Type ¹	Loc ²	_Texture	<u> </u>		Remarks	
0-6	10YR 2/1	100						loam				
6-12+	10YR 4/2	90	<u>10Y</u>	R 4/4	10	C	<u>M</u>	gr. s. lo	am_			
	-											
_												
Type: C=Co	oncentration, D=D	epletion,	RM=Red	uced Matrix,	CS=Cover	ed or Coat	ed Sand G	Grains.	² Loca	ation: PL=F	ore Lining	M=Matrix.
lydric Soil I	Indicators: (Appl	icable to	all LRR	s, unless oth	nerwise no	ted.)		Ind	dicator	s for Probl	ematic Hy	dric Soils³:
] Histosol (` '			Sandy Redox						Muck (A10)		
	ipedon (A2)			Stripped Matri	. ,					Parent Mate		
Black His	, ,			_oamy Mucky	,		t MLRA 1)		-	Shallow Da		(TF12)
_ ,	n Sulfide (A4) Below Dark Surfa	(411)		_oamy Gleyed Depleted Mati	•	2)		Ш	Other	(Explain in	Remarks)	
•	rk Surface (A12)	ice (ATT)		Redox Dark S	. ,)		³ ln	dicator	s of hydrop	hytic veget	ation and
	ucky Mineral (S1)			Depleted Dark	•	•				d hydrology		
-	leyed Matrix (S4)			Redox Depres						disturbed		
estrictive L	_ayer (if present):											
Туре:												
Donth (inc								I Is calast		Procent?	Yes 🛛	No □
emarks:	ches):							Hydrid	c Soil I	-resent?		
Remarks:								Hydrid	c Soil I	rieseitt?	160 23	
YDROLO Vetland Hyd	GY	s:		eck all that ap	oply)							ore required)
YDROLO Vetland Hyd	GY drology Indicator cators (minimum o	s:		eck all that ap □ Water-St		ves (B9) (є	except MLI		Secon	dary Indicat	ors (2 or m	
PROLO Vetland Hydrimary Indic Surface \	GY drology Indicator cators (minimum o	s:		☐ Water-St			except MLI		Secon	dary Indicat	ors (2 or m	ore required)
PROLO Petland Hydrimary Indic Surface \ High Wat Saturatio	GY drology Indicator cators (minimum o Water (A1) ter Table (A2) in (A3)	s:		☐ Water-St 1, 2, ☐ Salt Crus	tained Lear 4A, and 4 st (B11)	В)	except MLI	RA	Secon	dary Indicat Iter-Stained 4A, and 4I Inage Patte	ors (2 or m I Leaves (B B) erns (B10)	ore required) 9) (MLRA 1, 2
PROLO Petland Hydrimary Indic Surface \ High Wat Saturatio	GY drology Indicator cators (minimum o Water (A1) ter Table (A2) in (A3)	s:		☐ Water-St	tained Lear 4A, and 4 st (B11)	В)	except MLI	RA	Secon	dary Indicat tter-Stained 4A, and 4I	ors (2 or m I Leaves (B B) erns (B10)	ore required) 9) (MLRA 1, 2
/DROLO /etland Hydrimary Indic // Surface \ // High Wat // Saturatio // Water Ma // Sedimen	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2)	s:		☐ Water-St 1, 2, ☐ Salt Crus ☐ Aquatic I ☐ Hydroge	tained Lead 4A, and 4 st (B11) Invertebrat n Sulfide C	es (B13) Odor (C1)		RA	Second Waa Dra Dry	dary Indicat Iter-Stained 4A, and 4I ainage Patte /-Season W turation Visi	ors (2 or m I Leaves (B B) erns (B10) /ater Table ible on Aer	ore required) 9) (MLRA 1, 2, (C2) al Imagery (C9
YDROLO Vetland Hyd Trimary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3)	s:		Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized	tained Lear 4A, and 4 st (B11) nvertebrat n Sulfide C	es (B13) Odor (C1) eres along	Living Roo	RA	Second Waa Dra Dry	dary Indicat ter-Stained 4A, and 4I ainage Patte <i>r-</i> Season W	ors (2 or m I Leaves (B B) erns (B10) /ater Table ible on Aer	ore required) 9) (MLRA 1, 2, (C2) al Imagery (C9
YDROLO Vetland Hyd Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	s:		Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence	tained Lear 4A, and 4leat (B11) nvertebrat n Sulfide Collection Rhizosphile of Reduce	es (B13) Odor (C1) eres along ed Iron (C	Living Roo 4)	RA ots (C3)	Second Water Dray Dray Saa Gee	dary Indicat ter-Stained 4A, and 4I ainage Patte r-Season W turation Visi omorphic P allow Aquita	ors (2 or m Leaves (B B) erns (B10) /ater Table ible on Aer osition (D2 ard (D3)	ore required) 9) (MLRA 1, 2, (C2) al Imagery (C9
YDROLO Vetland Hyd Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	s:		Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C Rhizosphe of Reduct ron Reduct	es (B13) Odor (C1) eres along ed Iron (C	Living Roo 4) ed Soils (C6	RA outs (C3)	Second Wa Dra Dry Sa Ge Sha	dary Indicat ter-Stained 4A, and 4I ainage Patte v-Season W turation Visi omorphic P allow Aquita C-Neutral T	ors (2 or m Leaves (B B) erns (B10) /ater Table ible on Aer rosition (D2 ard (D3) Fest (D5)	ore required) 9) (MLRA 1, 2 , (C2) al Imagery (C9)
YDROLO Vetland Hyo Vetland Hyo Surface N Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	s: f one req	uired; ch	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent II	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C Rhizosphe of Reduct ron Reduct or Stresser	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Roo 4)	RA outs (C3)	Seconi Wa Dra Dry Sa Ge Sh: FA	dary Indicat tter-Stained 4A, and 4I ainage Patte r-Season W turation Visi omorphic P allow Aquita C-Neutral T ised Ant Mo	ors (2 or m Leaves (B B) erns (B10) /ater Table ible on Aer losition (D2 ard (D3) est (D5) ounds (D6)	ore required) 9) (MLRA 1, 2, (C2) al Imagery (C9)
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YDROLO Vetland Hyd Vetland Hyd Surface \ Sufface \ Saturatio Water Ma Sedimen Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Vater Table Saturation Princludes cap	drology Indicator cators (minimum or water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Concavations: er Present? Present?	s: f one req I Imagery ve Surfac Yes Yes Yes Yes Yes Yes Yes Yes	uired; che (B7) ce (B8) No No No No No No No No No No	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent II Stunted (Other (E.	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stressed xplain in R es): 2 es): 0	es (B13) Ddor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roo 4) ed Soils (C6 01) (LRR A	RA ots (C3) 6)	Seconi Wa Dra Dry Sa' Ge Sh. FA	dary Indicat tter-Stained 4A, and 4I inage Patte r-Season W turation Visi omorphic P allow Aquita C-Neutral T ised Ant Mo ist-Heave H	ors (2 or m I Leaves (B B) erns (B10) /ater Table fible on Aer rosition (D2 ard (D3) rest (D5) punds (D6) dummocks	ore required) 9) (MLRA 1, 2) (C2) al Imagery (C9)) (LRR A) (D7)
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YDROLO Wetland Hyd Primary Indic Surface N High Water Ma Sediment Drift Dep Algal Mat Iron Depo Surface S Inundation Sparsely Field Observ Surface Water Table Saturation Pr (includes cap	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca vations: er Present? Present? resent? present?	s: I Imagery ve Surface Yes Yes Yes Yes Imagery	uired; che (B7) ce (B8) No No No No e, monitor	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent II Stunted of Other (E.	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C I Rhizosphe e of Reduct ron Reduct or Stressee xplain in R es): 2 es): 0 es): 0 al photos, p	es (B13) Dodor (C1) eres along ed Iron (C tion in Tille d Plants (D emarks)	Living Roo 4) ed Soils (C6 01) (LRR A	RA ots (C3) ots (C3)	Second Well Dra Dry Sal Ge Shal FA	dary Indicat tter-Stained 4A, and 4I inage Patte r-Season W turation Visi omorphic P allow Aquita C-Neutral T ised Ant Mo ist-Heave H	ors (2 or m I Leaves (B B) erns (B10) /ater Table fible on Aer rosition (D2 ard (D3) rest (D5) punds (D6) dummocks	ore required) 9) (MLRA 1, 2) (C2) al Imagery (C9)) (LRR A) (D7)
/DROLO /etland Hydrimary Indic // Surface Nath Sedimen // Sedimen // Drift Dep // Algal Math Iron Depo // Surface Solon Inundatio // Sparsely ield Observer Urface Water Table // atter Table // atter Table atturation Princludes caplescribe Records	drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca vations: er Present? Present? Present? present? present? present? present? present? present? present (Streat	s: I Imagery ve Surface Yes Yes Yes Yes Imagery	uired; che (B7) ce (B8) No No No No e, monitor	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent II Stunted of Other (E.	tained Lear 4A, and 4I st (B11) nvertebrat n Sulfide C I Rhizosphe e of Reduct ron Reduct or Stressee xplain in R es): 2 es): 0 es): 0 al photos, p	es (B13) Ddor (C1) eres along ed Iron (C tion in Tille d Plants (D emarks)	Living Roo 4) ed Soils (C6 01) (LRR A	RA ots (C3) ots (C3)	Second Well Dra Dry Sal Ge Shal FA	dary Indicat tter-Stained 4A, and 4I inage Patte r-Season W turation Visi omorphic P allow Aquita C-Neutral T ised Ant Mo ist-Heave H	ors (2 or m I Leaves (B B) erns (B10) /ater Table fible on Aer rosition (D2 ard (D3) rest (D5) punds (D6) dummocks	ore required) 9) (MLRA 1, 2) (C2) al Imagery (C9)) (LRR A) (D7)

Project/Site: City of Seattle Meyers Way Remainder Property	<u>y</u> (City/County	y: <u>Seattle</u>	_	Sampling Date: 05/06/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: SP2-4
Investigator(s): E. Pritchard, J. Merriman, C. Wright					
Landform (hillslope, terrace, etc.): hillslope					
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable				-	
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	•		,	ormal Circumstances" pres	ent? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology natur			(If neede	ed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS – Attach site map s	showing	samplin	g point l	ocations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes ☐ No ☒		la 41	- Cl-d	A	
Hydric Soil Present? Yes ⊠ No □			e Sampled		· M
Wetland Hydrology Present? Yes ☐ No ☒		With	in a Wetlar	nd? Yes □ No	
Remarks: March and April 2011 have been unseasonably in	rainy with 16	69% of nor	mal rainfall	for the two months combin	ed. This amounts to 4.42
additional inches of precipitation during March and April. S Area of sample plot is in area that was mined prior to 2002		•			•
		o nave bee	on recialities	Thore than 10 years ago t	74304 011 3120 01 11003.
VEGETATION – Use scientific names of plant					
Tree Stratum (Plot size: 5m)	Absolute <u>% Cover</u>	Dominant Species?		Dominance Test works	
1. Salix scouleriana	40			Number of Dominant Spo That Are OBL, FACW, or	ecies r FAC: <u>1</u> (A)
Pseudotsuga menziesii				Total Number of Domina	
3. Arbutus menziesii	10	N	UPL	Species Across All Strata	
4				Percent of Deminent Sec	
Sapling/Shrub Stratum (Plot size: 3m)	70	= Total C	over	Percent of Dominant Spe That Are OBL, FACW, or	r FAC: <u>20</u> (A/B)
Rubus armeniacus	50	<u>Y</u>	FACU	Prevalence Index work	sheet:
2					Multiply by:
3					x 1 =
4				The state of the s	x 2 =
5					x 3 =
Herb Stratum (Plot size: 1.5m)	50	= Total C	over		x 4 =
1. Polystichum munitum	10	Υ	FACU		x 5 = (A) (B)
Geranium robertianum				Column rotals.	(A) (B)
3				Prevalence Index	= B/A =
4.				Hydrophytic Vegetation	n Indicators:
5				☐ 1 - Rapid Test for Hy	drophytic Vegetation
6				2 - Dominance Test i	s >50%
7				3 - Prevalence Index	
8					aptations ¹ (Provide supporting or on a separate sheet)
9				5 - Wetland Non-Vas	. ,
10				☐ Problematic Hydroph	nytic Vegetation ¹ (Explain)
11					and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	20	= Total C	over	be present, unless distur	bed or problematic.
1				Hydrophytic	
2				Vegetation	
% Bare Ground in Herb Stratum 80	0	= Total C	over	Present? Yes	□ No ⊠
Remarks:				1	

Depth (inches)	Matrix	%	Colo		dox Featu		Loc ²	Toytur	_	Remark	c
(inches)	Color (moist)		Cold	or (moist)	%	Type ¹	LOC	Texture			
)-4	2.5Y 3/2	100						sandy lo	oam_		
1 -10	2.5Y 4/2	95	<u>10Y</u>	R 4/4	5	<u>C</u>	<u>M</u>	gr.s. loa	am		
10-18+	2.5Y 5/1	95	<u>10Y</u>	R 4/4	5	<u>C</u>	<u>M</u>	gr.s. loa	am_		
						· ·	- '-	_			
			_				· ———				
							· ——				
									2.		
<i>_</i> ,	oncentration, D=D Indicators: (App						ted Sand G			ation: PL=Pore Linir s for Problematic I	•
Histosol		iicabie to		Sandy Redox		oteu.)				Muck (A10)	iyuric Jons .
	oipedon (A2)			Stripped Matri				-		Parent Material (TF2)
Black His				Loamy Mucky	` '	F1) (excer	t MLRA 1)			Shallow Dark Surfac	•
	n Sulfide (A4)			Loamy Gleyed			,		-	(Explain in Remark	• •
•	d Below Dark Surfa	ace (A11)	\boxtimes 1	Depleted Matr	rix (F3)						
	ark Surface (A12)			Redox Dark S				³ ln		s of hydrophytic veg	
	lucky Mineral (S1)			Depleted Dark		. ,				d hydrology must be	•
	Bleyed Matrix (S4) Layer (if present)			Redox Depres	ssions (F	3)			uniess	disturbed or proble	matic.
Type:										_	
	choc):							Llydria	النمعم	Drocont? Voc M	
	ches):							Hydrid	c Soil I	Present? Yes ⊠	No ∐
Depth (in	ches):							Hydrid	c Soil I	Present? Yes ⊠	No 🗆
Depth (in Remarks:	ches):							Hydrid	c Soil I	Present? Yes	No 🗌
Depth (in Remarks: YDROLO Wetland Hy	ches):	rs:		eck all that ap	pply)					Present? Yes ⊠	
Depth (in Remarks: YDROLO Wetland Hy	oGY drology Indicator	rs:		eck all that ap		aves (B9) (except ML		Secon		more required)
Depth (in Remarks: YDROLO Wetland Hy Primary India Surface	oGY drology Indicator	rs:		☐ Water-St			except ML		Secon	dary Indicators (2 or	more required)
Depth (in Remarks: YDROLO Wetland Hy Primary India Surface High Wa Saturatio	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3)	rs:		☐ Water-St 1, 2,	tained Lea 4A, and 4 st (B11)	4B)	except ML	RA	Secon	dary Indicators (2 or ater-Stained Leaves 4A, and 4B) ainage Patterns (B10	more required) (B9) (MLRA 1, 2,
Depth (in Remarks: YDROLO Wetland Hy Primary India Surface High Wa	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3)	rs:		☐ Water-St	tained Lea 4A, and 4 st (B11)	4B)	except ML	RA	Secon	dary Indicators (2 or hter-Stained Leaves 4A, and 4B)	more required) (B9) (MLRA 1, 2,
Depth (in Remarks: YDROLO Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) arks (B1) at Deposits (B2)	rs:		☐ Water-St 1, 2, ☐ Salt Crus ☐ Aquatic I ☐ Hydroge	tained Lea 4A , and 4 st (B11) Invertebra In Sulfide	1B) ates (B13) Odor (C1)		RA	Secon Wa Dra Dry	dary Indicators (2 or hter-Stained Leaves 4A, and 4B) hinage Patterns (B10 h/-Season Water Tab turation Visible on A	more required) (B9) (MLRA 1, 2, 0) le (C2) erial Imagery (C9)
Depth (in Remarks: YDROLO Wetland Hy Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep	drology Indicator cators (minimum of Water (A1) ther Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3)	rs:		Water-St 1, 2, Salt Crus Aquatic I Hydrogei Oxidized	tained Lea 4A, and 4 st (B11) nvertebra n Sulfide Rhizosph	tes (B13) Odor (C1) neres along	g Living Roo	RA oots (C3)	Secon. War Dra Dra Sa Ge	dary Indicators (2 or ater-Stained Leaves 4A, and 4B) ainage Patterns (B10 y-Season Water Tab turation Visible on A omorphic Position (I	more required) (B9) (MLRA 1, 2, 0) le (C2) erial Imagery (C9)
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Project/Site: City of Seattle Meyers Way Remainder Prope	rty	City/County	y: <u>Seattle</u>		Sampling Date: 05/06/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: SP3-1
Investigator(s): E. Pritchard, J. Merriman, C. Wright					
Landform (hillslope, terrace, etc.): hillslope		_ Local relie	ef (concave	, convex, none): convex	Slope (%): <u>10%</u>
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable				=	
Are climatic / hydrologic conditions on the site typical for th					
Are Vegetation, Soil, or Hydrology sig	-			ormal Circumstances" pres	sent? Yes⊠ No □
Are Vegetation, Soil, or Hydrology nat				ed, explain any answers in	
SUMMARY OF FINDINGS – Attach site map					
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes ⊠ No □			e Sampled		- -
Wetland Hydrology Present? Yes ⊠ No □		With	in a Wetlar	nd? Yes⊠ N	0 ⊔
Remarks: March and April 2011 have been unseasonably additional inches of precipitation during March and April.	Site condition	69% of nor	mal rainfall wet as a re	for the two months combir esult with large areas of pu	ned. This amounts to 4.42 ddling water on the surface.
VEGETATION – Use scientific names of plan	Absolute	Dominant	Indicator	Dominance Test works	choot:
<u>Tree Stratum</u> (Plot size: <u>5m</u>)		Species?		Number of Dominant Sp	
1. Alnus rubra	40	<u>Y</u>	FAC		r FAC: <u>5</u> (A)
2. Thuja plicata	10	<u>Y</u>	FAC	Total Number of Domina	ant
3				Species Across All Strat	a: <u>5</u> (B)
4				Percent of Dominant Sp	ecies
Sapling/Shrub Stratum (Plot size: 3m)	50	= Total C	Cover	That Are OBL, FACW, o	r FAC: <u>100</u> (A/B)
1. Rubus spectabilis	50	<u>Y</u>	FAC	Prevalence Index work	sheet:
2					Multiply by:
3.					x 1 =
4					x 2 =
5					x 3 =
Herb Stratum (Plot size: 1.5m)	50	= Total C	over		x 4 = x 5 =
1. Athyrium filix-femina	20	<u>Y</u>	FAC		(A) (B)
2. Solanum dulcamara	<u>10</u>	<u>Y</u>	FAC	Goldmin Foldio.	(),
3					= B/A =
4				Hydrophytic Vegetatio	
5				1 - Rapid Test for Hy	. , ,
6					
7				3 - Prevalence Index	
8				data in Remarks	daptations ¹ (Provide supporting or on a separate sheet)
9				5 - Wetland Non-Vas	scular Plants ¹
10 11				☐ Problematic Hydropl	nytic Vegetation ¹ (Explain)
11.	30				and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	<u> </u>			be present, unless distu	rbed or problematic.
1		·		Hydrophytic	
2		· ——		Vegetation	
% Bare Ground in Herb Stratum 50	0	= Total C	Cover	Present? Yes	s⊠ No □
Remarks:				1	

Depth	ription: (Describ Matrix			Red	ox Feature	es								
(inches)	Color (moist)	%	Colc	or (moist)	%	4	Loc ²	Textu	<u>e</u> _		F	Remarks		
0-8	10YR 2/2	100						loam						
8-20+	10YR 4/1	90	10Y	R 4/4	10	С	M	f.s. loa	<u>m</u>					
								-						
	-	_												
	-													
	-													
	-													
¹Type: C=Co	oncentration, D=D	epletion,	RM=Red	uced Matrix, C	S=Covere	ed or Coat	ed Sand G	rains.	² Loc	cation:	PL=Po	re Linino	, M=Matrix.	
	Indicators: (Appl												ydric Soils ³	
☐ Histosol ((A1)			Sandy Redox (S5)] 2 cm	Muck	(A10)			
☐ Histic Ep	ipedon (A2)			Stripped Matrix	(S6)] Red	Paren	t Materi	al (TF2)		
☐ Black His	stic (A3)			_oamy Mucky I			t MLRA 1)] Very	Shallo	ow Dark	Surface	(TF12)	
	n Sulfide (A4)			_oamy Gleyed	•	2)] Othe	er (Exp	lain in F	Remarks	ł	
-	Below Dark Surfa	ice (A11)		Depleted Matrix	. ,			3.		٠.				
	rk Surface (A12)		·	Redox Dark Su	` '			°I,					tation and	
	ucky Mineral (S1) leyed Matrix (S4)			Depleted Dark Redox Depress	`	-7)					• • •	must be problem		
	_ayer (if present):			redux Depless	510115 (1 0)				uilles	s uisit	iibeu oi	problem	alic.	
Type:	-u, o. (p. ooo)													
								Llscale	:- 0-!!	Droce	n+2 \	∕es ⊠	No □	
	ches).													
Remarks:	ches):							_ nyar	ic Soii	riese	ent r		<u> </u>	
Remarks:	GY							Hydr	ic Soii	riese	HILF		NO []	
Remarks: HYDROLO Wetland Hyo		s:		eck all that app	oly)			Hydr						1)
Remarks: HYDROLO Wetland Hyd Primary Indic	GY drology Indicator cators (minimum o	s:		• • • • • • • • • • • • • • • • • • • •		res (B9) (e	xcept MLi		Secon	ndary I	ndicato	rs (2 or r	nore require	
Remarks: IYDROLO Wetland Hyo Primary Indic Surface \	GY drology Indicator cators (minimum o	s:		☐ Water-Sta	ined Leav	, , ,	xcept MLI		Secon	ndary I	ndicato	rs (2 or r eaves (I		
Remarks: IYDROLO Wetland Hyo Primary Indic Surface \	GY drology Indicator eators (minimum o Water (A1) ter Table (A2)	s:		☐ Water-Sta	nined Leav	, , ,	xcept MLF		Secon	ndary I ater-S	ndicator tained L	rs (2 or r eaves (I	nore require 39) (MLRA 1	
Remarks: IYDROLO Wetland Hyd Primary Indic Surface \ High Wat	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3)	s:		☐ Water-Sta	ined Leav A, and 4E (B11)	3)	xcept MLI		Secon W	ndary I dater-S 4A, a	ndicator tained L and 4B) e Patter	rs (2 or n	nore require 39) (MLRA 1	
IYDROLO Wetland Hyo Primary Indic Surface \ High Wat Saturatio Water Ma	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3)	s:		☐ Water-Sta 1, 2, 4 ☐ Salt Crust	ined Leav A, and 4E (B11) (vertebrate	B) es (B13)	xcept MLI		Secon W	ndary I 'ater-S 4A , a rainago ry-Sea	ndicato tained L and 4B) e Patter son Wa	rs (2 or r eaves (l ns (B10) ter Table	nore require 39) (MLRA 1	, 2,
IYDROLO Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma Sedimen	GY drology Indicator cators (minimum o Water (A1) ter Table (A2) in (A3) arks (B1)	s:		☐ Water-Sta 1, 2, 4 ☐ Salt Crust ☐ Aquatic In	ained Leav A, and 4E (B11) overtebrate Sulfide O	es (B13) dor (C1)		RA	Secon W	ndary I /ater-S 4 A , a rainage ry-Sea aturatio	ndicator tained L and 4B) e Patter son Wa on Visib	rs (2 or r eaves (l ns (B10) ter Table	nore require 39) (MLRA 1 e (C2) rial Imagery	, 2,
HYDROLO Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma Sedimen □ Drift Dep	GY drology Indicator cators (minimum o Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2)	s:		☐ Water-Sta 1, 2, 4 ☐ Salt Crust ☐ Aquatic In ☐ Hydrogen	ined Leav A, and 4E (B11) vertebrate Sulfide O Rhizosphe	es (B13) dor (C1) eres along	Living Roc	RA	Secon W	ndary I dater-S 4A, a rainage ry-Sea aturatio	ndicator tained L and 4B) e Patter son Wa on Visib	rs (2 or r eaves (f ns (B10) ter Table le on Ae sition (D:	nore require 39) (MLRA 1 e (C2) rial Imagery	, 2,
IYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3)	s:		Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F	A, and 4E (B11) Evertebrate Sulfide O Rhizosphe of Reduce	es (B13) dor (C1) eres along ed Iron (C4	Living Roc 4)	RA ots (C3)	Secon W	ndary I dater-S 4A, a rainago ry-Sea aturatio eomor nallow	ndicator tained L and 4B) e Patter son Wa on Visib phic Po	rs (2 or r eaves (b ns (B10) ter Table le on Ae sition (D: d (D3)	nore require 39) (MLRA 1 e (C2) rial Imagery	, 2,
Remarks: IYDROLO Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	s:		Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F	A, and 4E (B11) (Vertebrate Sulfide O Rhizosphe of Reduce	es (B13) dor (C1) eres along ed Iron (C4) ion in Tille	Living Roc 4) d Soils (C6	RA ots (C3)	Secon W Di Si G G SI Fr	ndary I dater-S 4A, a rainage ry-Sea aturatio eomor nallow AC-Ne	ndicator tained L and 4B) e Patter son Wa on Visib phic Pos Aquitan utral Te	rs (2 or r Leaves (f ns (B10) ter Table le on Ae sition (D3 d (D3) st (D5)	nore require 39) (MLRA 1 e (C2) rial Imagery	, 2,
Remarks: IYDROLO Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	s: f one req	uired; ch	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	ined Leaven, A, and 4E (B11) Invertebrate Sulfide ORhizosphe of Reduce on Reduction Stressed	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D	Living Roc 4) d Soils (C6	RA ots (C3)	Secon W Di Si G Si F/	ndary I dater-S 4A, a rainago ry-Sea aturatio eomor nallow AC-Ne aised A	ndicator tained L and 4B) e Patter son Wa on Visib phic Por Aquitan utral Te Ant Mou	rs (2 or r Leaves (f ns (B10) ter Table le on Ae sition (D3 d (D3) st (D5)	nore require 39) (MLRA 1 e (C2) rial Imagery 2)	, 2,
Remarks: IYDROLO Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma Sedimen Drift Depo Algal Mat Iron Depo Surface S Inundatio	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	s: f one requ	uired; cho	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc	ined Leaven, A, and 4E (B11) Invertebrate Sulfide ORhizosphe of Reduce on Reduction Stressed	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D	Living Roc 4) d Soils (C6	RA ots (C3)	Secon W Di Si G Si F/	ndary I dater-S 4A, a rainago ry-Sea aturatio eomor nallow AC-Ne aised A	ndicator tained L and 4B) e Patter son Wa on Visib phic Por Aquitan utral Te Ant Mou	rs (2 or r Leaves (B10) ns (B10) ter Table le on Ae sition (D3) d (D3) st (D5) nds (D6)	nore require 39) (MLRA 1 e (C2) rial Imagery 2)	, 2,
Remarks: HYDROLO Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma Sedimen Drift Depo Algal Mat Iron Depo Surface S Inundatio	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Visible on Aeria Vegetated Conca	s: f one requ	uired; cho	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc	ined Leaven, A, and 4E (B11) Invertebrate Sulfide ORhizosphe of Reduce on Reduction Stressed	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D	Living Roc 4) d Soils (C6	RA ots (C3)	Secon W Di Si G Si F/	ndary I dater-S 4A, a rainago ry-Sea aturatio eomor nallow AC-Ne aised A	ndicator tained L and 4B) e Patter son Wa on Visib phic Por Aquitan utral Te Ant Mou	rs (2 or r Leaves (B10) ns (B10) ter Table le on Ae sition (D3) d (D3) st (D5) nds (D6)	nore require 39) (MLRA 1 e (C2) rial Imagery 2)	, 2,
HYDROLO Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca	s: f one requ	uired; cho	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc	nined Leav A, and 4E (B11) evertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed plain in Re	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D	Living Roc 4) d Soils (C6	RA ots (C3)	Secon W Di Si G Si F/	ndary I dater-S 4A, a rainago ry-Sea aturatio eomor nallow AC-Ne aised A	ndicator tained L and 4B) e Patter son Wa on Visib phic Por Aquitan utral Te Ant Mou	rs (2 or r Leaves (B10) ns (B10) ter Table le on Ae sition (D3) d (D3) st (D5) nds (D6)	nore require 39) (MLRA 1 e (C2) rial Imagery 2)	, 2,
Remarks: HYDROLO Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca vations: er Present?	s: f one requ I Imagery ve Surfac	uired; che	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or	ined Leaven, A, and 4E (B11) Evertebrate Sulfide O Rhizosphe of Reduce on Reduction r Stressed plain in Re	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D	Living Roc 4) d Soils (C6	RA ots (C3)	Secon W Di Si G Si F/	ndary I dater-S 4A, a rainago ry-Sea aturatio eomor nallow AC-Ne aised A	ndicator tained L and 4B) e Patter son Wa on Visib phic Por Aquitan utral Te Ant Mou	rs (2 or r Leaves (B10) ns (B10) ter Table le on Ae sition (D3) d (D3) st (D5) nds (D6)	nore require 39) (MLRA 1 e (C2) rial Imagery 2)	, 2,
Remarks: HYDROLO Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depa Surface S Inundatio Sparsely Field Observ Surface Water Water Table Saturation Pr	drology Indicator cators (minimum or water (A1) ter Table (A2) in (A3) arks (B1) to Deposits (B2) osits (B3) to or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Concavations: er Present? Present?	s: f one requ I Imagery ve Surfac Yes ⊠	uired; che (B7) ce (B8)	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted or Other (Exp	wined Leaver. A, and 4E (B11) Evertebrate Sulfide O Rhizosphe of Reduce on Reduction r Stressed plain in Reference es): 1	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D	Living Roo 4) d Soils (C6 1) (LRR A	RA ots (C3)	Secon W Di Si G Si Fi Ri	ndary I dater-S 4A, a rainage ry-Sea aturation eomor nallow AC-Ne aised A	ndicator tained L and 4B) e Patter son Visib phic Por Aquitan utral Te Ant Mou eave Hu	rs (2 or n .eaves (f ns (B10) ter Table le on Ae sition (D: d (D3) st (D5) nds (D6) mmocks	nore require 39) (MLRA 1 e (C2) rial Imagery 2)	, 2,
Remarks: HYDROLO Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Water Table Saturation Pr (includes cap	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca vations: er Present? Present? resent?	s: f one required to the second secon	uired; cho	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized If Presence Recent Irc Stunted or Other (Exp	sined Leaven, A, and 4E (B11) Evertebrate Sulfide O Rhizosphe of Reduce on Reduct or Stressed plain in Re es): 1 es): 0 es): 0	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D4 emarks)	Living Roc 4) d Soils (C6 1) (LRR A	RA ots (C3) ii)	Secon W Di Si G Si Fr	ndary I dater-S 4A, a rainage ry-Sea aturation eomor nallow AC-Ne aised A	ndicator tained L and 4B) e Patter son Visib phic Por Aquitan utral Te Ant Mou eave Hu	rs (2 or n .eaves (f ns (B10) ter Table le on Ae sition (D: d (D3) st (D5) nds (D6) mmocks	nore require 39) (MLRA 1 e (C2) rial Imagery 2)) (LRR A) (D7)	, 2,
Remarks: HYDROLO Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Water Table Saturation Pr (includes cap	drology Indicator cators (minimum or water (A1) ter Table (A2) in (A3) arks (B1) to Deposits (B2) osits (B3) to or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Concavations: er Present? Present?	s: f one required to the second secon	uired; cho	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized If Presence Recent Irc Stunted or Other (Exp	sined Leaven, A, and 4E (B11) Evertebrate Sulfide O Rhizosphe of Reduce on Reduct or Stressed plain in Re es): 1 es): 0 es): 0	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D4 emarks)	Living Roc 4) d Soils (C6 1) (LRR A	RA ots (C3) ii)	Secon W Di Si G Si Fr	ndary I dater-S 4A, a rainage ry-Sea aturation eomor nallow AC-Ne aised A	ndicator tained L and 4B) e Patter son Visib phic Por Aquitan utral Te Ant Mou eave Hu	rs (2 or n .eaves (f ns (B10) ter Table le on Ae sition (D: d (D3) st (D5) nds (D6) mmocks	nore require 39) (MLRA 1 e (C2) rial Imagery 2)) (LRR A) (D7)	, 2,
Remarks: HYDROLO Wetland Hyd Primary Indic Surface V High Water Ma Sediment Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Water Table Saturation Pr (includes cap Describe Rec	drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca vations: er Present? Present? present? present? present? present? present? product of the track of the	s: f one required I Imagery ve Surface Yes Yes Yes Yes Imagery	uired; che (B7) ce (B8) No No No No No No No No No No	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	ined Leaven A, and 4E (B11) evertebrate Sulfide O Rhizosphe of Reduction Reduction Reduction Stressed plain in Research Plain in	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (Demarks)	Living Roo 4) d Soils (C6 1) (LRR A Wetl spections),	RA ots (C3) s) land Hyo	Secon W Di Si G Si Fr	ndary I dater-S 4A, a rainage ry-Sea aturation eomor nallow AC-Ne aised A	ndicator tained L and 4B) e Patter son Visib phic Por Aquitan utral Te Ant Mou eave Hu	rs (2 or n .eaves (f ns (B10) ter Table le on Ae sition (D: d (D3) st (D5) nds (D6) mmocks	nore require 39) (MLRA 1 e (C2) rial Imagery 2)) (LRR A) (D7)	, 2,
Remarks: HYDROLO Wetland Hyd Primary Indic Surface N High Water Ma Sediment Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Water Table Saturation Pr (includes cap Describe Rec	GY drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca vations: er Present? Present? resent?	s: f one required I Imagery ve Surface Yes Yes Yes Yes Imagery	uired; che (B7) ce (B8) No No No No No No No No No No	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	ined Leaven A, and 4E (B11) evertebrate Sulfide O Rhizosphe of Reduction Reduction Reduction Stressed plain in Research Plain in	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (Demarks)	Living Roo 4) d Soils (C6 1) (LRR A Wetl spections),	RA ots (C3) s) land Hyo	Secon W Di Si G Si Fr	ndary I dater-S 4A, a rainage ry-Sea aturation eomor nallow AC-Ne aised A	ndicator tained L and 4B) e Patter son Visib phic Por Aquitan utral Te Ant Mou eave Hu	rs (2 or n .eaves (f ns (B10) ter Table le on Ae sition (D: d (D3) st (D5) nds (D6) mmocks	nore require 39) (MLRA 1 e (C2) rial Imagery 2)) (LRR A) (D7)	, 2,
Remarks: IYDROLO Wetland Hyde Primary Indic Surface V High Water Ma Sediment Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Water Table Saturation Pr (includes cap Describe Rec	drology Indicator cators (minimum or Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca vations: er Present? Present? present? present? present? present? present? product of the track of the	s: f one required I Imagery ve Surface Yes Yes Yes Yes Imagery	uired; che (B7) ce (B8) No No No No No No No No No No	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	ined Leaven A, and 4E (B11) evertebrate Sulfide O Rhizosphe of Reduction Reduction Reduction Stressed plain in Research Plain in	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (Demarks)	Living Roo 4) d Soils (C6 1) (LRR A Wetl spections),	RA ots (C3) s) land Hyo	Secon W Di Si G Si Fr	ndary I dater-S 4A, a rainage ry-Sea aturation eomor nallow AC-Ne aised A	ndicator tained L and 4B) e Patter son Visib phic Por Aquitan utral Te Ant Mou eave Hu	rs (2 or n .eaves (f ns (B10) ter Table le on Ae sition (D: d (D3) st (D5) nds (D6) mmocks	nore require 39) (MLRA 1 e (C2) rial Imagery 2)) (LRR A) (D7)	, 2,

Project/Site: City of Seattle Meyers Way Remainder Propert	у	City/Co	ounty: <u>Seattle</u>		Sampling Date: 05/06/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: SP3-2
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	ownship, Range: <u>S5, T23N,</u>	R4EWM
Landform (hillslope, terrace, etc.): hillslope		Local	relief (concave	, convex, none): convex	Slope (%): <u>2</u>
Subregion (LRR): Northwest Forests and Coasts (LRR A)	Lat: 47.3	1.01		Long: 122.19.52	Datum: unknown
Soil Map Unit Name: NRCS Soil Unit is Unavailable				_	
Are climatic / hydrologic conditions on the site typical for this				<u> </u>	
Are Vegetation, Soil, or Hydrology sign	•		,	ormal Circumstances" prese	ent? Yes⊠ No □
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in	
SUMMARY OF FINDINGS – Attach site map					
Attach site map	Silowing	Janip	Jillig politici	ocations, transcots,	——————————————————————————————————————
Hydrophytic Vegetation Present? Yes ☐ No ☒		l l	s the Sampled	l Area	
Hydric Soil Present? Yes ☐ No ☐		١,	within a Wetlar	nd? Yes ☐ No	
Wetland Hydrology Present? Yes ☐ No ☐ Remarks: March and April 2011 have been unseasonably	rainy with 1	69% of	normal rainfall	for the two months combine	ed. This amounts to 4.42
additional inches of precipitation during March and April. S					
					_
VEGETATION – Use scientific names of plant				15	
Tree Stratum (Plot size:)	Absolute % Cover		nant Indicator ies? Status	Dominance Test works Number of Dominant Spe	
1. Thuja plicata	40	Υ	FAC	That Are OBL, FACW, or	
2. Alnus rubra	40	Υ	FAC	Total Number of Domina	nt
Acer macrophyllum	10	N	FACU	Species Across All Strata	
4				Percent of Dominant Spe	ories
Sapling/Shrub Stratum (Plot size:)	90	= Tot	al Cover	That Are OBL, FACW, or	
1. Oemlaria cerasiformis	20	Y	<u>FACU</u>	Prevalence Index works	sheet:
Sambucus racemosa	10			Total % Cover of:	Multiply by:
3. Holodiscus discolor				OBL species 0	x 1 = 0
4. Rubus parviflorus		N	FAC	FACW species 0	x 2 = <u>0</u>
5. Rubus spectabilis	5	N	<u>UPL</u>	· ·	x 3 = <u>315</u>
Harb Otrature (Distrains	45	= Tot	al Cover	FACU species 90	x 4 = <u>360</u>
Herb Stratum (Plot size:) 1. Polystichum munitum	40	V	FACU	· -	x 5 = <u>55</u>
Polysticnum munitum Urtica dioica		Υ Υ	FAC FAC	Column Totals: 206	(A) <u>730</u> (B)
3. Gallium aperine			FACU	Prevalence Index :	= B/A = <u>3.5</u>
4. Tellmia grandiflora			UPL	Hydrophytic Vegetation	Indicators:
5. Geranium robertianum			UPL	☐ 1 - Rapid Test for Hy	drophytic Vegetation
6				2 - Dominance Test i	s >50%
7				3 - Prevalence Index	
8					aptations ¹ (Provide supporting or on a separate sheet)
9				☐ 5 - Wetland Non-Vas	• .
10				_	ytic Vegetation ¹ (Explain)
11				¹ Indicators of hydric soil a	and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	71	= 100	ai Cover	be present, unless distur	ped or problematic.
1				Hydrophytic	
2				Vegetation	
% Bare Ground in Herb Stratum 30		= Tot	al Cover	Present? Yes	□ No ⊠
Remarks:					

	-	e to the o	depth ne		ment the indicator	or confirm	n the ab	sence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Colo	Redo r (moist)	ox Features	Loc ²	Textur	e	Remarks
0-6	10YR 3/2	100		i (molocy	<u> </u>				Nomano
6-14	2.5Y 6/3	100				-	sandy l		
<u>14-18+</u>	2.5Y 5/2	100					sandy l	<u>oam</u>	
	-								
					-				
¹Type: C=C	oncentration D=De	nletion F	RM=Red	luced Matrix C	S=Covered or Coat	ed Sand Gr	rains	² l or	cation: PL=Pore Lining, M=Matrix.
	Indicators: (Appli					ca Garia Gi			ors for Problematic Hydric Soils ³ :
Histosol				Sandy Redox (n Muck (A10)
☐ Histic Ep	ipedon (A2)			Stripped Matrix				Red	Parent Material (TF2)
☐ Black His	stic (A3)			Loamy Mucky N	Mineral (F1) (excep	t MLRA 1)] Very	Shallow Dark Surface (TF12)
☐ Hydroge	n Sulfide (A4)			Loamy Gleyed	Matrix (F2)] Othe	er (Explain in Remarks)
•	Below Dark Surfa	ce (A11)		Depleted Matrix	. ,				
	rk Surface (A12)			Redox Dark Su	` '		3lr		ors of hydrophytic vegetation and
-	lucky Mineral (S1)			Depleted Dark	` ,				and hydrology must be present,
	leyed Matrix (S4) Layer (if present):		ш	Redox Depress	sions (F8)			unies	s disturbed or problematic.
	ches):						Llvde	io Soil	Present? Yes ☐ No ☒
Remarks:							пуш	ic Soii	Fresent: Tes No
l									
HYDROLO	GY								
Wetland Hy	drology Indicators	S :							
Primary India	cators (minimum of	one requ	ired; ch	eck all that app	ly)			Secor	ndary Indicators (2 or more required)
☐ Surface	Water (A1)			☐ Water-Sta	ined Leaves (B9) (except MLR	RA	\square W	ater-Stained Leaves (B9) (MLRA 1, 2,
☐ High Wa	ter Table (A2)			1, 2, 4	A, and 4B)				4A, and 4B)
☐ Saturation	` '			☐ Salt Crust	` '				rainage Patterns (B10)
☐ Water M	arks (B1)			☐ Aquatic In	vertebrates (B13)			☐ Di	ry-Season Water Table (C2)
	t Deposits (B2)				Sulfide Odor (C1)				aturation Visible on Aerial Imagery (C9)
	osits (B3)				Rhizospheres along	-	ts (C3)	☐ G	eomorphic Position (D2)
	t or Crust (B4)			_	of Reduced Iron (C	,			hallow Aquitard (D3)
	osits (B5)			_	n Reduction in Tille	` '	,		AC-Neutral Test (D5)
	Soil Cracks (B6)				Stressed Plants (D	01) (LRR A))		aised Ant Mounds (D6) (LRR A)
	on Visible on Aerial			☐ Other (Exp	olain in Remarks)			∐ Fr	ost-Heave Hummocks (D7)
	Vegetated Concav	e Surfac	e (B8)						
Field Obser		·		5 " " 1					
Surface Wat		Yes □	No ⊠		s):				
Water Table		Yes 🗌	No 🛛		s):				
Saturation P	resent? pillary fringe)	Yes 🗌	No ⊠	Depth (inche	s):	Wetla	and Hyd	irolog	y Present? Yes ☐ No ⊠
		m gauge	monitor	ing well, aerial	photos, previous in	spections),	if availa	ble:	
Remarks:									

Project/Site: City of Seattle Meyers Way Remainder Prope	rty	City/Count	y: <u>Seattle</u>		Sampling Date: 05/06/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: SP4-1
Investigator(s): E. Pritchard, J. Merriman, C. Wright					
Landform (hillslope, terrace, etc.): hillslope		_ Local relie	ef (concave,	, convex, none): convex	Slope (%): <u>10%</u>
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable				-	
Are climatic / hydrologic conditions on the site typical for th					
Are Vegetation, Soil, or Hydrology sig	-			ormal Circumstances" pres	ent? Yes⊠ No□
Are Vegetation, Soil, or Hydrology nat				ed, explain any answers in	
SUMMARY OF FINDINGS – Attach site map					
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes 🗵 No 🗌			ne Sampled		
Wetland Hydrology Present? Yes ⊠ No □		with	nin a Wetlar	nd? Yes⊠ N	0 ∐
Remarks: March and April 2011 have been unseasonably additional inches of precipitation during March and April. VEGETATION – Use scientific names of plan	Site condition	69% of nor	mal rainfall / wet as a re	for the two months combir esult with large areas of pu	ned. This amounts to 4.42 ddling water on the surface.
VEGETATION – Use scientific frames of piar		Dominant	Indicator	Dominance Test works	chapt:
<u>Tree Stratum</u> (Plot size: <u>5m</u>)		Species?		Number of Dominant Sp	
1. Alnus rubra	80	<u>Y</u>	FAC		r FAC: <u>3</u> (A)
2				Total Number of Domina	ant
3				Species Across All Strat	a: <u>3</u> (B)
4				Percent of Dominant Sp	ecies
Sapling/Shrub Stratum (Plot size: 3m)	80	= Total C	Cover	That Are OBL, FACW, o	r FAC: <u>100</u> (A/B)
1. Rubus spectabilis	20	Y	FAC	Prevalence Index work	sheet:
2.				Total % Cover of:	Multiply by:
3				OBL species	x 1 =
4				*	x 2 =
5					x 3 =
Herb Stratum (Plot size: 1.5m)	20	= Total C	Cover		x 4 =
Lysichiton americanum	20	Y	OBL		x 5 =
Solanum dulcamara		N	FAC	Column Totals.	(A) (B)
3. Athyrium filix-femina	<u> </u>	N	FAC	Prevalence Index	= B/A =
4. <u>Urtica dioica</u>	10	N	FAC	Hydrophytic Vegetatio	n Indicators:
5. Nasturtium officinale	10	<u>N</u>	OBL	☐ 1 - Rapid Test for Hy	, , ,
6. Gallium aparine	5	<u>N</u>	FACU	2 - Dominance Test	
7. Equsetum arvense			FAC	3 - Prevalence Index	
8. Tolmiea menziesii					daptations ¹ (Provide supporting or on a separate sheet)
9				5 - Wetland Non-Vas	• ,
10				☐ Problematic Hydropl	nytic Vegetation ¹ (Explain)
11					and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	<u>75</u>	= Total C	over	be present, unless distu	rbed or problematic.
1.				Lhadron bardio	
2				Hydrophytic Vegetation	
N/ Page Orang dia Hart Otal 25	0	= Total C	Cover		s⊠ No □
% Bare Ground in Herb Stratum <u>25</u> Remarks:					

(inches) Color (mo				dox Featur				
(mence) Select (me	<u> %</u>	Colo	r (moist)	%	Type ¹	Loc ²	Texture	e Remarks
0-10 <u>10YR 2/1</u>	100						loam	
10-20+ 10YR 4/1	90	<u>10YF</u>	R 4/4	10	С	<u>M</u>	sandy lo	oam_
							-	
							-	
		_						
Type: C=Concentratio	n, D=Depletion,	RM=Red	uced Matrix,	CS=Covere	ed or Coat	ed Sand G	rains.	² Location: PL=Pore Lining, M=Matrix
lydric Soil Indicators:								dicators for Problematic Hydric Soils
Histosol (A1)			Sandy Redox	(S5)				2 cm Muck (A10)
Histic Epipedon (A2	2)		Stripped Matr	. ,				Red Parent Material (TF2)
Black Histic (A3)			oamy Mucky	,		t MLRA 1)		Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A	,		oamy Gleye	•	2)		Ц	Other (Explain in Remarks)
☐ Depleted Below Dar☐ Thick Dark Surface			Depleted Mat Redox Dark S	. ,	`		3 _{ln}	dicators of hydrophytic vegetation and
☐ Sandy Mucky Miner	• •		Depleted Dark	•	•		111	wetland hydrology must be present,
☐ Sandy Gleyed Matri			Redox Depres	•				unless disturbed or problematic.
estrictive Layer (if pr								
Туре:								
Depth (inches):							Hvdri	c Soil Present? Yes ⊠ No □
Remarks:								
	dicators:							
Vetland Hydrology In		uired: che	eck all that ap	(vlag				Secondary Indicators (2 or more require
Vetland Hydrology Inc Primary Indicators (mini	imum of one req	uired; che			ves (B9) (e	except MLF		Secondary Indicators (2 or more require
Vetland Hydrology Indirimary Indicators (mini	imum of one req	uired; che	☐ Water-St	tained Leav		except MLF		Secondary Indicators (2 or more require Water-Stained Leaves (B9) (MLRA 4A, and 4B)
Vetland Hydrology Incrimary Indicators (minion Surface Water (A1) High Water Table (A	imum of one req	uired; che	☐ Water-St	tained Leav		except MLF	RA	☐ Water-Stained Leaves (B9) (MLRA
Vetland Hydrology Indicators (minicators (imum of one req	uired; che	☐ Water-St	tained Leaver tained Leaver tained Leaver tail tail tail tail tail tail tail tail	3)	except MLF	RA	Water-Stained Leaves (B9) (MLRA 4A, and 4B)□ Drainage Patterns (B10)
Vetland Hydrology Incrimary Indicators (mini Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1)	imum of one req	uired; che	☐ Water-Si 1, 2, ☐ Salt Crus ☐ Aquatic I	tained Leaver 4A, and 4B at (B11) at (B11) and the contraction of the	B) es (B13)	except MLF	RA	☐ Water-Stained Leaves (B9) (MLRA 4A, and 4B)
Primary Indicators (minimary Indicators (minimary Indicators (Minimary Indicators (Minimary Indicators (Mater Table (Minimary Indicators (Minimary Indicator	imum of one req	uired; che	☐ Water-Si 1, 2, ☐ Salt Crus ☐ Aquatic I ☐ Hydroge	tained Leaver 4A, and 4I st (B11) nvertebrate n Sulfide C	es (B13) Odor (C1)	except MLF	AS	 Water-Stained Leaves (B9) (MLRA 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2)
Primary Indicators (minimary I	imum of one req A2) (B2)		☐ Water-Si 1, 2, ☐ Salt Crus ☐ Aquatic I ☐ Hydroge	tained Leaver 4A, and 4B st (B11) nvertebrate n Sulfide Collected Rhizospher	es (B13) odor (C1) eres along	Living Roo	RA ots (C3)	Water-Stained Leaves (B9) (MLRA
Primary Indicators (minimary I	imum of one req A2) (B2)		Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized	tained Leav 4A, and 4B st (B11) nvertebrate n Sulfide C Rhizosphe e of Reduce	es (B13) odor (C1) eres along ed Iron (C	Living Roo 4)	ets (C3)	Water-Stained Leaves (B9) (MLRA
Primary Indicators (minimary I	imum of one requal (A2) (B2) (B4)		Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I	tained Leaver 4A, and 4I 4A, and	es (B13) odor (C1) eres along ed Iron (C	Living Roo 4)	RA ots (C3)	Water-Stained Leaves (B9) (MLRA
Primary Indicators (minimary Indicators (minimary Indicators (minimary Indicators (minimary Indicators (minimary Indicators (Maximary	imum of one req (A2) (B2) (B4) (B6)		Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted	tained Leaver 4A, and 4I 4A, and	es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Roo 4) ed Soils (C6	RA ots (C3)	Water-Stained Leaves (B9) (MLRA
Vetland Hydrology Incoming Indicators (minimary Indicators (minimary Indicators (minimary Indicators (minimary Indicators (minimary Indicators (Maximary Ind	imum of one req (A2) (B2) (B4) (B6) In Aerial Imagery	y (B7)	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted	tained Leaver tained Leaver tained Leaver tained 4 to 19 to	es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Roo 4) ed Soils (C6	RA ots (C3)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (I) Iron Deposits (B5) Surface Soil Cracks Inundation Visible o	imum of one req (A2) (B2) (B4) (B6) In Aerial Imagery	y (B7)	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted	tained Leaver tained Leaver tained Leaver tained 4 to 19 to	es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Roo 4) ed Soils (C6	RA ots (C3)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimary I	(B2) (B4) (B6) In Aerial Imagery Concave Surfa	y (B7)	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted	tained Leaver AA, and 4B, and 4B, and 4B, and 4B, and 4B, and 4B, and	es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Roo 4) ed Soils (C6	RA ots (C3)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimary I	imum of one reg (B2) (B4) (B6) In Aerial Imagery Concave Surfa	y (B7) ce (B8)	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E	tained Leaver 4A, and 4I st (B11) invertebrate in Sulfide Color Reduction Reduction Reduction Stressed explain in Reduction Stressed explain Stressed	es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Roo 4) ed Soils (C6	RA ots (C3)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minited primary Indicators (minited primary Indicators (minited primary Indicators (minited primary Indicators (Mater Marks (Mater Mater Mater Mater (Mater Mater Mater Mater (Mater Mater Mater Mater (Mater Mater Mater Mater (Mater Mater (Mater Mater (Mater Mater (Mater Mater (Mater Mater (Mater (Ma	imum of one requal (B2) (B2) (B4) (B6) In Aerial Imagery Concave Surfa	y (B7) ce (B8)	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E	tained Leaver ta	es (B13) odor (C1) eres along ed Iron (C tion in Tille d Plants (E	Living Roo 4) d Soils (C6 01) (LRR A)	RA (C3)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	imum of one requal (B2) (B2) (B4) (B6) In Aerial Imagery Concave Surfa Yes Yes Yes Yes E	/ (B7) ce (B8) No No No	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E	tained Leaver 4A, and 4I st (B11) invertebrate in Sulfide Color Reduction Reduction Reduction Stressed explain in Reduction Stressed in Sulfide in Reduction Stressed in Reduction Reduc	es (B13) Dodor (C1) Deres along Ed Iron (C Diction in Tille Did Plants (D Demarks)	Living Roo 4) d Soils (C6 01) (LRR A)	ets (C3)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
☐ Drift Deposits (B3) ☐ Algal Mat or Crust (☐ Iron Deposits (B5) ☐ Surface Soil Cracks ☐ Inundation Visible o	imum of one requal (B2) (B2) (B4) (B6) In Aerial Imagery Concave Surfa Yes Yes Yes Yes E	/ (B7) ce (B8) No No No	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E	tained Leaver 4A, and 4I st (B11) invertebrate in Sulfide Color Reduction Reduction Reduction Stressed explain in Reduction Stressed in Sulfide in Reduction Stressed in Reduction Reduc	es (B13) Dodor (C1) Deres along Ed Iron (C Diction in Tille Did Plants (D Demarks)	Living Roo 4) d Soils (C6 01) (LRR A)	ets (C3)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	imum of one requal (B2) (B2) (B4) (B6) In Aerial Imagery Concave Surfatives (Samples (Sam	y (B7) ce (B8) No No No No No No No No	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E Depth (inch Depth (inch	tained Leaver ta	es (B13) dor (C1) eres along ed Iron (C cion in Tille d Plants (D emarks)	Living Roo 4) ad Soils (C6 01) (LRR A) Wetl spections),	eta (C3) S) Jand Hyd if availab	Water-Stained Leaves (B9) (MLRA 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7) rology Present? Yes ☑ No □
Primary Indicators (minimary I	imum of one requal (B2) (B2) (B4) (B6) In Aerial Imagery Concave Surfatives (Samples (Sam	y (B7) ce (B8) No No No No No No No No	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E Depth (inch Depth (inch	tained Leaver ta	es (B13) dor (C1) eres along ed Iron (C cion in Tille d Plants (D emarks)	Living Roo 4) ad Soils (C6 01) (LRR A) Wetl spections),	eta (C3) S) Jand Hyd if availab	Water-Stained Leaves (B9) (MLRA 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7) rology Present? Yes ☑ No □
Vetland Hydrology Incrimary Indicators (mini rimary Indicators (mini Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (Incomplete Indicate Soil Cracks Inundation Visible of Sparsely Vegetated	imum of one requal (B2) (B2) (B4) (B6) In Aerial Imagery Concave Surfatives (Samples (Sam	y (B7) ce (B8) No No No No No No No No	Water-Si 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E Depth (inch Depth (inch	tained Leaver ta	es (B13) dor (C1) eres along ed Iron (C cion in Tille d Plants (D emarks)	Living Roo 4) ad Soils (C6 01) (LRR A) Wetl spections),	eta (C3) S) Jand Hyd if availab	Water-Stained Leaves (B9) (MLRA 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7) rology Present? Yes ☑ No □

Project/Site: City of Seattle Meyers Way Remainder Propert	у	City/Co	unty: <u>Seattle</u>	Sampling Date: <u>05/06/2011</u>
Applicant/Owner: City of Seattle				State: WA Sampling Point: SP4-2
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	ownship, Range: <u>S05, T23N, R4EWM</u>
Landform (hillslope, terrace, etc.): hillslope		Local	relief (concave	, convex, none): convex Slope (%): 10%
Subregion (LRR): Northwest Forests and Coasts (LRR A)	Lat: 47.30	0.52		Long: 122.19.45 Datum: unknown
Soil Map Unit Name: NRCS Soil Unit is Unavailable				
Are climatic / hydrologic conditions on the site typical for this				
Are Vegetation, Soil, or Hydrology sign	•		,	ormal Circumstances" present? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map				
Attach site map	Jilo Willig		mig point i	oodions, transcots, important reatures, etc.
Hydrophytic Vegetation Present? Yes ☐ No ☒		1	s the Sampled	I Area
Hydric Soil Present? Yes ☐ No ☐ Wetland Hydrology Present? Yes ☐ No ☐		v	within a Wetlaı	nd? Yes □ No ⊠
Wetland Hydrology Present? Yes ☐ No ☐ Remarks: March and April 2011 have been unseasonably	rainy with 1	69% of	normal rainfall	for the two months combined. This amounts to 4.42
additional inches of precipitation during March and April. S				
VEGETATION – Use scientific names of plant	ts.			
Tree Stratum (Plot size: 5m)			nant Indicator es? Status	Dominance Test worksheet:
1. Alnus rubra			FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Acer macrophyllum				
3.				Total Number of Dominant Species Across All Strata: 6 (B)
4				Percent of Dominant Species
Condition (Obstate Obstate on Color Cons)	70	= Tota	al Cover	That Are OBL, FACW, or FAC: 50 (A/B)
Sapling/Shrub Stratum (Plot size: 3m) 1. Rubus spectabilis	20	V	EAC	Prevalence Index worksheet:
Nubus spectabilis Demlaria cerasiformis				Total % Cover of: Multiply by:
3				OBL species 0 x 1 = 0
4.				FACW species $0 x 2 = 0$
5				FAC species <u>105</u> x 3 = <u>315</u>
Harb Objet viv. (Blat sizes 4.5 v.)	40	= Tota	al Cover	FACU species 80 $x 4 = 320$
Herb Stratum (Plot size: 1.5m) 1. Urtica dioica	40	Υ	FAC	UPL species <u>0</u> x 5 = <u>0</u>
Urtica dioica Polystichum munitum				Column Totals: <u>185</u> (A) <u>635</u> (B)
Gallium aparine	10			Prevalence Index = B/A = 3.4
4. Tolmiea menziesii				Hydrophytic Vegetation Indicators:
5				☐ 1 - Rapid Test for Hydrophytic Vegetation
6				2 - Dominance Test is >50%
7				3 - Prevalence Index is ≤3.0 ¹
8				4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
9				☐ 5 - Wetland Non-Vascular Plants ¹
10				☐ Problematic Hydrophytic Vegetation¹ (Explain)
11	65		al Cover	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	00	- 100	ai oovei	be present, unless disturbed or problematic.
1				Hydrophytic
2				Vegetation
% Bare Ground in Herb Stratum 35	0	= Tota	al Cover	Present? Yes □ No ⊠
Remarks:				<u> </u>

Profile Desc	ription: (Describe	to the d	epth ne	eded to docu	ment the i	ndicator	or confirn	the absence of indicators.)	
Depth	Matrix		_	Redo	x Feature				
(inches)	Color (moist)	%	Colo	r (moist)	%	Type ¹	Loc ²	Texture Remarks	_
0-7	10YR 2/2	100						sandy loam	_
<u>7-15+</u>	10YR 4/3	100						sandy loam	
<u>15-18+</u>	10YR 4/2	100						sandy loam_	
			· -		'-				
									_
			·		_				_
					_				_
			· <u></u>		_				_
					_				_
	oncentration, D=De						ed Sand G		
_	Indicators: (Appli	cable to a				ea.)		Indicators for Problematic Hydric Soils ³ :	
☐ Histosol	` '			Sandy Redox (2 cm Muck (A10)	
	ipedon (A2)		_	Stripped Matrix .oamy Mucky N	` ') (eveent	MI DA 1)	☐ Red Parent Material (TF2)☐ Very Shallow Dark Surface (TF12)	
	n Sulfide (A4)			oamy Gleyed	,		WILKA I)	Other (Explain in Remarks)	
	l Below Dark Surfa	e (A11)		Depleted Matrix		,		Cities (Explain in Remarks)	
	rk Surface (A12)	<i>(</i> (, (,		Redox Dark Su	` '			³ Indicators of hydrophytic vegetation and	
	ucky Mineral (S1)			Depleted Dark	Surface (F	7)		wetland hydrology must be present,	
☐ Sandy G	leyed Matrix (S4)		□ F	Redox Depress	ions (F8)			unless disturbed or problematic.	
Restrictive	Layer (if present):								
Type:			_						
Depth (in	ches):		_					Hydric Soil Present? Yes ☐ No ☒	
Remarks:									
HYDROLO	GY								
Wetland Hy	drology Indicators	: :							
Primary India	cators (minimum of	one requi	red; che	eck all that app	ly)			Secondary Indicators (2 or more required)	
☐ Surface	Water (A1)			☐ Water-Sta	ined Leave	es (B9) (e	xcept MLF	RA Water-Stained Leaves (B9) (MLRA 1, 2	2,
☐ High Wa	ter Table (A2)			1, 2, 4	A, and 4B)		4A, and 4B)	
☐ Saturation	n (A3)			☐ Salt Crust	(B11)			□ Drainage Patterns (B10)	
☐ Water M	arks (B1)			☐ Aquatic In	vertebrates	s (B13)		☐ Dry-Season Water Table (C2)	
☐ Sedimen	t Deposits (B2)			☐ Hydrogen	Sulfide Oc	lor (C1)		☐ Saturation Visible on Aerial Imagery (C	(9)
☐ Drift Dep	osits (B3)			☐ Oxidized F	Rhizospher	es along	Living Roo	ts (C3) Geomorphic Position (D2)	
☐ Algal Ma	t or Crust (B4)			☐ Presence	of Reduce	d Iron (C4	!)	☐ Shallow Aquitard (D3)	
☐ Iron Dep	osits (B5)			☐ Recent Iro	n Reductio	on in Tille	d Soils (C6) FAC-Neutral Test (D5)	
☐ Surface	Soil Cracks (B6)			☐ Stunted or	Stressed	Plants (D	1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Inundation	on Visible on Aerial	Imagery (B7)	☐ Other (Exp	olain in Re	marks)		☐ Frost-Heave Hummocks (D7)	
☐ Sparsely	Vegetated Concav	e Surface	(B8)						
Field Obser	vations:								
Surface Wat	er Present?	Yes 🗌	No 🛛	Depth (inches	s):				
Water Table	Present?	Yes 🗌	No 🛛	Depth (inches	s):				
Saturation P		Yes 🗌	No 🏻	Depth (inches	s):		Wetl	and Hydrology Present? Yes ☐ No ⊠	
(includes car Describe Re	corded Data (streat	m gauge.	monitor	ing well, aerial	photos, pr	evious ins	spections).	if available:	
	2000 (00000	32290,		J J, GONG	, (55, pi		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Remarks:									

Project/Site: City of Seattle Meyers Way Remainder Propert	у	City/Count	y: <u>Seattle</u>		Sampling Date: 05/06/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: SP5-1
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	ownship, Range: <u>S32, T24</u> ľ	N, R4EWM
Landform (hillslope, terrace, etc.): slope		Local reli	ef (concave	, convex, none): concave	Slope (%): <u>2%</u>
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable				NWI classificat	tion: PSS Wetland
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	-			ormal Circumstances" pres	ent? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology natu			(If need	ed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS – Attach site map					
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes ⊠ No □			ne Sampled nin a Wetlar		<u>,</u> П
Wetland Hydrology Present? Yes ⊠ No □					_
Remarks: March and April 2011 have been unseasonably additional inches of precipitation during March and April. S	rainy with 10	69% of nor	mal rainfall wet as a re	for the two months combinesult with large areas of pu	ned. This amounts to 4.42
No recent disturbance. Area of sample plot is in area that					
groundwater.	,	•	·	•	•
VEGETATION – Use scientific names of plant	ts.				
·	Absolute			Dominance Test works	sheet:
<u>Tree Stratum</u> (Plot size: <u>5m</u>)	% Cover			Number of Dominant Sp	
1				That Are OBL, FACW, o	r FAC: <u>5</u> (A)
2				Total Number of Domina	
3				Species Across All Strate	a: <u>5</u> (B)
4	0			Percent of Dominant Spe	
Sapling/Shrub Stratum (Plot size: irregular)	<u> </u>	Total	70701	That Are OBL, FACW, o	r FAC: <u>100</u> (A/B)
1. Salix sitchensis				Prevalence Index work	
2. Rubus armeniacus					Multiply by:
3					x 1 =
4					x 2 = x 3 =
5		= Total C			x 4 =
Herb Stratum (Plot size: 1.5m)	00	- Total C	ovei	UPL species	
Equisetum arvense	25	<u>Y</u>	FAC		(A) (B)
2. Scirpus microcarpus					
3. Nasturtium officinale					= B/A =
4. Juncus effusus				Hydrophytic Vegetation	
5				☐ 1 - Rapid Test for Hy ☐ 2 - Dominance Test	
6				☐ 3 - Prevalence Index	
7 8					laptations ¹ (Provide supporting
9				data in Remarks	or on a separate sheet)
10				5 - Wetland Non-Vas	
11					nytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 3m)		= Total C	Cover	be present, unless distur	and wetland hydrology must rbed or problematic.
1				Hydrophytic	
2				Vegetation	
% Bare Ground in Herb Stratum 50	0	= Total C	Cover	Present? Yes	No 🗆
Remarks:					

Depth	Matrix			Redox Featu				
(inches)	Color (moist)	%	Colc	r (moist) %	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-8	10YR 2/2	100					sandy lo	am_
<u>8-19+</u>	5Y 4/1	100					loamy sa	and
							-	
	-							
								
				uced Matrix, CS=Cove		ed Sand Gr		² Location: PL=Pore Lining, M=Matrix.
-		cable to		s, unless otherwise n	oted.)			icators for Problematic Hydric Soils ³ :
Histosol	` '			Sandy Redox (S5)				2 cm Muck (A10)
	pipedon (A2)			Stripped Matrix (S6)	Γ4) /avaant	MI DA 4)		Red Parent Material (TF2)
	istic (A3)			.oamy Mucky Mineral (.oamy Gleyed Matrix (I		MLRA 1)		Very Shallow Dark Surface (TF12)
	en Sulfide (A4) d Below Dark Surfa	ca (Δ11)		Loamy Gleyed Matrix (i Depleted Matrix (F3)	-2)		Ц	Other (Explain in Remarks)
•	ark Surface (A12)	ce (ATT)		Redox Dark Surface (F	6)		³ Inc	licators of hydrophytic vegetation and
	Mucky Mineral (S1)			Depleted Dark Surface	•			wetland hydrology must be present,
	Gleyed Matrix (S4)			Redox Depressions (F8				unless disturbed or problematic.
Restrictive	Layer (if present):							
Type:								
Depth (ir	nches):						Hydric	Soil Present? Yes ⊠ No □
Remarks:								
IYDROLC	OGY ydrology Indicators	··						
Surface	•		uired: ch	eck all that apply)			ç	Secondary Indicators (2 or more required)
		•	uired; che	eck all that apply) Water-Stained Lea	aves (R0) (e	vcent MI R		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MI RA 1 2
1/1 I HUH VV2	` ,		uired; ch	☐ Water-Stained Lea		xcept MLR		☐ Water-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A2)		uired; che	☐ Water-Stained Lea		xcept MLR	RA [☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
⊠ Saturati	ater Table (A2) on (A3)		uired; che	☐ Water-Stained Lea 1, 2, 4A, and 4 ☐ Salt Crust (B11)	IB)	xcept MLR		 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10)
⊠ Saturation	ater Table (A2) on (A3) Marks (B1)	·	uired; che	☐ Water-Stained Lea 1, 2, 4A, and 4 ☐ Salt Crust (B11) ☐ Aquatic Invertebra	tes (B13)	xcept MLR	A [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2)
⊠ Saturation □ Water M □ Sedimen	ater Table (A2) on (A3)		uired; ch	☐ Water-Stained Lea 1, 2, 4A, and 4 ☐ Salt Crust (B11)	tes (B13) Odor (C1)]]]]	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10)
Saturation Water M Sedimen Drift Dep	ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		<u>uired; ch</u>	☐ Water-Stained Lea 1, 2, 4A, and 4 ☐ Salt Crust (B11) ☐ Aquatic Invertebra ☐ Hydrogen Sulfide	tes (B13) Odor (C1) neres along	Living Root	(A [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Saturati Water M Sedime Drift De Algal Ma	on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		uired; ch	□ Water-Stained Lea 1, 2, 4A, and 4 □ Salt Crust (B11) □ Aquatic Invertebra □ Hydrogen Sulfide □ Oxidized Rhizosph	tes (B13) Odor (C1) heres along ced Iron (C4	Living Root	[[[[[[[[[[[[[[[[[[[Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Saturati Water M Sedimel Drift Dep Algal Ma	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		uired; ch	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduc	tes (B13) Odor (C1) neres along ced Iron (C4 ction in Tilled	Living Root) d Soils (C6)	ts (C3) [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Saturati Water M Sedimel Drift Del Algal Ma Iron Dep Surface	on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	Imagery		Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu	tes (B13) Odor (C1) heres along ced Iron (C4 ction in Tilled ed Plants (D	Living Root) d Soils (C6)	ts (C3) [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Saturati Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)		· (B7)	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct Stunted or Stresse	tes (B13) Odor (C1) heres along ced Iron (C4 ction in Tilled ed Plants (D	Living Root) d Soils (C6)	ts (C3) [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Saturatii Water № Sedimei Drift Dej Algal Ma Iron Dep Surface Inundatii Sparsely	ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concav		· (B7)	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct Stunted or Stresse	tes (B13) Odor (C1) heres along ced Iron (C4 ction in Tilled ed Plants (D	Living Root) d Soils (C6)	ts (C3) [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Saturati Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati Sparsely Field Obser	ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concav rvations:		· (B7)	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct Stunted or Stresse	tes (B13) Odor (C1) neres along ced Iron (C4 ction in Tilled ed Plants (D Remarks)	Living Root) d Soils (C6)	ts (C3) [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Saturati Water M Sedimel Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obsel	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concav rvations: ter Present?	e Surfac	/ (B7) ce (B8)	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct Stunted or Stresse Other (Explain in F	tes (B13) Odor (C1) heres along ced Iron (C4 ction in Tilled ed Plants (D Remarks)	Living Root) d Soils (C6)	ts (C3) [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Saturatio Water № Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obsen Surface Wa Water Table	ater Table (A2) on (A3) flarks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial by Vegetated Concavervations: ter Present?	ve Surfac	v (B7) ce (B8) No 🗆	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct Stunted or Stresse Other (Explain in F	tes (B13) Odor (C1) heres along ced Iron (C4 ction in Tilled ed Plants (D Remarks)	Living Root 1) 1 Soils (C6) 1) (LRR A)	ts (C3) [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Saturation Saturation Sediment Sediment Sediment Sediment Sediment Algal Mater Iron Dept Surface Inundati Sparsely Field Obset Surface Water Table Saturation Feincludes cat	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concaverations: ter Present? e Present? publicary fringe)	ve Surfac Yes ⊠ Yes ⊠ Yes ⊠	v (B7) ce (B8) No No No No No No No No No No	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct Stunted or Stresse Other (Explain in F	tes (B13) Odor (C1) neres along ced Iron (C4 ction in Tilled ed Plants (D Remarks)	Living Root Soils (C6) Living Root Living Root Living Root Wetla	ts (C3) [[] [] and Hydr	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) cology Present? Yes ⊠ No □
Saturation Sediment Sediment Drift Dep Algal Matern Dep Surface Inundati Sparsely Field Obselt Surface Water Table Saturation Fincludes cat	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concaverations: ter Present? e Present? publicary fringe)	ve Surfac Yes ⊠ Yes ⊠ Yes ⊠	v (B7) ce (B8) No No No No No No No No No No	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct Stunted or Stresse Other (Explain in F	tes (B13) Odor (C1) neres along ced Iron (C4 ction in Tilled ed Plants (D Remarks)	Living Root Soils (C6) Living Root Living Root Living Root Wetla	ts (C3) [[] [] and Hydr	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) cology Present? Yes ☑ No □
Saturation Saturation Saturation Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obsel Surface Wa Water Table Saturation F (includes ca	ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial by Vegetated Concavervations: ter Present? Present? Present? pillary fringe) ecorded Data (streat	ye Surfac Yes ⊠ Yes ⊠ Yes ⊠ m gauge	v (B7) ce (B8) No No No No No No a, monitor	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct Stunted or Stresse Other (Explain in F	tes (B13) Odor (C1) neres along ced Iron (C4 ction in Tilled ed Plants (D Remarks)	Living Root Soils (C6) Classification (LRR A) Wetlaspections),	ts (C3) [[] ts (C3) [[] and Hydr if availabl	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7) close Present? Yes □ No □ e:
Saturatio Water № Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wa Water Table Saturation F (includes ca Describe Re	ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concavervations: ter Present? Present? Present? pullary fringe) ecorded Data (streat	Yes Yes Yes Yes Yes Yes m gauge	v (B7) ce (B8) No No No No s, monitor	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct Stunted or Stresse Other (Explain in F	tes (B13) Odor (C1) neres along ced Iron (C4 ction in Tilled ed Plants (D Remarks)	Living Root Soils (C6) Classification (LRR A) Wetlaspections),	ts (C3) [[] ts (C3) [[] and Hydr if availabl	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) close Ology Present? Yes
Saturation Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wa Water Table Saturation Fincludes ca	ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concavervations: ter Present? Present? Present? pullary fringe) ecorded Data (streat	Yes Yes Yes Yes Yes Yes m gauge	v (B7) ce (B8) No No No No s, monitor	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct Stunted or Stresse Other (Explain in Figure 1) Depth (inches): Depth (inches): 0 ing well, aerial photos,	tes (B13) Odor (C1) neres along ced Iron (C4 ction in Tilled ed Plants (D Remarks)	Living Root Soils (C6) Classification (LRR A) Wetlaspections),	ts (C3) [[] ts (C3) [[] and Hydr if availabl	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7) close Present? Yes □ No □ e:
Saturation Water Mater M	ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concavervations: ter Present? Present? Present? pullary fringe) ecorded Data (streat	Yes Yes Yes Yes Yes Yes m gauge	v (B7) ce (B8) No No No No s, monitor	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide Oxidized Rhizosph Presence of Redu Recent Iron Reduct Stunted or Stresse Other (Explain in Figure 1) Depth (inches): Depth (inches): 0 ing well, aerial photos,	tes (B13) Odor (C1) neres along ced Iron (C4 ction in Tilled ed Plants (D Remarks)	Living Root Soils (C6) Classification (LRR A) Wetlaspections),	ts (C3) [[] ts (C3) [[] and Hydr if availabl	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7) close Present? Yes □ No □ e:

Project/Site: City of Seattle Meyers Way Remainder Propert	y (City/Count	y: <u>Seattle</u>		Sampling Date: 05/03/2011	
Applicant/Owner: City of Seattle				State: WA	Sampling Point: <u>UPL-1</u>	
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	ownship, Range: <u>S5, T23N</u> ,	, R4EWM	
Landform (hillslope, terrace, etc.): hillslope		Local reli	ef (concave,	convex, none): convex	Slope (%): 2	
Subregion (LRR): Northwest Forests and Coasts (LRR A)	Lat: 47.30	0.54	Long: <u>122.19.56</u> Datum: <u>unknown</u>			
Soil Map Unit Name: NRCS Soil Unit is Unavailable				NWI classificat	tion: <u>Upland</u>	
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrology sign	ificantly dist	turbed?	Are "No	ormal Circumstances" pres	ent? Yes ⊠ No □	
Are Vegetation, Soil, or Hydrology natu			(If neede	ed, explain any answers in	Remarks.)	
SUMMARY OF FINDINGS – Attach site map	showing	samplir	ng point le	ocations, transects,	important features, etc.	
Hydrophytic Vegetation Present? Yes ☐ No ☒		1- 4	Commissi	A		
Hydric Soil Present? Yes ☐ No ☒			he Sampled nin a Wetlan		n ⊠	
Wetland Hydrology Present? Yes ☐ No ☒						
Remarks: March and April 2011 have been unseasonably additional inches of precipitation during March and April. S	rainy with 16 Site condition	69% of no	rmal rainfall y wet as a re	for the two months combin esult with large areas of puo	ed. This amounts to 4.42 ddling water on the surface.	
No recent disturbance. Area of sample plot was previously				-	=	
trees.						
VEGETATION – Use scientific names of plant	s.					
T 01 1 (D) 1	Absolute			Dominance Test works	heet:	
Tree Stratum (Plot size:)	% Cover			Number of Dominant Spe		
1. Populus balsamifera				I hat Are OBL, FACW, or	r FAC: <u>2</u> (A)	
2. Alnus rubra				Total Number of Domina		
3				Species Across All Strata	a: <u>6</u> (B)	
4	100	= Total (Percent of Dominant Spe That Are OBL FACW or	ecies r FAC: <u>33</u> (A/B)	
Sapling/Shrub Stratum (Plot size:)						
1. Rubus armeniacus	<u>10</u>			Prevalence Index work		
2. Oemlaria cerasiformis					Multiply by:	
3. <u>Sambucus racemosa</u>					x 1 =	
4. Rubus parviflorus					x 2 =	
5. Holodiscus discolor	<u>3</u> <u>28</u>				x 3 = x 4 =	
Herb Stratum (Plot size:)	<u> 28 </u>	= rotar c	Jover	UPL species		
Polystichum munitum	10	Y	FACU		(A) (B)	
2. Geranium robertianum	10	<u>Y</u>	UPL	Column Fotalo.	(N) (B)	
3. Gallium aperine	5	N	FACU		= B/A =	
Tellmia grandiflora	1	<u>N</u>	<u>UPL</u>	Hydrophytic Vegetation		
Hydrophyllum tenuipes	1	<u>N</u>	UPL	☐ 1 - Rapid Test for Hy		
6				2 - Dominance Test i		
7				3 - Prevalence Index		
8					laptations ¹ (Provide supporting or on a separate sheet)	
9				5 - Wetland Non-Vas	• • •	
10				☐ Problematic Hydroph	nytic Vegetation ¹ (Explain)	
11				¹ Indicators of hydric soil	and wetland hydrology must	
Woody Vine Stratum (Plot size: 3m)	<u>27</u>	= Fotal C	Cover	be present, unless distur	bed or problematic.	
1. Hedera helix	5	<u>Y</u>	NI	The december of the		
2				Hydrophytic Vegetation		
9/ Para Ground in Horb Stratum 60	5	= Total (Cover		□ No ⊠	
% Bare Ground in Herb Stratum 60 Remarks:						

Profile Desc	cription: (Describe	e to the o	depth ne	eded to docu	ment the i	ndicator	or confirm	the ab	sence of indicators.)
Depth	Matrix				x Feature				
(inches)	Color (moist)	%	Colc	r (moist)	%	Type ¹	Loc ²	Textu	re Remarks
0-2	10YR 3/2	100			_			sandy	loam_
2-10	2.5Y 6/3	100	_					loamy	sand
10-20	2.5Y 5/2	100						loamy	sand
					-				
<u> </u>					-				
¹ Type: C=C	oncentration, D=De	pletion. F	RM=Red	uced Matrix. C	S=Covered	d or Coate	ed Sand Gr	rains.	² Location: PL=Pore Lining, M=Matrix.
	Indicators: (Appli								ndicators for Problematic Hydric Soils ³ :
☐ Histosol	(A1)			Sandy Redox (S	S5)				☐ 2 cm Muck (A10)
☐ Histic Ep	pipedon (A2)			Stripped Matrix	, ,				Red Parent Material (TF2)
☐ Black His	, ,			_oamy Mucky N			MLRA 1)		Very Shallow Dark Surface (TF12)
	n Sulfide (A4)	(8.4.4)		oamy Gleyed I)		L	Other (Explain in Remarks)
	l Below Dark Surfa Irk Surface (A12)	ce (A11)		Depleted Matrix Redox Dark Sui	` '			31	Indicators of hydrophytic vegetation and
	lucky Mineral (S1)			Depleted Dark Sui	` ,	7)		ı	wetland hydrology must be present,
-	leyed Matrix (S4)			Redox Depress	`	.,			unless disturbed or problematic.
-	Layer (if present):			·					· ·
Type:									
Depth (in	ches):							Hydr	ric Soil Present? Yes □ No ⊠
Remarks:	•							1	
	CV								
HYDROLO									
_	drology Indicators								
	cators (minimum of	one requ	iired; ch						Secondary Indicators (2 or more required)
	Water (A1)			☐ Water-Stai			xcept MLR	RA	Water-Stained Leaves (B9) (MLRA 1, 2,
_	ter Table (A2)				A, and 4B))			4A, and 4B)
☐ Saturation	` '			☐ Salt Crust		(D12)			Drainage Patterns (B10)
	arks (B1)			☐ Aquatic Inv		` '			Dry-Season Water Table (C2)
	nt Deposits (B2) posits (B3)			☐ Oxidized F			Living Poo	te (C3)	☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2)
-	it or Crust (B4)			☐ Presence		_	_	13 (03)	Shallow Aguitard (D3)
	osits (B5)			☐ Recent Iro		,	')	FAC-Neutral Test (D5)
-	Soil Cracks (B6)			☐ Stunted or			`	,	Raised Ant Mounds (D6) (LRR A)
	on Visible on Aerial	Imagery	(B7)	Other (Exp			., (=,		Frost-Heave Hummocks (D7)
	Vegetated Concav					,			(,
Field Obser									
Surface Wat	er Present?	Yes 🗌	No 🛛	Depth (inches	s):				
Water Table		Yes 🗌	No 🏻	Depth (inches					
Saturation P		Yes 🗌	No 🖾	Depth (inches			Wetl	and Hv	drology Present? Yes ☐ No ⊠
(includes car	oillary fringe)								
Describe Re	corded Data (strea	m gauge	monitor	ing well, aerial	photos, pr	evious ins	spections),	if availa	able:
Remarks:									

Project/Site: City of Seattle Meyers Way Remainder Propert	<u>y</u> (City/Count	y: <u>Seattle</u>		Sampling Date: 05/03/2011		
Applicant/Owner: City of Seattle				State: WA	Sampling Point: <u>UPL-2</u>		
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	wnship, Range: <u>S5</u>			
Landform (hillslope, terrace, etc.): hillslope		Local reli	ef (concave,	convex, none): convex	Slope (%): <u>2</u>		
Subregion (LRR): Northwest Forests and Coasts (LRR A)	_ Lat: <u>47.30</u>).57					
Soil Map Unit Name: NRCS Soil Unit is Unavailable							
Are climatic / hydrologic conditions on the site typical for this				no, explain in Remarks.)			
Are Vegetation, Soil, or Hydrology signif	,		_ `	mal Circumstances" prese	nt? Yes⊠ No □		
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in			
SUMMARY OF FINDINGS – Attach site map							
Hydrophytic Vegetation Present? Yes ☐ No ☒		1- 41		A			
Hydric Soil Present? Yes ☐ No ☒			ne Sampled nin a Wetlan		. ⊠		
Wetland Hydrology Present? Yes ☐ No ☒							
Remarks: March and April 2011 have been unseasonably additional inches of precipitation during March and April.	•				ed. This amounts to 4.42		
No recent disturbance to the area. Mining operations ende	ed in 2002.	Soils are r	nixed from h	istoric mining practices.			
VEGETATION – Use scientific names of plant	s.						
			Indicator	Dominance Test works	heet:		
Tree Stratum (Plot size:) 1	% Cover			Number of Dominant Spo That Are OBL, FACW, or			
2				Total Number of Domina	nt		
3	-			Species Across All Strata			
4				Percent of Dominant Spe	ecies		
Sapling/Shrub Stratum (Plot size: 3m)	0			That Are OBL, FACW, or	r FAC: <u>33</u> (A/B)		
Cytisus scoparius	40			Prevalence Index work			
2. Rubus armeniacus					Multiply by:		
3. Populus balsamifera					x1 =		
4					x 2 = x 3 =		
5	85				x 4 =		
Herb Stratum (Plot size: 1.5m)	00	- Total C	OVEI		x 5 =		
1. Tanacetum vulgare	30	<u>Y</u>	NI		(A) (B)		
Festuca rubra	30	<u>Y</u>	FAC		(
3. Musci spp.	30				= B/A =		
4	-			Hydrophytic Vegetation			
5				1 - Rapid Test for Hy			
6				☐ 2 - Dominance Test i☐ 3 - Prevalence Index			
7					aptations¹ (Provide supporting		
8					or on a separate sheet)		
9				☐ 5 - Wetland Non-Vas	cular Plants ¹		
10				☐ Problematic Hydroph	nytic Vegetation ¹ (Explain)		
11	90				and wetland hydrology must		
Woody Vine Stratum (Plot size: 3m)	<u>50</u>	- Total C	00001	be present, unless distur	bed or problematic.		
1				Hydrophytic			
2				Vegetation			
% Bare Ground in Herb Stratum 10	0	= Total C	Cover	Present? Yes	□ No ⊠		
Remarks:				<u> </u>			

Profile Des	cription: (Describ	e to the	depth n	eeded to document	the indicator	or confirm	n the absence of indicators.)
Depth	Matrix			Redox Fea			
(inches)	Color (moist)	%	Cold	or (moist) %	6 Type¹	Loc ²	Texture Remarks
<u>0-10</u>	2.5Y 5/3	100					gr. s. loam
10-20	2.5Y 5/2	100					loamy sand
-				<u>-</u>			
	-	<u> </u>		-			
					,		
1- 0.0							
				uced Matrix, CS=Co s, unless otherwise		ed Sand Gr	rains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
_		iicabie io			: notea.)		-
☐ Histosol	pipedon (A2)			Sandy Redox (S5) Stripped Matrix (S6)			☐ 2 cm Muck (A10) ☐ Red Parent Material (TF2)
	istic (A3)			Loamy Mucky Minera	al (F1) (except	MIRA1)	☐ Very Shallow Dark Surface (TF12)
	en Sulfide (A4)			Loamy Gleyed Matrix		,	☐ Other (Explain in Remarks)
_ , ,	d Below Dark Surfa	ace (A11)		Depleted Matrix (F3)	,		<u> </u>
☐ Thick Da	ark Surface (A12)	. ,		Redox Dark Surface	(F6)		³ Indicators of hydrophytic vegetation and
☐ Sandy N	Mucky Mineral (S1)			Depleted Dark Surfac	ce (F7)		wetland hydrology must be present,
-	Gleyed Matrix (S4)			Redox Depressions (F8)		unless disturbed or problematic.
Restrictive	Layer (if present)	:					
Type:							
Depth (in	nches):						Hydric Soil Present? Yes ☐ No ☒
Remarks:							
HYDROLO)CV						
1	drology Indicator		uirod: ob	ack all that apply)			Cacandary Indicators (2 or more required)
	icators (minimum o	i one reqi	uirea, cri		(DO) (-		Secondary Indicators (2 or more required)
Surface	` ,			☐ Water-Stained L		xcept MLR	
_ •	ater Table (A2)			1, 2, 4A, and			4A, and 4B)
Saturation	` ,			☐ Salt Crust (B11)			☐ Drainage Patterns (B10)
	farks (B1)			Aquatic Inverteb	, ,		☐ Dry-Season Water Table (C2)
	nt Deposits (B2) posits (B3)			☐ Hydrogen Sulfid☐ Oxidized Rhizos		Living Doot	☐ Saturation Visible on Aerial Imagery (C9) ts (C3) ☐ Geomorphic Position (D2)
1	at or Crust (B4)			☐ Presence of Rec		-	Shallow Aquitard (D3)
	posits (B5)			Recent Iron Rec	`	,	
1	Soil Cracks (B6)			☐ Stunted or Stres		` ′	, ,
	on Visible on Aeria	l Imagery	(R7)	☐ Other (Explain in		1) (LIXIX A)	Frost-Heave Hummocks (D7)
l	y Vegetated Conca		, ,	☐ Other (Explain ii	ii Neiliaiks)		1 Tost-fleave Hummocks (D1)
Field Obser			(20)				
	ter Present?	Yes □	No ⊠	Depth (inches):			
Water Table		Yes 🗌	No ⊠	Depth (inches):			
Saturation F		Yes 🗌	No 🛛		·	Moti	and Hydrology Present? Yes ☐ No ⊠
	pillary fringe)	res 🗀	NO 🖂	Depth (inches):		wella	and nydrology Fresent? Tes No
		am gauge	, monito	ing well, aerial photo	s, previous in	spections),	if available:
1							
Remarks:							
Remarks:							
Remarks:							

Project/Site: City of Seattle Meyers Way Remainder Propert	ty	City/Cou	ınty: <u>Seattle</u>	S	ampling Date: <u>05/03/2011</u>
Applicant/Owner: City of Seattle				State: WA S	ampling Point: <u>UPL-3</u>
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	ownship, Range: <u>S6, T23M, 4</u>	EWM
Landform (hillslope, terrace, etc.): hillslope					
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable				_	
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	•		,	ormal Circumstances" presen	it? Yes⊠ No□
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in R	- -
SUMMARY OF FINDINGS – Attach site map					
Soliman Tol Thebings - Attach site map	Silowing	Samp	ing point i	ocations, transects, ii	ilportant leatures, etc.
Hydrophytic Vegetation Present? Yes ⊠ No □		Is	the Sampled	l Area	
Hydric Soil Present? Yes ⊠ No ☐		w	ithin a Wetlar	nd? Yes ☐ No [\boxtimes
Wetland Hydrology Present? Yes ☐ No ☒ Remarks: March and April 2011 have been unseasonably	rainy with 1	60% of r	normal rainfall	for the two months combined	This amounts to 4.42
additional inches of precipitation during March and April.					
No recent disturbance. Area of sample plot was previousl trees.	y mined pric	or but ap	pears to have	been reclaimed more than 40) years ago based on size of
	40				
VEGETATION – Use scientific names of plan	Absolute	Domine	ant Indicator	Dominance Test workshe	not:
<u>Tree Stratum</u> (Plot size: <u>5m</u>)			es? Status	Number of Dominant Spec	
1. Alnus rubra	60	Y	FAC	That Are OBL, FACW, or F	
2. Populus balsamifera	20	Υ	FAC	Total Number of Dominant	
3				Species Across All Strata:	<u>6</u> (B)
4				Percent of Dominant Speci	ies
Sanling/Shruh Stratum (Plot sizo: 3m)	80	= Tota	l Cover	That Are OBL, FACW, or F	
Sapling/Shrub Stratum (Plot size: 3m) 1. Rubus armeniacus	30	V	FACU	Prevalence Index worksh	neet:
Alnus rubra					Multiply by:
3				OBL species	
4.				FACW species	
5				FAC species	
	50	= Tota	l Cover	FACU species	
Herb Stratum (Plot size: 1.5m)				UPL species	x 5 =
1. Ranunculus repens	<u>20</u>	<u>Y</u>	<u>FACW</u>	Column Totals:	(A) (B)
2. Festuca rubra		<u>Y</u>	<u>FAC</u>	Dravalanas Inday — I	D/A -
3. <u>Tanacetum vulgare</u>			<u>NI</u>	Prevalence Index = I Hydrophytic Vegetation I	
4. Poa palustris	<u>10</u>	<u>N</u>		☐ 1 - Rapid Test for Hydr	
5. Holcus lanatus	10	<u>N</u>	<u>FAC</u>	2 - Dominance Test is	. , ,
Geranium robertianum Taraxacum officinale	<u>10</u>	N N	UPL	☐ 3 - Prevalence Index is	4
I araxacum officinale Epilobium ciliatum		<u>N</u>	<u>FACU</u> FACW		otations ¹ (Provide supporting
9. Daucus carota					on a separate sheet)
10				☐ 5 - Wetland Non-Vascu	ılar Plants ¹
11				☐ Problematic Hydrophyt	ic Vegetation ¹ (Explain)
	95		l Cover	¹ Indicators of hydric soil an be present, unless disturbe	
Woody Vine Stratum (Plot size: 3m)				P	t
1				Hydrophytic	
2				Vegetation	7 Na □
% Bare Ground in Herb Stratum 5	0	= Tota	l Cover	Present? Yes	No □
Remarks:				1	

Profile Des	cription: (Descri	be to the	depth n	eeded to docur	nent the	indicator	or confirn	n the absence of indicators.)				
Depth	Matrix			Redo	x Feature							
(inches)	Color (moist)	%	Cold	or (moist)	%	Type ¹	Loc ²	Texture Remarks				
0-6	10YR 3/2	100						<u>laom</u>				
<u>6-16</u>	2.5Y 5/2	95	<u>10Y</u>	R 4/4	5	C	<u>M</u>	gr. s. loam				
16-20+	2.5Y 5/2	95	<u>10Y</u>	R 4/4	5	С	M	sandy loam				
					-							
					_							
					-							
	¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :											
_		licable to				ea.)		Indicators for Problematic Hydric Soils ³ :				
Histosol	` '			Sandy Redox (S				2 cm Muck (A10)				
	oipedon (A2) stic (A3)			Stripped Matrix Loamy Mucky M	. ,	I) (ovcon	• MI D A 1\	☐ Red Parent Material (TF2)☐ Very Shallow Dark Surface (TF12)				
	en Sulfide (A4)			Loamy Gleyed N			(WILKA I)	☐ Other (Explain in Remarks)				
	d Below Dark Surf	ace (A11)		Depleted Matrix		,		Guidi (Explain in Remains)				
	ark Surface (A12)	400 (7111)		Redox Dark Sur	. ,			³ Indicators of hydrophytic vegetation and				
	Mucky Mineral (S1))		Depleted Dark S	` ,	7)		wetland hydrology must be present,				
	Gleyed Matrix (S4)			Redox Depressi	ons (F8)			unless disturbed or problematic.				
Restrictive	Layer (if present)):										
Type:												
Depth (in	iches):							Hydric Soil Present? Yes ⊠ No □				
Remarks:												
HYDROLO)GY											
	drology Indicato	rs·										
_	cators (minimum o		ıired: ch	eck all that appl	v)			Secondary Indicators (2 or more required)				
	Water (A1)		0 0, 0	☐ Water-Stair	•	es (R9) (e	excent MI F					
	ater Table (A2)				A, and 4B		Accet ME	4A, and 4B)				
☐ Saturation	` ,			☐ Salt Crust		,		☐ Drainage Patterns (B10)				
	larks (B1)			☐ Aquatic Inv	` '	s (B13)		☐ Dry-Season Water Table (C2)				
	nt Deposits (B2)			☐ Hydrogen S				☐ Saturation Visible on Aerial Imagery (C9)				
	posits (B3)			☐ Oxidized R			Living Roo					
1	at or Crust (B4)			☐ Presence of		-	•	☐ Shallow Aquitard (D3)				
	posits (B5)			☐ Recent Iron		,	,	_ , , ,				
1	Soil Cracks (B6)			☐ Stunted or			,	, –				
	on Visible on Aeria	al Imagery	(B7)	Other (Exp			· · / (=: · · · / · /	Frost-Heave Hummocks (D7)				
l	Vegetated Conca			☐ Other (Exp		marks)		- Trest fleave flammooks (51)				
Field Obser			- (- /									
Surface Wa	ter Present?	Yes □	No 🛛	Depth (inches	s):							
Water Table		Yes 🗌	No 🖾	Depth (inches								
Saturation F		Yes 🗆	No 🖾	Depth (inches			Wetl	and Hydrology Present? Yes ☐ No ⊠				
(includes ca	pillary fringe)			. ,	,							
Describe Re	ecorded Data (stre	am gauge	, monito	ring well, aerial i	photos, pi	evious in	spections),	if available:				
Remarks:												
1												

Project/Site: City of Seattle Meyers Way Remainder Propert	v	City/Count	v: Seattle	S	ampling Date:05/03/2011
		-	-	State: WA S	
Investigator(s): E. Pritchard, J. Merriman, C. Wright					
Landform (hillslope, terrace, etc.): hillslope					
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable				NWI classification	n: <u>Upland</u>
Are climatic / hydrologic conditions on the site typical for this	•		No ⊠ (l	f no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology sign	ificantly dist	turbed?	Are "No	ormal Circumstances" presen	t? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology natu	rally probler	natic?	(If need	ed, explain any answers in R	emarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point l	ocations, transects, ir	nportant features, etc.
Hydrophytic Vegetation Present? Yes ☐ No ☒					
Hydric Soil Present? Yes ☐ No ☒			ne Sampled		-
Wetland Hydrology Present? Yes ☐ No ☒		with	iin a Wetlar	nd? Yes ☐ No [∆
Remarks: March and April 2011 have been unseasonably					
additional inches of precipitation during March and April. S No recent disturbance. Area of sample plot was previously		•		•	•
trees.	r mineu pno	i but appe	ais to riave	been recialined more than 40	years ago based on size of
VEGETATION Lies eciontific names of plant					
VEGETATION – Use scientific names of plant		D	La di a da a	Bendance Testinostate	
Tree Stratum (Plot size: 5m)	Absolute % Cover			Dominance Test workshot Number of Dominant Spec	
Populus balsamifera	70	Y	FAC	That Are OBL, FACW, or F	
2				Total Number of Dominant	
3				Species Across All Strata:	<u>4</u> (B)
4				Percent of Dominant Speci	00
	70	= Total C	Cover	That Are OBL, FACW, or F	
Sapling/Shrub Stratum (Plot size: 3m)	4-	.,	E4011	Prevalence Index worksh	
Oemlaria cerasiformis Dubus armania sus					Multiply by:
2. Rubus armeniacus				OBL species	
3. Rubus ursinus				FACW species	
4. 5.				FAC species	
0		= Total C	Cover	FACU species	
Herb Stratum (Plot size: 1.5m)					x 5 =
1. Musci spp.	60	<u>Y</u>	NI	Column Totals:	(A) (B)
Geum macrophyllum			FACW		
3. Equisetum arvense				Prevalence Index = I	
4. Geranium robertianum				Hydrophytic Vegetation I	
5				1 - Rapid Test for Hydr	
6				☐ 2 - Dominance Test is : ☐ 3 - Prevalence Index is	
7					stations ¹ (Provide supporting
8					on a separate sheet)
9				☐ 5 - Wetland Non-Vascu	ılar Plants ¹
10				☐ Problematic Hydrophyt	ic Vegetation ¹ (Explain)
11		= Total C		¹ Indicators of hydric soil an	
Woody Vine Stratum (Plot size: 3m)	04	- Total C	ovei	be present, unless disturbe	ed or problematic.
1					
2				Hydrophytic Vegetation	
		= Total C	Cover	_] No ⊠
% Bare Ground in Herb Stratum <u>35</u>					
Remarks:					

Profile Des	cription: (Describ	e to the	depth n	eeded to document	the indica	tor or confir	m the absence of indicators.)
Depth	Matrix			Redox Fe			
(inches)	Color (moist)	%	Cold	or (moist)	% Type	e ¹ Loc ²	Texture Remarks
0-8	10YR 2/2	100					sandy loam
8-18+	2.5Y4/2	100					gr. s. loam
	-						
	-						
1							2
				luced Matrix, CS=Co		oated Sand G	<u> </u>
-		licable to		s, unless otherwis	e notea.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol	pipedon (A2)			Sandy Redox (S5) Stripped Matrix (S6)			☐ 2 cm Muck (A10) ☐ Red Parent Material (TF2)
	istic (A3)			Loamy Mucky Miner		ant MIRA 1	, ,
	en Sulfide (A4)			Loamy Gleyed Matri		opt merca i	Other (Explain in Remarks)
	d Below Dark Surfa	ace (A11)		Depleted Matrix (F3)			<u> </u>
☐ Thick Da	ark Surface (A12)	, ,		Redox Dark Surface	(F6)		³ Indicators of hydrophytic vegetation and
☐ Sandy N	Mucky Mineral (S1)			Depleted Dark Surfa	ce (F7)		wetland hydrology must be present,
-	Gleyed Matrix (S4)			Redox Depressions	(F8)		unless disturbed or problematic.
Restrictive	Layer (if present)	:					
Type:							
Depth (ir	nches):						Hydric Soil Present? Yes ☐ No ☒
Remarks:							
HYDROLO)GY						
	drology Indicator						
1	icators (minimum o		iirad: ab	ook all that apply)			Secondary Indicators (2 or more required)
	-	i one requ	alleu, ch		(DO	\	Secondary Indicators (2 or more required)
☐ Surface	ater Table (A2)			☐ Water-Stained) (except wil	RA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
☐ Saturation	` ,			1, 2, 4A, an Salt Crust (B11			☐ Drainage Patterns (B10)
	larks (B1)			☐ Aquatic Inverte	•	\	☐ Dry-Season Water Table (C2)
	nt Deposits (B2)			☐ Hydrogen Sulfic	•	•	☐ Saturation Visible on Aerial Imagery (C9)
	posits (B3)			☐ Oxidized Rhizo			
1	at or Crust (B4)			☐ Presence of Re	•		Shallow Aquitard (D3)
	posits (B5)			☐ Recent Iron Re		` '	
·	Soil Cracks (B6)			☐ Stunted or Stre		•	, ,
	on Visible on Aeria	ıl İmagery	(B7)	Other (Explain			Frost-Heave Hummocks (D7)
l	y Vegetated Conca		` '	Other (Explain)	iii i keinaiks	,	Trost-ficave fluminocks (DT)
Field Obser		- Canac	(50)				
	ter Present?	Yes □	No ⊠	Depth (inches):			
Water Table		Yes 🗌	No ⊠	Depth (inches):			
Saturation F		Yes 🗌	No 🛛				tland Hydrology Present? Yes ☐ No ⊠
	pillary fringe)	res 🗀	NO 🖂	Depth (inches):		_ we	tialid Hydrology Fresent? Tes 🖂 No 🖂
		am gauge	, monito	ring well, aerial photo	os, previous	inspections)), if available:
Remarks:							

Project/Site: City of Seattle Meyers Way Remainder Property	<u>y</u> (City/Count	y: <u>Seattle</u>		Sampling Date: 05/03/2011	
Applicant/Owner: City of Seattle				_ State: WA Sampling Point: UPL-5		
Investigator(s): E. Pritchard, J. Merriman, C. Wright						
Landform (hillslope, terrace, etc.): depression		Local relie	ef (concave,	convex, none): concave	Slope (%): <u>1</u>	
Subregion (LRR): Northwest Forests and Coasts (LRR A)	_ Lat: <u>47.31</u>	1.01		Long: <u>122.20.05</u>	Datum: unknown	
Soil Map Unit Name: NRCS Soil Unit is Unavailable				NWI classificat	ion: <u>upland</u>	
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrology significantly d	•		,	•	s □ No □	
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in		
SUMMARY OF FINDINGS – Attach site map s						
Hydrophytic Vegetation Present? Yes ⊠ No □				•		
Hydric Soil Present? Yes ⊠ No □			e Sampled	Area ud? Yes⊠ No	, n	
Wetland Hydrology Present? Yes ☐ No ☒						
Remarks: March and April 2011 have been unseasonably additional inches of precipitation during March and April. S	rainy with 16 Site condition	69% of nor ns are very	mal rainfall t wet as a re	for the two months combinesult with large areas of pu	ed. This amounts to 4.42 ddling water on the surface	
No recent disturbance. Mining operations ended in 2002.	Sample plot	t is located	at the west	ern terminus of a 4-foot de	ep stormwater conveyence	
facility that is part of the mine stormwater system.						
VEGETATION – Use scientific names of plant	s.					
Trace Otastana (Blatainas Fue)	Absolute			Dominance Test works	heet:	
Tree Stratum (Plot size: 5m)	% Cover			Number of Dominant Spe		
1. Alnus rubra				I hat Are OBL, FACW, or	r FAC: <u>4</u> (A)	
2				Total Number of Domina		
3				Species Across All Strata	a: <u>5</u> (B)	
	20			Percent of Dominant Spe That Are OBL, FACW, or	ecies r FAC: <u>80</u> (A/B)	
Sapling/Shrub Stratum (Plot size: 3m)	20	V	EA C) A /	Prevalence Index work	shoot	
1. Salix sitchensis					Multiply by:	
2. Rubus armeniacus					x 1 =	
3					x 2 =	
5					x 3 =	
·	35				x 4 =	
Herb Stratum (Plot size: 1.5m)				UPL species		
Phragmites australis	10	<u>Y</u>	FACW		(A) (B)	
2. <u>Cirsium arvense</u>					5.4	
3. Equisetum arvense				Hydrophytic Vegetation	= B/A =	
4				☐ 1 - Rapid Test for Hy		
5				☐ 1 - Rapid Test for Hy		
6				☐ 3 - Prevalence Index		
7				-	aptations ¹ (Provide supporting	
8 9					or on a separate sheet)	
10				☐ 5 - Wetland Non-Vas	cular Plants ¹	
11					nytic Vegetation ¹ (Explain)	
Woody Vine Stratum (Plot size: 3m)	20		over	¹ Indicators of hydric soil a be present, unless distur	and wetland hydrology must bed or problematic.	
1. Hedera helix	1	N	UPI			
2				Hydrophytic		
% Bare Ground in Herb Stratum 80	1			Vegetation Present? Yes	⊠ No □	
Remarks:						

Profile Desc	cription: (Describe	to the d	epth ne	eded to docur	nent the i	ndicator	or confirm	the ab	sence of indicators.)
Depth	Matrix			Redo	x Feature:				
(inches)	Color (moist)	%	Colo	r (moist)	%	Type ¹	Loc ²	Textur	re Remarks
0-7	2.5Y 4/2	100						sandy	loam
<u>7-15</u>	2.5Y 5/2	95	2.5Y	5/4	5	С	M	sandy	loam
15-20+	5Y 4/1	100						loamy	sand
	-								
	-				_				
	oncentration, D=De						ed Sand Gr		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to	all LRR	s, unless othe	rwise note	ed.)		In	ndicators for Problematic Hydric Soils ³ :
Histosol	` '			Sandy Redox (S					2 cm Muck (A10)
	oipedon (A2)			Stripped Matrix					Red Parent Material (TF2)
☐ Black His				oamy Mucky M			MLRA 1)		☐ Very Shallow Dark Surface (TF12)
	n Sulfide (A4) I Below Dark Surfac	- (Δ11)		_oamy Gleyed I Depleted Matrix)		L	Other (Explain in Remarks)
	rk Surface (A12)	C (ATT)		Redox Dark Sur	` '			³ lı	Indicators of hydrophytic vegetation and
	lucky Mineral (S1)			Depleted Dark S	` '	7)			wetland hydrology must be present,
-	leyed Matrix (S4)		□ F	Redox Depressi	ions (F8)	•			unless disturbed or problematic.
Restrictive	Layer (if present):								
Type:			_						
Depth (in	ches):							Hydr	ric Soil Present? Yes 🛭 No 🗌
Remarks:								ı	
HYDROLO	GY								
	drology Indicators	:							
Primary India	cators (minimum of	one requ	ired; che	eck all that appl	y)				Secondary Indicators (2 or more required)
☐ Surface	Water (A1)			☐ Water-Stai	ned Leave	es (B9) (e	xcept MLR	RA	☐ Water-Stained Leaves (B9) (MLRA 1, 2,
☐ High Wa	ter Table (A2)				A, and 4B)		•		4A, and 4B)
☐ Saturation	on (A3)			☐ Salt Crust	(B11)				☐ Drainage Patterns (B10)
☐ Water M	arks (B1)			☐ Aquatic Inv	ertebrates	s (B13)			☐ Dry-Season Water Table (C2)
☐ Sedimen	t Deposits (B2)			☐ Hydrogen	Sulfide Od	or (C1)			☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Dep	osits (B3)			☐ Oxidized R	hizospher	es along	Living Roo	ts (C3)	☐ Geomorphic Position (D2)
☐ Algal Ma	t or Crust (B4)			☐ Presence of	of Reduce	d Iron (C4	1)		☐ Shallow Aquitard (D3)
☐ Iron Dep	osits (B5)			☐ Recent Iron	n Reductio	n in Tille	d Soils (C6)	☐ FAC-Neutral Test (D5)
☐ Surface	Soil Cracks (B6)			☐ Stunted or	Stressed	Plants (D	1) (LRR A))	Raised Ant Mounds (D6) (LRR A)
☐ Inundation	on Visible on Aerial	Imagery	(B7)	☐ Other (Exp	lain in Rer	marks)			☐ Frost-Heave Hummocks (D7)
☐ Sparsely	Vegetated Concav	e Surface	e (B8)						
Field Obser									
Surface Wat			No 🖂	Depth (inches					
Water Table	Present?	Yes ⊠	No 🗌	Depth (inches	s): <u>17</u>				
Saturation P		Yes ⊠	No 🗌	Depth (inches	s): <u>15 </u>		Wetl	and Hyd	drology Present? Yes ☐ No ⊠
(includes cap Describe Re	corded Data (strear	n gauge,	monitor	ing well, aerial	photos, pr	evious ins	spections),	if availa	able:
	`			- '	•		. "		
Remarks: Sa	aturation and ground	dwater ar	e below	12 inches.					
	•								

Project/Site: City of Seattle Meyers Way Remainder Propert	<u>y</u> (City/Coun	ity: <u>Seattle</u>		Sampling Date: 05/04/2011		
Applicant/Owner: City of Seattle				State: WA	Sampling Point: <u>UPL-6</u>		
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	wnship, Range: <u>S32, T24</u>	N, R4EWM		
Landform (hillslope, terrace, etc.): hillslope		Local rel	lief (concave,	convex, none): convex	Slope (%): <u>10</u>		
Subregion (LRR): Northwest Forests and Coasts (LRR A)	Lat: 47.31	1.04	Long: 122.20.02 Datum: unknowr				
Soil Map Unit Name: NRCS Soil Unit is Unavailable		-					
Are climatic / hydrologic conditions on the site typical for this					· · · · · · · · · · · · · · · · · · ·		
Are Vegetation, Soil, or Hydrology sign	-			ormal Circumstances" pres	ent? Yes⊠ No□		
Are Vegetation, Soil, or Hydrology natu	-			ed, explain any answers in			
SUMMARY OF FINDINGS – Attach site map							
Hydrophytic Vegetation Present? Yes ☐ No ☒							
Hydric Soil Present? Yes ⊠ No □			he Sampled		_		
Wetland Hydrology Present? Yes ☐ No ☒		wit	hin a Wetlan	nd? Yes ☐ No) <u> </u>		
Remarks: March and April 2011 have been unseasonably additional inches of precipitation during March and April.	rainy with 16	69% of no	ormal rainfall	for the two months combin	ed. This amounts to 4.42		
No recent disturbance to the area. Mining operations ende	ed in 2002.	Soils are	mixed from h	istoric mining practices.			
VEGETATION – Use scientific names of plant	ts.						
		Dominan	nt Indicator	Dominance Test works	heet:		
Tree Stratum (Plot size: 5m) 1	% Cover			Number of Dominant Spo That Are OBL, FACW, or	ecies r FAC: <u>2</u> (A)		
2				Total Number of Domina	unt		
3				Species Across All Strata			
4				Percent of Dominant Spe	ncine		
Sapling/Shrub Stratum (Plot size: 3m)	0	= Total (Cover	That Are OBL, FACW, or			
Populus balsamifera	10	<u>Y</u>	FAC	Prevalence Index work			
2. Cytisus scoparius	10	<u>Y</u>	UPL	Total % Cover of:	Multiply by:		
3. Rubus armeniacus					x 1 =		
4					x 2 =		
5				· · · · · · · · · · · · · · · · · · ·	x 3 =		
Herb Stratum (Plot size: 1.5m)	30	= Total (Cover		x 4 =		
1. Juncus effusus	40	Υ	FACW		x 5 = (A) (B)		
Hypericum perforatum				Column rotals.	(A) (D)		
3				Prevalence Index	= B/A =		
4.				Hydrophytic Vegetation	n Indicators:		
5		-	_	☐ 1 - Rapid Test for Hy	drophytic Vegetation		
6				2 - Dominance Test i	is >50%		
7				3 - Prevalence Index			
8					laptations ¹ (Provide supporting or on a separate sheet)		
9				5 - Wetland Non-Vas	• .		
10				'-	nytic Vegetation ¹ (Explain)		
11				_ , ,	and wetland hydrology must		
Woody Vine Stratum (Plot size: 3m)	65	= Total (Cover	be present, unless distur			
Hedera helix Z	1		UPL	Hydrophytic			
% Bare Ground in Herb Stratum 20	1		Cover	Vegetation Present? Yes	□ No ⊠		
Remarks: Lots of gravel patches							
3 · · · · · · · · · · · · · · · · · · ·							

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth	Matrix			Redo	x Feature						
(inches)	Color (moist)	%	Colo	or (moist)	%	Type ¹	Loc ²	Textur	<u>e</u>	Remarks	
<u>0-11</u>	2.5Y 5/2	60						gr. l. f.	sand_	mixed matrix	
0-11	2.5Y 5/1	40						gr. l. f.	sand	mixed matrix	
11-17+	2.5Y 4/1	100						gr. s. lo	am	very compacted	
			_								
								-			
										-	
					_						
			_								
¹ Type: C=C	oncentration, D=De	pletion. F	RM=Red	uced Matrix. C	S=Covere	d or Coate	ed Sand G	rains.	² Loc	cation: PL=Pore Lining, M=M	atrix.
	Indicators: (Appli									rs for Problematic Hydric S	
☐ Histosol	(A1)			Sandy Redox (S5)] 2 cm	Muck (A10)	
☐ Histic Ep	oipedon (A2)			Stripped Matrix] Red	Parent Material (TF2)	
	stic (A3)			_oamy Mucky N			MLRA 1)		_ ,	Shallow Dark Surface (TF12)
	n Sulfide (A4)			_oamy Gleyed)] Othe	er (Explain in Remarks)	
	d Below Dark Surfac	e (A11)		Depleted Matrix	` '			3.			
	ark Surface (A12) Mucky Mineral (S1)		_	Redox Dark Su Depleted Dark :	` ,	7 \		°Ir		ors of hydrophytic vegetation and hydrology must be presen	
	Bleyed Matrix (S4)			Redox Depress	•	1)				s disturbed or problematic.	٠,
_	Layer (if present):		Ш'	tedex Depress	10110 (1 0)				unico	o distarbed or problematio.	
Type:	, ,										
Depth (in								Hydri	ic Soil	Present? Yes ⊠ No □	
. `	urface soils appear	to he mix	ed from	historic mining	practices			,			
rtomanto. Ot	ariado dono appoar		.00 110111	Thotorio mining	pradado						
HYDROLO	GY										
Wetland Hy	drology Indicators	:									
Primary Indi	cators (minimum of	one requ	ired; ch	eck all that app	ly)				Secor	ndary Indicators (2 or more re	quired)
☐ Surface	Water (A1)			☐ Water-Sta	ined Leave	es (B9) (e :	xcept MLF	RA	\square W	ater-Stained Leaves (B9) (ML	.RA 1, 2,
_	iter Table (A2)				A, and 4B)				4A, and 4B)	
☐ Saturation	on (A3)			☐ Salt Crust	(B11)					rainage Patterns (B10)	
	larks (B1)			Aquatic In		. ,				ry-Season Water Table (C2)	
	nt Deposits (B2)			Hydrogen						aturation Visible on Aerial Ima	gery (C9)
-	posits (B3)			Oxidized F		_	_	ots (C3)		eomorphic Position (D2)	
	at or Crust (B4)			Presence		,	,			nallow Aquitard (D3)	
-	oosits (B5)			☐ Recent Iro			`	,		AC-Neutral Test (D5)	• `
	Soil Cracks (B6)		(DZ)	☐ Stunted or			1) (LRR A))		aised Ant Mounds (D6) (LRR	A)
	on Visible on Aerial			☐ Other (Exp	olain in Re	marks)			⊔ Fr	ost-Heave Hummocks (D7)	
	/ Vegetated Concav	е бипас	e (B8)				1				
Field Obser		V □	No 🏻	Donth (inche	٠١.						
Surface Wat			No ⊠	Depth (inches							
Water Table			No ⊠	Depth (inches						.	
Saturation P	resent? pillary fringe)	Yes 🗌	No 🛛	Depth (inche	s):		Weti	and Hyd	irolog	y Present? Yes ☐ No ⊠	
	ecorded Data (strear	n gauge,	monitor	ing well, aerial	photos, pr	evious ins	spections),	if availa	ble:		
	•			-	•		,.				
Remarks: O	xidized rhvzosphere	s are wit	hin the ı	upper 2 inches	of the soil	profile. G	iven the su	ubstantia	ılly wet	ter conditions resulting from a	bove
normal rainfa	all, it is our best pro									ur within the soil profile to be	
I indication of	wetland hydrology.										

Project/Site: City of Seattle Meyers Way Remainder Propert	v	City/Coun	tv: Seattle	;	Sampling Date:05/04/2011
		-	-	State: WA	· -
Investigator(s): E. Pritchard, J. Merriman, C. Wright					
Landform (hillslope, terrace, etc.): flat					
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable				_	
•					on. <u>upianu</u>
Are climatic / hydrologic conditions on the site typical for this	•		`	,	
Are Vegetation, Soil, or Hydrology sign				ormal Circumstances" prese	
Are Vegetation, Soil, or Hydrology natu	rally probler	natic?	(If need	ed, explain any answers in I	Remarks.)
SUMMARY OF FINDINGS – Attach site map s	showing	samplii	ng point l	ocations, transects, i	important features, etc.
Hydrophytic Vegetation Present? Yes ☐ No ☒					
Hydric Soil Present? Yes No			he Sampled		_
Wetland Hydrology Present? Yes ☐ No ☒		wit	hin a Wetlar	nd? Yes ☐ No	
Remarks: March and April 2011 have been unseasonably additional inches of precipitation during March and April. S	rainy with 16 Site condition	69% of no	ormal rainfall ry wet as a re	for the two months combine esult of recent rainfal and the	ed. This amounts to 4.42 ere are large puddles in the
vicinity of the sample plot.					
No recent disturbance to the area. Mining operations ende	ed in 2002.	Soils are	mixed from h	nistoric mining practices.	
VEGETATION – Use scientific names of plant	s.				
Tree Stratum (Plot size: 5m)			nt Indicator	Dominance Test worksh	neet:
1			? Status	Number of Dominant Spe	cies FAC: <u>2</u> (A)
				That Are OBL, I ACW, or	1 AC. <u>2</u> (A)
2				Total Number of Dominar Species Across All Strata	
4					` , ,
	0	= Total (Cover	Percent of Dominant Spe That Are OBL, FACW, or	cies FAC: <u>40</u> (A/B)
Sapling/Shrub Stratum (Plot size: 3m)	40	.,	E40		
1. Populus balsamifera			<u>FAC</u>	Prevalence Index works	Multiply by:
Cytisus scoparius Rubus armeniacus	<u>10</u>			OBL species	
4				FACW species	
5			- ——	FAC species	
	30	= Total (Cover	FACU species	
Herb Stratum (Plot size: 1.5m)					x 5 =
Agrostis capillaris	40	<u>Y</u>	FAC	Column Totals:	(A) (B)
2. Hypericum perforatum			UPL		5/4
3. Holcus lanatus					: B/A =
4. Plantango lanceolata				Hydrophytic Vegetation	
5. Geum macrophyllum				1 - Rapid Test for Hyd	
6. <u>Taraxacum officinale</u>				☐ 2 - Dominance Test is☐ 3 - Prevalence Index	
7					aptations¹ (Provide supporting
8					or on a separate sheet)
9				5 - Wetland Non-Vaso	cular Plants ¹
10 11				☐ Problematic Hydrophy	ytic Vegetation ¹ (Explain)
111.	92			¹ Indicators of hydric soil a be present, unless disturb	and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)				be present, unless disturt	Ded of problematic.
1				Hydrophytic	
2				Vegetation	
% Bare Ground in Herb Stratum 5	0	= Total (Cover	Present? Yes	□ No ⊠
Remarks:					
I .					

Profile Desc Depth	-		depth ne		nent the indicator x Features	or confirr	n the at	bsence of indicators.)
(inches)	Matrix Color (moist)	%	Colo	or (moist)	<u>% Type¹</u>	Loc ²	Textu	ure Remarks
0-15	2.5Y 4/2	65					loam	
0-15	2.5Y 4/1	45					loam	
	-							nd .
15-20+	2.5Y 4/2	<u>100</u>			·		l. f. saı	
					- 			
					·			
		•			S=Covered or Coat	ed Sand G		² Location: PL=Pore Lining, M=Matrix.
-	Indicators: (App	licable to	all LRR	s, unless other	wise noted.)		lı	ndicators for Problematic Hydric Soils ³ :
Histosol	• •			Sandy Redox (S				2 cm Muck (A10)
	pipedon (A2)			Stripped Matrix (• •	MI DA 4\	Ļ	Red Parent Material (TF2)
☐ Black Hi	, ,				lineral (F1) (except	MLRA 1)		☐ Very Shallow Dark Surface (TF12)☐ Other (Explain in Remarks)
	n Sulfide (A4) d Below Dark Surfa	nce (Δ11)		_oamy Gleyed N Depleted Matrix			L	Other (Explain in Remarks)
	ark Surface (A12)	ace (ATT)		Redox Dark Sur	• •		3	Indicators of hydrophytic vegetation and
	lucky Mineral (S1)			Depleted Dark S	, ,		•	wetland hydrology must be present,
-	leyed Matrix (S4)			Redox Depressi	ons (F8)			unless disturbed or problematic.
Restrictive	Layer (if present)	:						
Type:								
Depth (in	ches):						Hydi	ric Soil Present? Yes 🗌 No 🛛
Remarks: U	oper 15 inches apr	ears to b	e mixed.	This is likely a	result of mining ac	tivities.		
				-	-			
HYDROLO								
-	drology Indicator							
Primary Indi	cators (minimum o	f one requ	uired; ch		•			Secondary Indicators (2 or more required)
□ Surface	` '				ned Leaves (B9) (e	xcept MLI	RA	☐ Water-Stained Leaves (B9) (MLRA 1, 2,
☐ High Wa	ter Table (A2)			1, 2, 4A	, and 4B)			4A, and 4B)
☐ Saturation	` ,			☐ Salt Crust (☐ Drainage Patterns (B10)
☐ Water M	` '				ertebrates (B13)			☐ Dry-Season Water Table (C2)
	nt Deposits (B2)				Sulfide Odor (C1)			Saturation Visible on Aerial Imagery (C9)
	oosits (B3)				hizospheres along	-	ots (C3)	
	it or Crust (B4)				of Reduced Iron (C4	,		Shallow Aquitard (D3)
-	osits (B5)				Reduction in Tille	•	,	FAC-Neutral Test (D5)
	Soil Cracks (B6)				Stressed Plants (D	1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
	on Visible on Aeria				lain in Remarks)			☐ Frost-Heave Hummocks (D7)
	Vegetated Conca	ve Surfac	e (B8)					
Field Obser		v 🖂		5 " " '				
Surface Wat		Yes ⊠	No 🗆	Depth (inches	·			
Water Table		Yes ⊠	No 🗆	Depth (inches				
Saturation P (includes ca	resent? pillary fringe)	Yes ⊠	No 🗌	Depth (inches): <u>17 </u>	Wet	land Hy	vdrology Present? Yes ☐ No ⊠
		am gauge	, monitor	ing well, aerial p	photos, previous in	spections),	if availa	able:
	ne upper 2 inches or from recent rain				a small puddle is lo	cated app	roximate	ely 3 feet from the test pit. This appears to be
				•	orofile Given the s	uhetantially	v wetter	conditions resulting from above normal rainfall,
	professional judge							n the soil profile is not sufficient indication of

Project/Site: City of Seattle Meyers Way Remainder Propert	y	City/Count	y: Seattle	S	ampling Date:05/04/2011
		-	-	State: WA S	· -
Investigator(s): E. Pritchard, J. Merriman, C. Wright					
Landform (hillslope, terrace, etc.): flat					
Subregion (LRR): Northwest Forests and Coasts (LRR A)		=	,	, -	
Soil Map Unit Name: NRCS Soil Unit is Unavailable					
Are climatic / hydrologic conditions on the site typical for this					п. арына
Are Vegetation, Soil, or Hydrology sign	•		_ `	ormal Circumstances" preser	ot2 Voc ⊠ No □
				·	
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in R	
SUMMARY OF FINDINGS – Attach site map s	showing	samplin	g point l	ocations, transects, ii	nportant features, etc.
Hydrophytic Vegetation Present? Yes ⊠ No □		le th	ne Sampled	Area	
Hydric Soil Present? Yes ☐ No ☒			•	nd? Yes ☐ No [\boxtimes
Wetland Hydrology Present? Yes ☐ No ☒					
Remarks: March and April 2011 have been unseasonably additional inches of precipitation during March and April. S					
No recent disturbance. Mining operations ended in 2002. recent rainfall.		•			· ·
VEGETATION – Use scientific names of plant	ts.				
		Dominant	Indicator	Dominance Test worksho	eet:
<u>Tree Stratum</u> (Plot size: <u>5m</u>)	% Cover			Number of Dominant Spec	
1				That Are OBL, FACW, or F	AC: <u>2</u> (A)
2				Total Number of Dominant	
3				Species Across All Strata:	<u>2</u> (B)
4			`	Percent of Dominant Spec	
Sapling/Shrub Stratum (Plot size: 3m)	0	= rotar C	over	That Are OBL, FACW, or F	FAC: <u>100</u> (A/B)
1. Populus balsamifera	40	<u>Y</u>	FAC	Prevalence Index worksh	ieet:
2. Cytisus scoparius	5	N	UPL	Total % Cover of:	Multiply by:
3. Rubus armeniacus	1	<u>N</u>	FACU	OBL species	x 1 =
4				FACW species	
5				FAC species	
Herb Stratum (Plot size: 1.5m)	46	= Total C	Cover	FACU species	
1. Musci spp.	40	Υ	NI	· -	x 5 =
2. Agrostis capillaris	30		FAC	Column Lotals:	(A) (B)
3. Holcus lanatus			FAC	Prevalence Index =	B/A =
4. Plantango lanceolata			FAC	Hydrophytic Vegetation	ndicators:
5. Juncus effusus			FACW	☐ 1 - Rapid Test for Hydi	ophytic Vegetation
6. Tanacetum vulgare	5	N	NI	☐ 2 - Dominance Test is	>50%
7. Hypochaeris radicata	5	N	FACU	3 - Prevalence Index is	i ≤3.0 ¹
8. Carex spp.	1	<u>N</u>	FACW		otations ¹ (Provide supporting on a separate sheet)
9				5 - Wetland Non-Vasci	• .
10				☐ Problematic Hydrophyt	
11				¹ Indicators of hydric soil ar	• , , ,
Woody Vine Stratum (Plot size: 3m)	96	= Total C	Cover	be present, unless disturbe	ed or problematic.
1					
2.				Hydrophytic Vegetation	
	0	= Total C	Cover		☑ No □
% Bare Ground in Herb Stratum <u>5</u>					
Remarks:					

Depth Ma	trix		Redox	Features			
(inches) Color (moist)	%	Colo	or (moist)	% Type ¹	Loc ²	Texture	Remarks
0-8 <u>2.5Y 5/2</u>	100					loamy sa	and
8-18+ 2.5Y 4/2	100					loam	
	· · · · · · · · · · · · · · · · · · ·						
¹ Type: C=Concentration, D	=Depletion	RM=Red	uced Matrix CS	=Covered or Coate	ed Sand Gr	ains	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (A					ou ouriu or		icators for Problematic Hydric Soils ³ :
☐ Histosol (A1)			Sandy Redox (S				2 cm Muck (A10)
☐ Histic Epipedon (A2)			Stripped Matrix (Red Parent Material (TF2)
☐ Black Histic (A3)		□ I	Loamy Mucky M	ineral (F1) (except	MLRA 1)		Very Shallow Dark Surface (TF12)
☐ Hydrogen Sulfide (A4)			Loamy Gleyed M	, ,			Other (Explain in Remarks)
Depleted Below Dark S	, ,		Depleted Matrix	• •		•	
☐ Thick Dark Surface (A1:	•		Redox Dark Surf	` '			dicators of hydrophytic vegetation and
Sandy Mucky Mineral (S			Depleted Dark S				wetland hydrology must be present,
Sandy Gleyed Matrix (S Restrictive Layer (if prese		'	Redox Depression	ons (F8)		1	unless disturbed or problematic.
	•						
Type:						Unicalmia	Call Brancost 2 Vac 🗆 No 🕅
Depth (inches): Remarks: .						Hydric	Soil Present? Yes No 🗵
	tors:						
Wetland Hydrology Indica		uired; che	eck all that apply	<i>(</i>)			Secondary Indicators (2 or more required)
Wetland Hydrology Indica Primary Indicators (minimur		uired; ch		•	xcept MLR		
Wetland Hydrology Indica Primary Indicators (minimur ⊠ Surface Water (A1)		uired; ch	☐ Water-Stair	/) ned Leaves (B9) (e , and 4B)	xcept MLR		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indica Primary Indicators (minimur ☑ Surface Water (A1)		uired; che	☐ Water-Stair	ned Leaves (B9) (e ,, and 4B)	xcept MLR	RA [☐ Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3)		uired; ch	☐ Water-Stain 1, 2, 4A ☐ Salt Crust (ned Leaves (B9) (e ,, and 4B)	xcept MLR	R A [☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3)	n of one req	uired; che	☐ Water-Stain 1, 2, 4A ☐ Salt Crust (I) ☐ Aquatic Inve	ned Leaves (B9) (e , and 4B) B11)	xcept MLR	R A [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10)
Wetland Hydrology Indicators (minimum Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2)	n of one req	uired; ch	Water-Stair 1, 2, 4A Salt Crust (Aquatic Inve	ned Leaves (B9) (e, and 4B) B11) ertebrates (B13)] A S	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	n of one req	uired; che	Water-Stair 1, 2, 4A Salt Crust (I Aquatic Invo	ned Leaves (B9) (e, and 4B) B11) ertebrates (B13) Sulfide Odor (C1)	Living Roof	RA [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators (minimur Indicators (minimur Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	n of one req	uired; ch	Water-Stair 1, 2, 4A Salt Crust (I Aquatic Invo Hydrogen S Oxidized Rt Presence o	ned Leaves (B9) (e, and 4B) B11) ertebrates (B13) Gulfide Odor (C1) nizospheres along	Living Root	RA [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2)
Wetland Hydrology Indica Primary Indicators (minimur 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 req	uired; che	Water-Stair 1, 2, 4A Salt Crust (I Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S	ned Leaves (B9) (e., and 4B) B11) ertebrates (B13) Sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tille Stressed Plants (D	Living Roof 4) d Soils (C6)	RA [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators (minimur Indicat	n of one req	, (B7)	Water-Stair 1, 2, 4A Salt Crust (I Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S	ned Leaves (B9) (e., and 4B) B11) ertebrates (B13) Sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tille	Living Roof 4) d Soils (C6)	RA [[[ts (C3) [[]]	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators (minimur Indicators (minimur Ingine	n of one req	, (B7)	Water-Stair 1, 2, 4A Salt Crust (I Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S	ned Leaves (B9) (e., and 4B) B11) ertebrates (B13) Sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tille Stressed Plants (D	Living Roof 4) d Soils (C6)	RA [[[ts (C3) [[]]	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indica Primary Indicators (minimur 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 Coi	n of one req	/ (B7) ce (B8)	Water-Stain 1, 2, 4A Salt Crust (I) Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leaves (B9) (e., and 4B) B11) ertebrates (B13) Sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tilles Stressed Plants (D ain in Remarks)	Living Roof 4) d Soils (C6)	RA [[[ts (C3) [[]]	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators (minimur Indicat	n of one req	/ (B7) ce (B8)	Water-Stair 1, 2, 4A Salt Crust (I Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leaves (B9) (e., and 4B) B11) ertebrates (B13) Sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tille Stressed Plants (D ain in Remarks)	Living Roof 4) d Soils (C6)	RA [[[ts (C3) [[]]	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators (minimur 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 Coi Field Observations: Surface Water Present?	n of one req	/ (B7) ce (B8) No	Water-Stair 1, 2, 4A Salt Crust (I Aquatic Invo Hydrogen S Oxidized Rt Presence o Recent Iron Stunted or S Other (Expl	ned Leaves (B9) (e, and 4B) B11) ertebrates (B13) Sulfide Odor (C1) nizospheres along f Reduced Iron (C4) Reduction in Tille Stressed Plants (D ain in Remarks)	Living Roof 4) d Soils (C6) 1) (LRR A)	ts (C3) [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indica Primary Indicators (minimur 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 Coof Field Observations: Surface Water Present? Water Table Present?	n of one req	/ (B7) ce (B8)	Water-Stair 1, 2, 4A Salt Crust (I Aquatic Invo Hydrogen S Oxidized Rt Presence o Recent Iron Stunted or S Other (Expl	ned Leaves (B9) (e., and 4B) B11) ertebrates (B13) Sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tille Stressed Plants (D ain in Remarks)	Living Roof 4) d Soils (C6) 1) (LRR A)	ts (C3) [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indica Primary Indicators (minimur 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 Con Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	n of one requirements of o	/ (B7) ce (B8) No No No No No No No No	Water-Stair 1, 2, 4A Salt Crust (I Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leaves (B9) (e., and 4B) B11) ertebrates (B13) Sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tille Stressed Plants (D ain in Remarks)): 1	Living Roof 4) d Soils (C6) 1) (LRR A)	RA [[[ts (C3) []] []	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) cology Present? Yes □ 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 A6	n of one requirements of o	/ (B7) ce (B8) No No No No No No No No	Water-Stair 1, 2, 4A Salt Crust (I Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leaves (B9) (e., and 4B) B11) ertebrates (B13) Sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tille Stressed Plants (D ain in Remarks)): 1	Living Roof 4) d Soils (C6) 1) (LRR A)	RA [[[ts (C3) []] []	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) cology Present? Yes □ No ⊠
Wetland Hydrology Indica Primary Indicators (minimur 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 Cor Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (st	rof one required in of one required in one req	/ (B7) ce (B8) No No No No pe, monitor	Water-Stain 1, 2, 4A Salt Crust (I Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl Depth (inches) Depth (inches) Depth (inches) ing well, aerial p	ned Leaves (B9) (e., and 4B) B11) ertebrates (B13) Sulfide Odor (C1) nizospheres along f Reduced Iron (C4 Reduction in Tiller Stressed Plants (D ain in Remarks) 1: 1 1: 2: 2: 2: 3: a small puddle is	Living Roof d Soils (C6) 1) (LRR A) Wetla spections),	ts (C3) [its (C3	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7) rology Present? Yes □ No ☑ le:
Wetland Hydrology Indica Primary Indicators (minimur 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 Con Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (so	ricave Surface Yes Yes Yes Tream gauge tream gauge	/ (B7) ce (B8) No	Water-Stain 1, 2, 4A Salt Crust (I) Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Depth (inches) Depth (inches) ring well, aerial p	ned Leaves (B9) (e, and 4B) B11) ertebrates (B13) Sulfide Odor (C1) nizospheres along f Reduced Iron (C2 Reduction in Tille Stressed Plants (D ain in Remarks) 1: 1 1: 1 1: 1 1: 1 2: 1 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2	Living Roof 4) d Soils (C6) 1) (LRR A) Wetla spections),	ts (C3) [ts (C3) [[] and Hydr if available croximatel in18 inches	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7) rology Present? Yes □ No □

Project/Site: City of Seattle Meyers Way Remainder Proper	ty	City/Cour	nty: <u>Seattle</u>		Sampling Date: 05/04/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: <u>UPL-9</u>
Investigator(s): E. Pritchard, J. Merriman, C. Wright			_ Section, To	ownship, Range: <u>S5, T23N</u>	I, R4EWM
Landform (hillslope, terrace, etc.): flat		_Local re	lief (concave,	convex, none): none	Slope (%): <u>0</u>
Subregion (LRR): Northwest Forests and Coasts (LRR A)	Lat: 47.3	0.59		Long: 122.20.03	Datum: unknown
Soil Map Unit Name: NRCS Soil Unit is Unavailable					
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes [☐ No 🏻 (I	f no, explain in Remarks.)	1
Are Vegetation, Soil, or Hydrology sign	-			ormal Circumstances" pres	
Are Vegetation, Soil, or Hydrology natu			(If need	ed, explain any answers ir	n Remarks.)
SUMMARY OF FINDINGS – Attach site map			,	•	,
Hydrophytic Vegetation Present? Yes □ No ☒					
Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☐ No ☒			the Sampled		
Wetland Hydrology Present? Yes ☐ No ☒		Wit	thin a Wetlar	nd? Yes □ N	lo 🗵
Remarks: No recent disturbance. Mining operations ende result recent rainfall. March and April 2011 have been uns to 4.42 additional inches of precipitation during March and ruts. VEGETATION – Use scientific names of plan	seasonably April. Site	rainy with	169% of nor	mal rainfall for the two mo	onths combined. This amounts
The state of the s		Dominar	nt Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size: 5m) 1	% Cover	Species	? Status	Number of Dominant Sp That Are OBL, FACW, of	pecies or FAC: 2 (A)
2.					, ,
3.				Total Number of Domina Species Across All Stra	
4	-			Percent of Dominant Sp	pocios
Conling/Chruh Stratum (Dlot size: 2m)	0	= Total	Cover		or FAC: <u>40</u> (A/B)
Sapling/Shrub Stratum (Plot size: 3m) 1. Populus balsamifera	10	Y	FAC	Prevalence Index worl	ksheet:
2. Cytisus scoparius				Total % Cover of:	
3. Rubus armeniacus					x 1 =
4				FACW species	x 2 =
5					x 3 =
Horb Stratum (Diet cizo: 1 Em)	<u>25</u>	= Total	Cover		x 4 =
Herb Stratum (Plot size: 1.5m) 1. Agrostis capillaris	40	Υ	FAC	UPL species	
Tanacetum vulgare	20		NI	Column Totals:	(A) (B)
3. Daucus carota	20			Prevalence Index	= B/A =
4. Juncus effusus	3	N	FACW	Hydrophytic Vegetation	on Indicators:
5. Holcus lanatus	1	N	FAC	☐ 1 - Rapid Test for H	
6. Plantango lanceolata			FAC	2 - Dominance Test	
7				3 - Prevalence Inde	
8					daptations ¹ (Provide supporting s or on a separate sheet)
9				5 - Wetland Non-Va	· · · · · · · · · · · · · · · · · · ·
10				☐ Problematic Hydrop	ohytic Vegetation ¹ (Explain)
11. Woody Vino Stratum (Plot cize: 2m)	85		Cover	¹ Indicators of hydric soil be present, unless distu	l and wetland hydrology must urbed or problematic.
Woody Vine Stratum (Plot size: 3m) 1					
2.				Hydrophytic Vegetation	
	0			_	s □ No ⊠
% Bare Ground in Herb Stratum 15					
Remarks:					

Profile Desc	cription: (Describe	e to the o	lepth ne	eded to docu	ment the i	ndicator	or confirm	the ab	sence	of indicators.)
Depth	Matrix			Redo	x Features					
(inches)	Color (moist)	%	Colo	r (moist)	%	Type ¹	Loc ²	Textu	re	Remarks
<u>0-8</u>	2.5Y 4/2	50						loam		mixed matrix
0-8	2.5Y 5/2	50						loam		mixed matrix
8-15+	2.5Y 4/2	100						l. f. saı	nd	compacted
								-		
					_					
					_					
¹ Type: C=C	oncentration, D=De	pletion, F	RM=Red	uced Matrix, C	S=Covered	d or Coate	ed Sand Gr	ains.	² Lo	cation: PL=Pore Lining, M=Matrix.
	Indicators: (Appli								ndicato	ors for Problematic Hydric Soils ³ :
☐ Histosol	` '			Sandy Redox (S	S5)] 2 cm	n Muck (A10)
	pipedon (A2)			Stripped Matrix	, ,					Parent Material (TF2)
☐ Black Hi	, ,			_oamy Mucky N	•		MLRA 1)		-	/ Shallow Dark Surface (TF12)
	n Sulfide (A4)	(044)		Loamy Gleyed I				L	_ Othe	er (Explain in Remarks)
	l Below Dark Surfac ork Surface (A12)	ce (ATT)	_	Depleted Matrix Redox Dark Su	` '			3	ndicato	ors of hydrophytic vegetation and
	lucky Mineral (S1)			Depleted Dark	` '	7)		'		and hydrology must be present,
	leyed Matrix (S4)		_	Redox Depress	•	,				ss disturbed or problematic.
Restrictive	Layer (if present):			-						
Type:										
Depth (in	ches):							Hydr	ic Soil	Present? Yes ☐ No ⊠
Remarks: U	oper 8 inches appea	ars to be	mixed.	This is likely a r	esult of m	ining activ	rities.	1		
HYDROLO	CV									
-	drology Indicators		عام بام مدا		I. A				C	and any landicators (2 ar magazinad)
	cators (minimum of	one requ	irea; che		-	- (DO) (ndary Indicators (2 or more required)
Surface	` ,			☐ Water-Stai			ксерт ишн	KA	□ w	/ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
☐ Saturation	ter Table (A2)			I, 2, 4/	A, and 4B)	,				rainage Patterns (B10)
	arks (B1)			☐ Aquatic Inv	• •	: (B13)				ry-Season Water Table (C2)
	it Deposits (B2)			☐ Hydrogen		, ,				aturation Visible on Aerial Imagery (C9)
	oosits (B3)			☐ Oxidized F			l iving Roo	ts (C3)		eomorphic Position (D2)
-	it or Crust (B4)			☐ Presence		_	_	10 (00)		hallow Aquitard (D3)
	osits (B5)			☐ Recent Iro		•	,)		AC-Neutral Test (D5)
-	Soil Cracks (B6)			☐ Stunted or			`	,		aised Ant Mounds (D6) (LRR A)
	on Visible on Aerial	Imagery	(B7)	Other (Exp			, ,			rost-Heave Hummocks (D7)
	Vegetated Concav									
Field Obser	vations:									
Surface Wat	er Present?	Yes 🛚	No 🗌	Depth (inches	s): <u>1</u>					
Water Table	Present?		No 🛛	Depth (inches						
Saturation P	resent?	Yes 🗌	No ⊠	Depth (inches	s):		Wetl	and Hy	drolog	y Present? Yes □ No ⊠
	pillary fringe)		.,							-
Describe Re	corded Data (strear	n gauge,	monitor	ing well, aerial	pnotos, pr	evious ins	spections),	ıt availa	ible:	
										Water is present at the surface to depth er. No water table observed within 15
inches of the		appears		acc water no		4114 13	mineu	.5 g.00	. 14 11 416	water table observed within 10
Ĩ										

Project/Site: City of Seattle Meyers Way Remainder Propert	у	City/Count	ty: <u>Seattle</u>		Sampling Date: 05/04/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: <u>UPL-10</u>
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	wnship, Range: <u>S6, T23N,</u>	R4EWM
Landform (hillslope, terrace, etc.): flat		Local reli	ef (concave,	convex, none): none	Slope (%): <u>0</u>
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable				NWI classificat	ion: upland
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	-			ormal Circumstances" pres	ent? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in	
SUMMARY OF FINDINGS – Attach site map			•	•	,
Hydrophytic Vegetation Present? Yes ⊠ No □		1- 4	h a Camanda d	A	
Hydric Soil Present? Yes ⊠ No □			he Sampled hin a Wetlar		
Wetland Hydrology Present? Yes ☐ No ☒				_	_
Remarks: No recent disturbance. Mining operations ender result recent rainfall. March and April 2011 have been uns to 4.42 additional inches of precipitation during March and surface in tire ruts. VEGETATION – Use scientific names of plant	easonably i April. Site	rainy with	169% of nor	mal rainfall for the two mon	ths combined. This amounts
VEGETATION OSC SCIENTIFIC HAIRCS OF PIANT		Dominan	t Indicator	Dominance Test works	heet:
Tree Stratum (Plot size: 5m) 1	% Cover	Species'	? Status	Number of Dominant Spe That Are OBL, FACW, or	ecies
2				Total Number of Domina	nt
3				Species Across All Strata	-
4				Percent of Dominant Spe	acies
Sapling/Shrub Stratum (Plot size: 3m)	0	= Total (Cover	That Are OBL, FACW, or	
1. Populus balsamifera	5	N	FAC	Prevalence Index work	sheet:
Cytisus scoparius					Multiply by:
3				OBL species 0	
4				FACW species 0	x 2 = <u>0</u>
5					x 3 = <u>288</u>
	6	= Total (Cover	FACU species 0	
Herb Stratum (Plot size: 1.5m)	75	V	FAC	UPL species 11	
Agrostis capillaris Cardimine oligosperma	<u>75</u> 5	<u>Y</u> N	FAC FAC	Column Totals: 107	(A) <u>343</u> (B)
Daucus carota			UPL	Prevalence Index :	= B/A = <u>3.2</u>
4. Vicia sativa			UPL	Hydrophytic Vegetation	n Indicators:
5. Plantango lanceolata			FAC	☐ 1 - Rapid Test for Hy	drophytic Vegetation
6. Holcus lanatus			FAC	2 - Dominance Test i	s >50%
7				3 - Prevalence Index	is ≤3.0 ¹
8				4 - Morphological Ad	aptations ¹ (Provide supporting or on a separate sheet)
9				5 - Wetland Non-Vas	
10			·		ytic Vegetation ¹ (Explain)
11				l .	and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	96			be present, unless distur	
1			· ——	Hydrophytic	
2			2	Vegetation	
% Bare Ground in Herb Stratum <u>5</u>	U	= Total (Jover	riesent? Yes	□ No ⊠
Remarks: Area is dominated by a single non-native, disturb		ted, faculta	ative species	Therefore, we used the p	prevalence index to determine
that the area does not meet the hydrophytic vegetation crit	eria.				

Depth	Matrix				dox Featur		. 2					
	Color (moist)	%		or (moist)	%	Type ¹	Loc ²	Texture	<u>e</u> _		Remarks	
-6	2.5Y 5/1	95	<u>2.5Y</u>	5/4	<u>5</u>	<u>C</u>	<u>M</u>	<u>loamy s</u>	and	Soils appea	ar disturbed	d by grading
-18+	2.5Y 4/2	<u>100</u>						I. f. sand	<u>d</u>			
								-				
				184.11					2,			
	ncentration, D=Dendicators: (Appl						ed Sand G			ation: PL=F		, M=Matrix. rdric Soils³:
Histosol (A		ouble te		Sandy Redox		ricu.,				Muck (A10)	-	
_ ,	pedon (A2)			Stripped Matri						Parent Mate		
Black Hist				_oamy Mucky	, ,	1) (excep	t MLRA 1)			Shallow Da		(TF12)
	Sulfide (A4)			_oamy Gleyed	•		,			r (Explain in		
Depleted I	Below Dark Surfa	ce (A11)		Depleted Matr	rix (F3)							
	k Surface (A12)			Redox Dark S	,	•		³ ln		rs of hydrop		
-	ucky Mineral (S1)			Depleted Dark						nd hydrology		
	eyed Matrix (S4) ayer (if present):			Redox Depres	ssions (F8))		1	unies	s disturbed o	or problem	atic.
	ayer (ii present).											
	hes):							l le calad	- 0-:1	Present?	V M	Na 🖂
											ies 🖂	No 🗌
. ,								1	C 3011			
remarks: Sar	ndy soils.											
YDROLOG	ndy soils.	S :		eck all that ap	ylq:						ors (2 or m	nore required)
Pemarks: Sar POROLOG Vetland Hyd Primary Indica	GY Irology Indicators	S :				ves (B9) (6	except MLF		Secor	ndary Indicat	•	
PROLOGIES Sar Properties of the Control of the Cont	GY Irology Indicators	S :		☐ Water-St			except MLI		Secor	ndary Indicat	Leaves (B	nore required) 19) (MLRA 1, 2
PROLOGIES Sarving Control of the Con	GY rology Indicators ators (minimum of Vater (A1) er Table (A2)	S :		☐ Water-St	tained Lea		except MLI	RA	Secor	ndary Indicat ater-Stained	Leaves (B	
*/ OROLOG /etland Hyd rimary Indica 3 Surface W 1 High Wate 1 Saturation	rology Indicators (minimum of Vater (A1) er Table (A2) in (A3)	S :		☐ Water-St	tained Lea 4A, and 4 st (B11)	В)	except MLI	RA	Secor	ndary Indicat ater-Stained 4A, and 4E	Leaves (B B) erns (B10)	39) (MLRA 1, 2
PROLOGIES SAFER SA	rology Indicators (minimum of Vater (A1) er Table (A2) in (A3)	S :		☐ Water-St 1, 2,	tained Lea 4A, and 4 st (B11) nvertebrat	B) es (B13)	except MLI	RA	Secon W Dr	ndary Indicat ater-Stained 4A, and 4E rainage Patte ry-Season W	Leaves (B B) erns (B10) /ater Table	39) (MLRA 1, 2
/DROLOG/ /etland Hyd/ rimary Indicadil Surface Waller Mater Mail Sediment	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2)	S :		☐ Water-St 1, 2, ☐ Salt Crus ☐ Aquatic I	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C	B) es (B13) Odor (C1)		RA	Secor WDr	ndary Indicat ater-Stained 4A, and 4E rainage Patte ry-Season W	Leaves (B B) erns (B10) /ater Table ible on Aer	(C2) ial Imagery (C
PROLOGIEM STATE OF THE PROCESS OF TH	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2)	S :		☐ Water-St 1, 2, ☐ Salt Crus ☐ Aquatic I ☐ Hydroge	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C	es (B13) Odor (C1) eres along	Living Roo	RA ots (C3)	Secor W Dr	ndary Indicat ater-Stained 4A, and 4E rainage Patte ry-Season W aturation Visi	Leaves (BB) erns (B10) /ater Table ible on Aer	(C2) ial Imagery (C
PROLOGIEM STATE OF THE PROCESS OF TH	rology Indicators (minimum of Vater (A1) er Table (A2) in (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4)	S :		Water-St 1, 2, Salt Crus Aquatic I Hydrogei Oxidized	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduc	es (B13) Odor (C1) eres along ed Iron (C	Living Roc 4)	RA ots (C3)	Secor W Dr Dr Sa Ge	ndary Indicat ater-Stained 4A, and 4E rainage Patte ry-Season W aturation Visi eomorphic P	Leaves (BB) erns (B10) /ater Table ible on Aer rosition (D2 ard (D3)	(C2) ial Imagery (C
/DROLOG /etland Hyd rimary Indica Surface W High Wate Saturation Water Man Sediment Drift Depo Algal Mat Iron Depo Surface S	rology Indicators ators (minimum of Vater (A1) er Table (A2) er (A3) erks (B1) Deposits (B2) esits (B3) or Crust (B4) esits (B5) soil Cracks (B6)	s: one req	uired; ch	Water-St 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent II	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse	es (B13) Odor (C1) eres along ed Iron (C tion in Tille	Living Roc 4) ed Soils (C6	RA ots (C3)	Secor W Dr Dr Se GG Sr	adary Indicat ater-Stained 4A, and 4E rainage Patte ry-Season W aturation Visi eomorphic P nallow Aquita AC-Neutral T aised Ant Mo	Leaves (BB) erns (B10) /ater Table ible on Aer rosition (D2 ard (D3) rest (D5) ounds (D6)	(C2) ial Imagery (C2) (LRR A)
/DROLOG /etland Hyd rimary Indica Surface W High Wate Saturation Water Man Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) soil Cracks (B6) n Visible on Aerial	s: one req	uired; cho	Water-St 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse	es (B13) Odor (C1) eres along ed Iron (C tion in Tille	Living Roc 4) ed Soils (C6	RA ots (C3)	Secor W Dr Dr Se GG Sr	ndary Indicat ater-Stained 4A, and 4E rainage Patte ry-Season W aturation Visi eomorphic P nallow Aquita	Leaves (BB) erns (B10) /ater Table ible on Aer rosition (D2 ard (D3) rest (D5) ounds (D6)	(C2) ial Imagery (C2) (LRR A)
/DROLOG /etland Hyd rimary Indica Surface W High Water Mai Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) poil Cracks (B6) n Visible on Aerial Vegetated Concav	s: one req	uired; cho	Water-St 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent II	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse	es (B13) Odor (C1) eres along ed Iron (C tion in Tille	Living Roc 4) ed Soils (C6	RA ots (C3)	Secor W Dr Dr Se GG Sr	adary Indicat ater-Stained 4A, and 4E rainage Patte ry-Season W aturation Visi eomorphic P nallow Aquita AC-Neutral T aised Ant Mo	Leaves (BB) erns (B10) /ater Table ible on Aer rosition (D2 ard (D3) rest (D5) ounds (D6)	(C2) ial Imagery (C2) (LRR A)
PROLOGIVE TIME TO THE TIME TO	rology Indicators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) or Crust (B4) esits (B5) foil Cracks (B6) n Visible on Aerial Vegetated Concavations:	s: one req Imagery e Surface	uired; che (B7) ce (B8)	Water-St 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent II Stunted o	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduc ron Reduc or Stresse xplain in R	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roc 4) ed Soils (C6	RA ots (C3)	Secor W Dr Dr Se GG Sr	adary Indicat ater-Stained 4A, and 4E rainage Patte ry-Season W aturation Visi eomorphic P nallow Aquita AC-Neutral T aised Ant Mo	Leaves (BB) erns (B10) /ater Table ible on Aer rosition (D2 ard (D3) rest (D5) ounds (D6)	(C2) ial Imagery (C2) (LRR A)
PROLOGICAL PROPERTY OF THE PRO	rology Indicators ators (minimum of Vater (A1) er Table (A2) er (A3) erks (B1) Deposits (B2) esits (B3) er Crust (B4) esits (B5) er Crust (B4) esits (B5) er Visible en Aerial Vegetated Concavations:	s: one req Imagery ve Surfac Yes ⊠	uired; chu	Water-St 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent II Stunted 6 Other (E:	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse xplain in R	es (B13) Dodor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roc 4) ed Soils (C6	RA ots (C3)	Secor W Dr Dr Se GG Sr	adary Indicat ater-Stained 4A, and 4E rainage Patte ry-Season W aturation Visi eomorphic P nallow Aquita AC-Neutral T aised Ant Mo	Leaves (BB) erns (B10) /ater Table ible on Aer rosition (D2 ard (D3) rest (D5) ounds (D6)	(C2) ial Imagery (C2) (LRR A)
YDROLOG Vetland Hyd Vetland Hyd Simary Indica Surface W High Water Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely V Sield Observator	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) soil Cracks (B6) n Visible on Aerial Vegetated Concave vations: er Present?	Imagery ve Surface Yes Yes	uired; cher r (B7) ce (B8) No □ No ☑	Water-St 1, 2, Salt Crus Aquatic I Hydrogel Oxidized Presence Recent II Stunted of Other (Es	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduc ron Reduc or Stresse xplain in R ees): 1	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (C emarks)	Living Roo 4) d Soils (C6 01) (LRR A	RA (C3)	Secor W Dr Dr Sa Ge	ater-Stained 4A, and 4E rainage Patte ry-Season W aturation Visi eomorphic P nallow Aquita AC-Neutral T aised Ant Mo ost-Heave H	Leaves (BB) erns (B10) /ater Table ible on Aer rosition (D2 ard (D3) est (D5) bunds (D6) dummocks	(C2) ial Imagery (C2) (LRR A) (D7)
YDROLOG Vetland Hyd Vetland Hyd Surface W Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely V Vetland Observator	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) esits (B5) foil Cracks (B6) n Visible on Aerial Vegetated Concavations:	s: one req Imagery ve Surfac Yes ⊠	uired; chu	Water-St 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent II Stunted 6 Other (E:	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduc ron Reduc or Stresse xplain in R ees): 1	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (C emarks)	Living Roo 4) d Soils (C6 01) (LRR A	RA (C3)	Secor W Dr Dr Sa Ge	adary Indicat ater-Stained 4A, and 4E rainage Patte ry-Season W aturation Visi eomorphic P nallow Aquita AC-Neutral T aised Ant Mo	Leaves (BB) erns (B10) /ater Table ible on Aer rosition (D2 ard (D3) est (D5) bunds (D6) dummocks	(C2) ial Imagery (C2) (LRR A)
PROLOGIVETION OF THE PROCESS OF THE	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) soil Cracks (B6) n Visible on Aerial Vegetated Concavations: er Present? Present? esent? elilary fringe)	Imagery ve Surface Yes Yes Yes Yes Yes Yes Yes	uired; chu (B7) ce (B8) No □ No ⊠ No ⊠	Water-St 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent II Stunted G Other (E:	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse xplain in R es): 1 es): es):	es (B13) Ddor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roo 4) ed Soils (C6 01) (LRR A	RA ots (C3) s)	Secor W Dr Dr Se Ge Str	ater-Stained 4A, and 4E rainage Patte ry-Season W aturation Visi eomorphic P nallow Aquita AC-Neutral T aised Ant Mo ost-Heave H	Leaves (BB) erns (B10) /ater Table ible on Aer rosition (D2 ard (D3) est (D5) bunds (D6) dummocks	(C2) ial Imagery (C2) (LRR A) (D7)
PROLOGIVETION OF THE PROCESS OF THE	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) esits (B5) foil Cracks (B6) n Visible on Aerial Vegetated Concavations:	Imagery ve Surface Yes Yes Yes Yes Yes Yes Yes	uired; chu (B7) ce (B8) No □ No ⊠ No ⊠	Water-St 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent II Stunted G Other (E:	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduct ron Reduct or Stresse xplain in R es): 1 es): es):	es (B13) Ddor (C1) eres along ed Iron (C tion in Tille d Plants (E emarks)	Living Roo 4) ed Soils (C6 01) (LRR A	RA ots (C3) s)	Secor W Dr Dr Se Ge Str	ater-Stained 4A, and 4E rainage Patte ry-Season W aturation Visi eomorphic P nallow Aquita AC-Neutral T aised Ant Mo ost-Heave H	Leaves (BB) erns (B10) /ater Table ible on Aer rosition (D2 ard (D3) est (D5) bunds (D6) dummocks	(C2) ial Imagery (C2) (LRR A) (D7)
Vetland Hyderimary Indicated Saturation Sediment Depo Algal Mater Sediment Depo Surface Water Table Feditaturation Presidudes capilities Sediment Depo	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) poil Cracks (B6) n Visible on Aerial Vegetated Concaverations: er Present? Present? esent? elilary fringe) orded Data (strea	Imagery ve Surface Yes Yes Yes The surface Yes The surface The	uired; che (B7) ce (B8) No □ No ☑ No ☑ s, monitor	Water-St 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent II Stunted of Other (E: Depth (inch Depth (inch	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduc ron Reduc or Stresse xplain in R es): les): al photos, I	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (D emarks)	Living Roc 4) ed Soils (C6 01) (LRR A Wetl spections),	RA ots (C3) i) land Hyd if availab	Secor W Dr Dr Sa Ge St Ra Fr	adary Indicat ater-Stained 4A, and 4E rainage Pattery-Season W aturation Visi eomorphic P nallow Aquita AC-Neutral T aised Ant Mo ost-Heave H	Leaves (BB) erns (B10) /ater Table fible on Aer Position (D2 ard (D3) Fest (D5) bunds (D6) dummocks Yes	(C2) ial Imagery (C2) (LRR A) (D7)
Vetland Hyderimary Indicated Saturation Sediment Deporation Sparsely Vetland Observation President Concludes capilities and second of the concludes capilities of the concludes Concluded Concludes	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) poil Cracks (B6) n Visible on Aerial Vegetated Concavations: er Present? Present? eseent? elilary fringe) orded Data (streations) elications between the concavation of t	Imagery ve Surface Yes Yes Yes m gauge	uired; che (B7) De (B8) No No No No No No no monitor The control of the con	Water-St 1, 2, Salt Crus Aquatic I Hydroge Oxidized Presence Recent II Stunted of Other (E: Depth (inch Depth (inch Depth (inch	tained Lea 4A, and 4 st (B11) nvertebrat n Sulfide C Rhizosph e of Reduc ron Reduc or Stresse xplain in R es): al photos, parea does	es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (D emarks) previous in	Living Roc 4) 4d Soils (C6 01) (LRR A Wetl spections),	RA ots (C3) if availab	Secor W Dr Dr Sa Ge Str FA	adary Indicat ater-Stained 4A, and 4E rainage Pattery-Season W aturation Visi eomorphic P nallow Aquita AC-Neutral T aised Ant Mo ost-Heave H	Leaves (BB) erns (B10) /ater Table fible on Aer Position (D2 ard (D3) Fest (D5) bunds (D6) dummocks Yes	(C2) ial Imagery (C2) (LRR A) (D7)

Project/Site: City of Seattle Meyers Way Remainder Propert	У	City/Count	y: <u>Seattle</u>		Sampling Date: 05/04/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: <u>UPL-11</u>
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	ownship, Range: <u>S6, T23N</u>	, R4EWM
Landform (hillslope, terrace, etc.): flat		_Local reli	ef (concave	, convex, none): none	Slope (%): <u>0</u>
Subregion (LRR): Northwest Forests and Coasts (LRR A)	Lat: 47.3	0.59		Long: <u>122.20.08</u>	Datum: unknown
Soil Map Unit Name: NRCS Soil Unit is Unavailable				NWI classifica	tion: upland
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	nificantly dis	turbed?	Are "No	ormal Circumstances" pres	sent? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology natu			(If need	ed, explain any answers in	ı Remarks.)
SUMMARY OF FINDINGS – Attach site map					
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes ⊠ No □			ne Sampled nin a Wetlar		• N
Wetland Hydrology Present? Yes ☐ No ☒		Witt	iiri a vvetiai	nd? Yes □ N	0 🔯
Remarks: No recent disturbance. Mining operations ender result recent rainfall. March and April 2011 have been unsto 4.42 additional inches of precipitation during March and surface in tire ruts.	seasonably April. Site	rainy with	169% of nor	mal rainfall for the two mor	nths combined. This amounts
VEGETATION – Use scientific names of plan		Dominon	t Indicator	Dominance Test works	-haat
<u>Tree Stratum</u> (Plot size: <u>5m</u>)	% Cover		t Indicator Status	Number of Dominant Sp	
1					or FAC: <u>3</u> (A)
2				Total Number of Domina	ant
3				Species Across All Strat	
4				Percent of Dominant Sp	ecies
Sapling/Shrub Stratum (Plot size: 3m)	0	= Total C	Cover	That Are OBL, FACW, o	
1. Populus balsamifera	40	Υ	FAC	Prevalence Index work	sheet:
2. Cytisus scoparius				Total % Cover of:	Multiply by:
3				OBL species	x 1 =
4				FACW species	x 2 =
5					x 3 =
Harb Charture (Diet sines 4 5m)	50	= Total C	Cover		x 4 =
Herb Stratum (Plot size: 1.5m) 1. Agrostis capillaris	40	Υ	FAC	UPL species	x 5 =
O Halana lamatus	20	Y	FAC	Column Totals:	(A) (B)
Hoicus ianatus Hypochaeris radicata	<u>25</u> 15		FACU	Prevalence Index	= B/A =
4. Trifolium repens				Hydrophytic Vegetatio	n Indicators:
5. Plantango lanceolata			FAC	☐ 1 - Rapid Test for Hy	ydrophytic Vegetation
6. Vicia sativa	1	N	UPL	□ 2 - Dominance Test	
7				3 - Prevalence Index	(is ≤3.0 ¹
8				4 - Morphological Ac	daptations ¹ (Provide supporting or on a separate sheet)
9				5 - Wetland Non-Vas	•
10					hytic Vegetation ¹ (Explain)
11					and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	91	= Total (Cover	be present, unless distu	
1		·		Hydrophytic	
2				Vegetation	_
% Bare Ground in Herb Stratum 10	0	= Total C	Cover	Present? Yes	s⊠ No □
Remarks:					

	01.pt.10111 (2000118	c to the	aepiii iid	seded to docu	ment the	iiiuicatoi	or commi	n tne ab	sence	of indicators.)
Depth	Matrix				ox Feature					
(inches)	Color (moist)	%	Colc	or (moist)	<u></u> %	Type ¹	Loc ²	<u>Textur</u>	<u>e</u> _	Remarks
0-5	2.5Y 5/1	95	<u>2.5Y</u>	4/4	5	<u>C</u>	<u>M</u>	loamy :	sand	Soils appear disturbed by grading
<u>5-18</u>	2.5Y 5/1	60						<u>l. f. san</u>	ıd	Soils appear mixed by grading
<u>5-18</u>	2.5Y4/3	30								Soils appear mixed by grading
18-20+	2.5Y 5/1	50				_				Soils appear mixed by grading
18-20+	2.5Y 4/2	50								Soils appear mixed by grading
		_						-		
1Type: C=C	Concentration, D=De	onlotion	 DM-Dod	ucod Matrix C	S=Covere	d or Coat	od Sand G	raine	² l oc	ation: PL=Pore Lining, M=Matrix.
	Indicators: (Appl						eu Sanu G			rs for Problematic Hydric Soils ³ :
☐ Histosol				Sandy Redox (,				Muck (A10)
	pipedon (A2)			Stripped Matrix					_	Parent Material (TF2)
	istic (A3)			_oamy Mucky I	. ,	1) (excep	t MLRA 1)			Shallow Dark Surface (TF12)
	en Sulfide (A4)			_oamy Gleyed			·,		_	r (Explain in Remarks)
	d Below Dark Surfa	ce (A11)		Depleted Matri		,		_		· (=/p/a// // terrarie)
	ark Surface (A12)	(, , , , ,		Redox Dark Su	. ,			³ lı	ndicato	rs of hydrophytic vegetation and
	Mucky Mineral (S1)			Depleted Dark	, ,	7)				nd hydrology must be present,
-	Gleyed Matrix (S4)		·	Redox Depress	•	,				s disturbed or problematic.
-	Layer (if present):	:								·
Type:										
Depth (in	nches):							Hydri	ic Soil	Present? Yes ⊠ No □
Remarks:										
HYDROLO										
Wetland Hy	/drology Indicator									
Wetland Hy Primary Indi	drology Indicator		uired; che		•					idary Indicators (2 or more required)
Wetland Hy Primary Indi ☑ Surface	ydrology Indicator icators (minimum of Water (A1)		uired; ch	☐ Water-Sta	ined Leav		except MLF	RA		ater-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary Indi ⊠ Surface ☐ High Wa	ydrology Indicator icators (minimum of Water (A1) ater Table (A2)		uired; ch	☐ Water-Sta	ined Leave		except MLF	RA	□ W	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hy Primary Indi Surface High Wa Saturation	rdrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3)		uired; cho	☐ Water-Sta	ined Leave A, and 4B (B11))	except MLF	RA	□ W	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10)
Wetland Hy Primary Indi Surface High Wa Saturatic Water M	rdrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1)		uired; ch	☐ Water-Sta 1, 2, 4 ☐ Salt Crust ☐ Aquatic In	ined Leave A, and 4B (B11) vertebrate) s (B13)	except MLF	RA		ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)
Wetland Hy Primary Indi	vdrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3) vdrks (B1) at Deposits (B2)		uired; cho	☐ Water-Sta 1, 2, 4 ☐ Salt Crust ☐ Aquatic In ☐ Hydrogen	ined Leave A, and 4B (B11) vertebrate Sulfide Oc	s (B13) dor (C1)				ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep	vdrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		uired; cho	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I	A, and 4B (B11) vertebrate Sulfide Od Rhizosphe	s (B13) dor (C1) res along	Living Roo		 □ Wa □ Dr □ Dr □ Sa □ Ge 	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) ecomorphic Position (D2)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep	vdrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3) vdrks (B1) at Deposits (B2)		uired; che	☐ Water-Sta 1, 2, 4 ☐ Salt Crust ☐ Aquatic In ☐ Hydrogen	A, and 4B (B11) vertebrate Sulfide Od Rhizosphe	s (B13) dor (C1) res along	Living Roo		 □ Wa □ Dr □ Dr □ Sa □ Ge 	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	vdrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		uired; che	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce	s (B13) dor (C1) res along	Living Roo 4)	ots (C3)	Dr Dr Sa	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) ecomorphic Position (D2)
Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma	rdrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		uired; ch	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce	s (B13) dor (C1) res along d Iron (Co	Living Roo 4)	ots (C3)	Will Will Drr Drr Sa Ge Str FA	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) atturation Visible on Aerial Imagery (C9) ecomorphic Position (D2) allow Aquitard (D3)
Wetland Hy Primary Indi Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	rdrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	f one req		Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	ined Leave A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction	s (B13) dor (C1) res along d Iron (Co on in Tille Plants (C	Living Roo 4) d Soils (C6	ots (C3)	□ W: □ Dr: □ Dr: □ Sa □ Ge: □ St: □ FA	atter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) atturation Visible on Aerial Imagery (C9) ecomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundation	rdrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	f one req	· (B7)	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc	ined Leave A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction	s (B13) dor (C1) res along d Iron (Co on in Tille Plants (C	Living Roo 4) d Soils (C6	ots (C3)	□ W: □ Dr: □ Dr: □ Sa □ Ge: □ St: □ FA	atter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) atturation Visible on Aerial Imagery (C9) ecomorphic Position (D2) hallow Aquitard (D3) hallow Aquitard (D5) aised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundation	rdrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concar	f one req	r (B7) ce (B8)	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex	ined Leave A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed plain in Re	s (B13) dor (C1) res along d Iron (Co on in Tille Plants (Co marks)	Living Roo 4) d Soils (C6	ots (C3)	□ W: □ Dr: □ Dr: □ Sa □ Ge: □ St: □ FA	atter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) atturation Visible on Aerial Imagery (C9) ecomorphic Position (D2) hallow Aquitard (D3) hallow Aquitard (D5) aised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser	rdrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial by Vegetated Concar rvations: ter Present?	f one req I Imagery ve Surfac Yes ⊠	v (B7) ce (B8) No 🗆	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed plain in Re	s (B13) dor (C1) res along d Iron (C- on in Tille Plants (C- marks)	Living Roo 4) d Soils (C6	ots (C3)	□ W: □ Dr: □ Dr: □ Sa □ Ge: □ St: □ FA	atter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) atturation Visible on Aerial Imagery (C9) ecomorphic Position (D2) hallow Aquitard (D3) hallow Aquitard (D5) aised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely	rdrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial by Vegetated Concar rvations: ter Present?	f one req	r (B7) ce (B8)	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed plain in Re	s (B13) dor (C1) res along d Iron (C- on in Tille Plants (C- marks)	Living Roo 4) d Soils (C6	ots (C3)	□ W: □ Dr: □ Dr: □ Sa □ Ge: □ St: □ FA	atter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) atturation Visible on Aerial Imagery (C9) ecomorphic Position (D2) hallow Aquitard (D3) hallow Aquitard (D5) aised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation F	rdrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concarvations: ter Present? Present?	f one req I Imagery ve Surfac Yes ⊠	v (B7) ce (B8) No 🗆	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex	ined Leave A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed plain in Re s): 1	s (B13) dor (C1) res along d Iron (C- on in Tille Plants (C- marks)	Living Roo 4) d Soils (C6 11) (LRR A	ots (C3)	Wi	atter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) atturation Visible on Aerial Imagery (C9) ecomorphic Position (D2) hallow Aquitard (D3) hallow Aquitard (D5) aised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation F (includes ca	rdrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial by Vegetated Concar rvations: ter Present? Present? apillary fringe)	I Imagery ve Surfac Yes Yes Yes Yes Yes Yes	v (B7) ce (B8) No □ No ⊠ No ⊠	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed plain in Re ss): 1 ss):	s (B13) dor (C1) res along d Iron (C- on in Tille Plants (C- marks)	Living Roo 4) d Soils (C6 1) (LRR A	ots (C3) i) land Hyd	Dr Dr Sa Ge St Ra	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) comorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) haised Ant Mounds (D6) (LRR A) host-Heave Hummocks (D7)
Wetland Hy Primary Indi Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation F (includes ca	rdrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concarvations: ter Present? Present?	I Imagery ve Surfac Yes Yes Yes Yes Yes Yes	v (B7) ce (B8) No □ No ⊠ No ⊠	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed plain in Re ss): 1 ss):	s (B13) dor (C1) res along d Iron (C- on in Tille Plants (C- marks)	Living Roo 4) d Soils (C6 1) (LRR A	ots (C3) i) land Hyd	Dr Dr Sa Ge St Ra	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) comorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) haised Ant Mounds (D6) (LRR A) host-Heave Hummocks (D7)
Wetland Hy Primary Indi Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation F (includes ca	rdrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial by Vegetated Concar rvations: ter Present? Present? present? present? present? present (Streat present)	I Imagery ve Surfac Yes □ Yes □ Yes □	v (B7) ce (B8) No □ No ⊠ No ⊠	Water-Sta 1, 2, 4	wined Leave A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed plain in Re s): 1 photos, pi	s (B13) dor (C1) res along d Iron (C- on in Tille Plants (C- marks)	Living Roo 4) d Soils (C6 1) (LRR A Wetl	ots (C3) i) land Hyd if availa	☐ Wi	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) ecomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) bost-Heave Hummocks (D7)
Wetland Hy Primary Indi Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation F (includes ca Describe Re	rdrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial by Vegetated Concar rvations: ter Present? Present? Present? politically fringe) ecorded Data (streat	I Imagery ve Surfac Yes Yes Yes Imagery	v (B7) ce (B8) No □ No ⊠ No ⊠ c, monitor	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex	ined Leave A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed plain in Re (s): 1 (s): photos, pi	s (B13) dor (C1) res along d Iron (Coon in Tille Plants (Coonarks) revious in	Living Roo 4) d Soils (C6 1) (LRR A) Wetl spections),	ots (C3) i) land Hyo if availa	Dr Dr Sa Ge St St FA Ra Strology ble:	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) comorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) haised Ant Mounds (D6) (LRR A) host-Heave Hummocks (D7)
Wetland Hy Primary Indi Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation F (includes ca Describe Re	widrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial by Vegetated Concarvations: ter Present? Present (Streater (I Imagery ve Surfac Yes Yes Yes Imagery	v (B7) ce (B8) No □ No ⊠ No ⊠ c, monitor	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex	ined Leave A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed plain in Re (s): 1 (s): photos, pi	s (B13) dor (C1) res along d Iron (Coon in Tille Plants (Coonarks) revious in	Living Roo 4) d Soils (C6 1) (LRR A) Wetl spections),	ots (C3) i) land Hyo if availa	Dr Dr Sa Ge St St FA Ra Strology ble:	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) ecomorphic Position (D2) allow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)

Project/Site: City of Seattle Meyers Way Remainder Propert	y (City/Count	y: Seattle	Sa	ampling Date:05/04/2011
		-	-	State: WA Sa	
Investigator(s): E. Pritchard, J. Merriman, C. Wright					
Landform (hillslope, terrace, etc.): toe of slope					
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable					
Are climatic / hydrologic conditions on the site typical for this					. upiana
Are Vegetation, Soil, or Hydrology sign	•		_ `	ormal Circumstances" present	2 Vac ⊠ No □
Are Vegetation, Soil, or Hydrology natu				•	
SUMMARY OF FINDINGS – Attach site map s				ed, explain any answers in Re ocations, transects, in	
					<u>-</u>
Hydrophytic Vegetation Present? Yes ☐ No ☐ Hydric Soil Present? Yes ☐ No ☐ N		ls ti	ne Sampled		
Wetland Hydrology Present? Yes ☐ No ☒		with	nin a Wetlar	nd? Yes ☐ No 🛭	
Remarks: March and April 2011 have been unseasonably					
additional inches of precipitation during March and April. S Area was mined prior to 2002. Also recently disturbed by g tire ruts caused by heavy equipment.				•	•
VEGETATION – Use scientific names of plant	rs.				
	Absolute	Dominan	t Indicator	Dominance Test workshe	et:
<u>Tree Stratum</u> (Plot size: <u>5m</u>)	% Cover			Number of Dominant Specie	
1				That Are OBL, FACW, or FA	AC: <u>3</u> (A)
2				Total Number of Dominant	
3				Species Across All Strata:	<u>6</u> (B)
4	0	= Total (Percent of Dominant Specie	
Sapling/Shrub Stratum (Plot size: 3m)	<u>U</u>	- Total C	ovei	That Are OBL, FACW, or FA	AC: <u>50</u> (A/B)
Populus balsamifera	30	<u>Y</u>	FAC	Prevalence Index worksho	eet:
2. Cytisus scoparius	20	<u>Y</u>	<u>UPL</u>	Total % Cover of:	Multiply by:
3. Rubus armeniacus	<u>15</u>	<u>Y</u>	<u>FACU</u>	OBL species 0	<u> </u>
4				FACW species 0	
5				FACILITY OF STATE OF	
Herb Stratum (Plot size: 1.5m)	<u>65</u>	= Total (Cover	FACU species 35 UPL species 20	
1. Agrostis capillaris	40	Υ	FAC	UPL species 20 Column Totals: 151	-
2. Holcus lanatus	20		FAC	Column Totals. 151	_ (A) <u>526</u> (B)
3. Hypochaeris radicata			FACU	Prevalence Index = B	3/A = 3.5
4. Festuca rubra	5	N	FAC	Hydrophytic Vegetation Ir	ndicators:
5. Tanacetum vulgare	5	N	NI	☐ 1 - Rapid Test for Hydro	ophytic Vegetation
6. Rumex crispus	1	N	FAC	2 - Dominance Test is >	
7				3 - Prevalence Index is	
8				4 - Morphological Adapt	tations' (Provide supporting on a separate sheet)
9				5 - Wetland Non-Vascul	•
10				☐ Problematic Hydrophytic	
11				¹ Indicators of hydric soil and	
Woody Vine Stratum (Plot size: 3m)	91	= rotar C	over	be present, unless disturbed	d or problematic.
1	-				
2				Hydrophytic Vegetation	
W	0	= Total C	Cover	_	No ⊠
% Bare Ground in Herb Stratum <u>5</u> Remarks:					
Tromains.					

Depth	cription: (Descrit Matrix			Re	dox Featu	ires			
(inches)	Color (moist)	%	Colc	or (moist)	%	Type ¹	Loc ²	Texture	Remarks
<u>0-11</u>	2.5Y 5/2	50						loamy sand	<u> </u>
11-14	2.5Y 5/1	<u>55</u>	<u>10Y</u>	R 4/6	5	<u>C</u>	M	I. f. sand	Soils appear mixed by grading
<u>11-14</u>	2.5Y5/2	35	<u>10Y</u>	R 4/6	5	<u>C</u>	<u>M</u>	I. f. sand	Soils appear mixed by grading
14-18+	2.5Y 5/2	100						I. f. sand	soil is loose
								-	
									
17				leen and B.A. Andre	00 0			21	- Di Bara Linius M Matris
	oncentration, D=D Indicators: (App						ted Sand G		Location: PL=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
☐ Histosol		iloubio te		Sandy Redox		otou.,			cm Muck (A10)
	oipedon (A2)			Stripped Matr					ed Parent Material (TF2)
☐ Black Hi				Loamy Mucky	` ,	F1) (exce	t MLRA 1)		ery Shallow Dark Surface (TF12)
☐ Hydroge	n Sulfide (A4)		□ I	Loamy Gleye	d Matrix (I	=2)	,		ther (Explain in Remarks)
☐ Depleted	d Below Dark Surfa	ice (A11)	I	Depleted Mat	rix (F3)				
☐ Thick Da	ark Surface (A12)			Redox Dark S	Surface (F	6)			ators of hydrophytic vegetation and
-	lucky Mineral (S1)			Depleted Dar					tland hydrology must be present,
-	Bleyed Matrix (S4)			Redox Depre	ssions (F8	3)		un	ess disturbed or problematic.
	Layer (if present)								
Type:									
Depth (in	ches):							Hydric S	oil Present? Yes ☐ No ⊠
Remarks: So	oilis appear mixed	from histo	oric minir	ng practices.					
		from histo	oric minir	ng practices.					
HYDROLO)GY		oric minir	ng practices.					
HYDROLO Wetland Hy	PGY drology Indicator	s:			oply)			Society	condany Indicators (2 or more required)
HYDROLO Wetland Hy Primary Indi	OGY drology Indicator cators (minimum o	s:		eck all that ap		(10)			condary Indicators (2 or more required)
HYDROLO Wetland Hy Primary Indi Surface	OGY drology Indicator cators (minimum o	s:		eck all that ar	tained Lea		except ML		Water-Stained Leaves (B9) (MLRA 1, 2,
HYDROLO Wetland Hy Primary Indi Surface High Wa	drology Indicator cators (minimum o Water (A1) ater Table (A2)	s:		eck all that an	tained Lea		except ML	RA 🗆	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio	order (A1) ater Table (A2) bn (A3)	s:		eck all that ap Water-S 1, 2,	tained Lea 4A, and 4 st (B11)	1B)	except ML	RA 🗆	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M	rdrology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) larks (B1)	s:		eck all that ap Water-S 1, 2, Salt Cru Aquatic	tained Lea 4A , and 4 st (B11) Invertebra	4B) Ites (B13)	except ML	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturation Water M Sedimer	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2)	s:		eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge	tained Lea 4A, and 4 st (B11) Invertebra n Sulfide	tes (B13) Odor (C1)		RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Drift Dep	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2)	s:		eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized	tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizospl	tes (B13) Odor (C1) neres along	g Living Roo	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4)	s:		eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presence	tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizosph e of Redu	tes (B13) Odor (C1) neres along ced Iron (C	g Living Roo (4)	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	s:		eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenct	tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizosph e of Redu ron Redu	tes (B13) Odor (C1) neres along ced Iron (C	g Living Roo (4) ed Soils (Cé	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6)	s: f one req	uired; cho	eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizosphe of Redu I Redu	ttes (B13) Odor (C1) heres along ced Iron (C ction in Tilled Plants (I	g Living Roo (4)	PRA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundation	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria	s: f one req	uired; che	eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted	tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizosph e of Redu ron Redu	ttes (B13) Odor (C1) heres along ced Iron (C ction in Tilled Plants (I	g Living Roo (4) ed Soils (Cé	PRA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Conca	s: f one req	uired; che	eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizosphe of Redu I Redu	ttes (B13) Odor (C1) heres along ced Iron (C ction in Tilled Plants (I	g Living Roo (4) ed Soils (Cé	PRA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria v Vegetated Conca	s: f one req	uired; chi	eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenct Recent I Stunted Other (E	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizosph e of Redu ron Redu or Stresse xplain in F	ttes (B13) Odor (C1) heres along ced Iron (C ction in Till ed Plants (I Remarks)	g Living Roo (4) ed Soils (Cé	PRA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Conca	s: f one req	uired; chu	eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenct Recent I Stunted Other (E	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizosph e of Redu ron Redu or Stresse xplain in F	ttes (B13) Odor (C1) heres along ced Iron (C ction in Till ed Plants (I Remarks)	g Living Roo (4) ed Soils (Cé	PRA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser Surface Wat Water Table	drology Indicator cators (minimum of cators (minimu	s: f one required in the second secon	uired; che (B7) ce (B8) No 🏻	eck all that ar Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizosph e of Redu ron Redu or Stresse xxplain in F	ttes (B13) Odor (C1) neres along ced Iron (C ction in Till ed Plants (I Remarks)	g Living Roo (4) ed Soils (C6 () (LRR A	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wate Water Table Saturation P (includes ca	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concar cyations: ter Present? Present? Present?	s: f one req I Imagery ve Surface Yes Yes Yes Yes Yes Yes	uired; cho	eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenct Recent I Stunted Other (E	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizosph e of Redu ron Redu or Stresse xplain in F	ttes (B13) Odor (C1) neres along ced Iron (C ction in Tille ed Plants (I Remarks)	g Living Roo (4) ed Soils (C6 (D1) (LRR A	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wate Water Table Saturation P (includes ca	drology Indicator cators (minimum of water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aeria v Vegetated Conca vations: ter Present? Present?	s: f one req I Imagery ve Surface Yes Yes Yes Yes Yes Yes	uired; cho	eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenct Recent I Stunted Other (E	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizosph e of Redu ron Redu or Stresse xplain in F	ttes (B13) Odor (C1) neres along ced Iron (C ction in Tille ed Plants (I Remarks)	g Living Roo (4) ed Soils (C6 (D1) (LRR A	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	drology Indicator cators (minimum of water (A1) ater Table (A2) on (A3) darks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Conca vations: ter Present? Present? pillary fringe) corded Data (streat	s: f one req I Imagery ve Surface Yes Yes Yes Yes am gauge	uired; che (B7) Se (B8) No eck all that ar Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizosph e of Redu ron Redu or Stresse xplain in F	ttes (B13) Odor (C1) neres along ced Iron (C ction in Tille ed Plants (I Remarks)	g Living Roo (4) ed Soils (C6 (D1) (LRR A	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)	
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concar cyations: ter Present? Present? Present?	s: f one req I Imagery ve Surface Yes Yes Yes Yes am gauge	uired; che (B7) Se (B8) No eck all that ar Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizosph e of Redu ron Redu or Stresse xplain in F	ttes (B13) Odor (C1) neres along ced Iron (C ction in Tille ed Plants (I Remarks)	g Living Roo (4) ed Soils (C6 (D1) (LRR A	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)	
HYDROLO Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	drology Indicator cators (minimum of water (A1) ater Table (A2) on (A3) darks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Conca vations: ter Present? Present? pillary fringe) corded Data (streat	s: f one req I Imagery ve Surface Yes Yes Yes Yes am gauge	uired; che (B7) Se (B8) No eck all that ar Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizosph e of Redu ron Redu or Stresse xplain in F	ttes (B13) Odor (C1) neres along ced Iron (C ction in Tille ed Plants (I Remarks)	g Living Roo (4) ed Soils (C6 (D1) (LRR A	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)	

Project/Site: City of Seattle Meyers Way Remainder Propert	y (City/County	y: <u>Seattle</u>		Sampling Date: <u>05/04/2011</u>
				State: WA S	· -
Investigator(s): E. Pritchard, J. Merriman, C. Wright					
Landform (hillslope, terrace, etc.): toe of slope					
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable				_	
Are climatic / hydrologic conditions on the site typical for this					ni. <u>upiana</u>
Are Vegetation, Soil, or Hydrology sign	•		_ `	ormal Circumstances" preser	nt? Ves ⊠ No □
Are Vegetation, Soil, or Hydrology natu				·	- -
SUMMARY OF FINDINGS – Attach site map s				ed, explain any answers in Focations, transects, it	
					<u> </u>
Hydrophytic Vegetation Present? Yes ⊠ No ☐ Hydric Soil Present? Yes ⊠ No ☐		Is th	e Sampled	Area	
Wetland Hydrology Present? Yes ☐ No ☒		with	in a Wetlar	nd? Yes ☐ No	
Remarks: March and April 2011 have been unseasonably					
additional inches of precipitation during March and April. S No recent disturbance. Area was mined prior to 2002. Als caused by heavy equipment.		•		•	<u>-</u>
, , , , ,					
VEGETATION – Use scientific names of plant					
Tree Stratum (Plot size: 5m)	Absolute % Cover			Dominance Test worksh	
1				Number of Dominant Spec That Are OBL, FACW, or F	
2				Total Number of Dominant	
3				Species Across All Strata:	
4				Percent of Dominant Spec	ies
Sapling/Shrub Stratum (Plot size: 3m)	0	= Total C	over		FAC: <u>67</u> (A/B)
1. Populus balsamifera	15	Υ	FAC	Prevalence Index worksl	neet:
Cytisus scoparius				Total % Cover of:	Multiply by:
3. Rubus armeniacus				OBL species	
4.				FACW species	x 2 =
5				FAC species	x 3 =
	30	= Total C	over	FACU species	x 4 =
Herb Stratum (Plot size: 1.5m)	75	V	FAC	· -	x 5 =
Agrostis capillaris Trifolium repens	<u>75</u>		FAC FAC	Column Totals:	(A) (B)
Z. Trifolium repens Holcus lanatus		· ·	FAC FAC	Prevalence Index =	B/A =
Plantango lanceolata			FAC	Hydrophytic Vegetation	
5. Tanacetum vulgare		· ·	NI	☐ 1 - Rapid Test for Hyd	
6. Taraxacum officinale			FACU	□ 2 - Dominance Test is	>50%
7				3 - Prevalence Index is	s ≤3.0 ¹
8					otations ¹ (Provide supporting
9					r on a separate sheet)
10				5 - Wetland Non-Vasc	
11				Problematic Hydrophy	nd wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	100	= Total C	over	be present, unless disturb	
1				Hydrophytic	
2				Vegetation	7. No 🗆
% Bare Ground in Herb Stratum 4	0	= Total C	over	Present? Yes	☑ No □
Remarks:				<u> </u>	

Depth	Matrix				dox Featu		1 - 2		_	5 .	_
inches)	Color (moist)	%	Cold	or (moist)	%	Type ¹		Texture	<u>e</u> _	Remark	
-7	2.5Y 5/2	<u>50</u>	10Y	R 4/4	2	<u>C</u>	<u>PL</u>	loamy s	and	Soils appear mixed	by grading
-7	2.5Y 4/2	<u>50</u>			<u>5</u>	<u>C</u>	<u>M</u>	loamy s	and_	Soils appear mixed	by grading
-13	2.5Y5/1	50			5	C	<u>M</u>	l. f. sand	d	Soils appear mixed	by grading
-13	2.5Y 5/2	<u>50</u>					_	I. f. sand	d	Soils appear mixed	by grading
3-18+	2.5Y 4/2							I. f. sand	d		
ype: C=Co	ncentration, D=D	epletion,	RM=Red	luced Matrix,	CS=Cove	ered or Coa	ated Sand	Grains.	² Loc	ation: PL=Pore Linir	ng, M=Matrix.
ydric Soil I	ndicators: (App	licable to	all LRR	s, unless otl	nerwise n	oted.)		Inc	dicato	rs for Problematic I	Hydric Soils ³ :
] Histosol (,		\boxtimes :	Sandy Redox	(S5)				2 cm	Muck (A10)	
	pedon (A2)			Stripped Matr						Parent Material (TF2	•
Black His	• •			Loamy Mucky			pt MLRA 1			Shallow Dark Surfac	, ,
	Sulfide (A4)			Loamy Gleye	•	F2)		Ш	Othe	r (Explain in Remark	s)
•	Below Dark Surfa	ace (A11)		Depleted Mat	. ,	·6\		31	dia-t-	ro of budrambudia	otation cod
	rk Surface (A12)			Redox Dark S		•		۲In		rs of hydrophytic veg	
-	ucky Mineral (S1) eyed Matrix (S4)			Depleted Dar Redox Depre						nd hydrology must be s disturbed or proble	
	ayer (if present)		— Ш	redox Depie	3310113 (1 (<i>)</i>			uilles	s disturbed or probler	mauc.
	шус. (р. ссс,										
. , , ,								Llvdei	انه ۲ م	Present? Yes ⊠	No □
Depth (inc	:hes):							HIJAH	COOII		
	,			of soil profile.	Soils bed	come very	compact fi			and then are loose be	
demarks: Pol	re linings appear	in upper (of soil profile.	Soils bed	come very	compact fi				
Portland Hyd	re linings appear	in upper (3 inches			come very	compact fi	rom 7-13 ir	nches		elow.
emarks: Por	re linings appear GY Irology Indicator ators (minimum o	in upper (3 inches		oply)			rom 7-13 ir	Secor	and then are loose be	elow. more required)
POROLOGIEM POROLOGIEM PROPERTY INDICENTY INDIC	re linings appear GY Irology Indicator ators (minimum o	in upper (3 inches	eck all that an	oply)	aves (B9)		rom 7-13 ir	Secor	and then are loose be	elow. more required)
POROLOGIE POR	GY Irology Indicator ators (minimum o Vater (A1) er Table (A2)	in upper (3 inches	eck all that an	oply) tained Lea 4A, and 4	aves (B9)		rom 7-13 ir	Secon	and then are loose be ndary Indicators (2 or ater-Stained Leaves	more required) (B9) (MLRA 1, 2
POROLOG Vetland Hydrimary Indice Surface V High Wate Saturation	GY Irology Indicator ators (minimum o Vater (A1) er Table (A2) n (A3)	in upper (3 inches	eck all that ap Water-S 1, 2,	oply) tained Lea 4A, and 4 st (B11)	aves (B9)		rom 7-13 ir	Secon W	and then are loose be ndary Indicators (2 or ater-Stained Leaves 4A, and 4B)	more required) (B9) (MLRA 1, 2
POROLOGY (Petland Hydrimary Indice) Surface V High Wate Saturation Water Ma	GY Irology Indicator ators (minimum o Vater (A1) er Table (A2) n (A3)	in upper (3 inches	eck all that ap □ Water-S 1, 2, □ Salt Cru	oply) tained Lea 4A, and 4 st (B11) Invertebra	aves (B9) 4 B)	(except MI	rom 7-13 ir	Secon W	and then are loose be adary Indicators (2 or ater-Stained Leaves 4A, and 4B) rainage Patterns (B10	more required) (B9) (MLRA 1, 2
POROLOG Petland Hydrimary Indice Surface V High Wate Saturation Water Ma Sediment	GY Irology Indicator ators (minimum o Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2)	in upper (3 inches	eck all that ap Water-S 1, 2, Salt Crue	oply) tained Lea 4A, and 4 st (B11) Invertebra n Sulfide	aves (B9) 4 B) ates (B13) Odor (C1)	(except MI	rom 7-13 ir	Secon Dri Dri Sa	and then are loose be ndary Indicators (2 or ater-Stained Leaves 4A, and 4B) rainage Patterns (B10 ry-Season Water Tab	more required) (B9) (MLRA 1, 2 0) ble (C2) erial Imagery (CS
/DROLOG /etland Hyd rimary Indic Surface V High Wate Saturation Water Ma Sediment Drift Depo	GY Irology Indicator ators (minimum o Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2)	in upper (3 inches	eck all that ar Water-S 1, 2, Salt Crui Aquatic Hydroge	oply) tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizospl	aves (B9) 4B) ates (B13) Odor (C1) heres alon	(except MI	LRA	Secor W Dr Dr Sa	and then are loose be ndary Indicators (2 or ater-Stained Leaves 4A, and 4B) rainage Patterns (B10 ry-Season Water Tab aturation Visible on A	more required) (B9) (MLRA 1, 2 0) ble (C2) erial Imagery (CS
POROLOGIC TOROLOGIC Tetland Hydrimary Indice Surface V High Water Saturation Water Ma Sediment Drift Depo	GY Irology Indicator ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) or Crust (B4)	in upper (3 inches	eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized	oply) tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizospl	aves (B9) 4B) ates (B13) Odor (C1) heres alon ced Iron ((except MI	LRA	Secor W Dr. Dr. Secor Ge	and then are loose be addressed to the are loose be addressed to the addre	more required) (B9) (MLRA 1, 2 0) ble (C2) erial Imagery (CS
POROLOGY Petland Hydrimary Indice Surface V High Water Ma Sediment Drift Depor Algal Mat I ron Depor	GY Irology Indicator ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) or Crust (B4)	in upper (3 inches	eck all that ap Water-S 1, 2, Salt Crue Aquatic Hydroge Oxidized	oply) tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizospl e of Redu	aves (B9) 4B) ates (B13) Odor (C1) heres alon ced Iron (C	(except MI) Ig Living Ro C4) Ied Soils (C	LRA	Secon W Dri Dri Sa GG	and then are loose be adary Indicators (2 or ater-Stained Leaves 4A, and 4B) rainage Patterns (B10 ry-Season Water Tab aturation Visible on Action	more required) (B9) (MLRA 1, 2 0) ele (C2) erial Imagery (CS
PROLOG Petland Hydrimary Indice Surface V High Water Saturation Water Ma Sediment Drift Depot Algal Mater Iron Depot Surface S	GY Irology Indicator ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) or Crust (B4) posits (B5)	rs: of one req	uired; ch	eck all that ap Water-S 1, 2, Salt Crue Aquatic Hydroge Oxidized Presenc	oply) tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizospl e of Redu ron Redu or Stresse	aves (B9) 4B) ates (B13) Odor (C1) heres alon ced Iron (Cotion in Till ed Plants ((except MI) Ig Living Ro C4) Ied Soils (C	LRA pots (C3)	Secor W Dr Sa GG St FA	and then are loose be adary Indicators (2 or ater-Stained Leaves 4A, and 4B) rainage Patterns (B10 ry-Season Water Tab aturation Visible on Acceptable (D3) AC-Neutral Test (D5)	more required) (B9) (MLRA 1, 2 0) ele (C2) erial Imagery (C5 02)
POROLOG Petland Hydrimary Indic Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation	GY Irology Indicator ators (minimum o Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) or Crust (B4) posits (B5) Goil Cracks (B6)	rs: of one req	uired; ch	eck all that ar Water-S 1, 2, Aquatic Hydroge Oxidized Presenc Recent I Stunted	oply) tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizospl e of Redu ron Redu or Stresse	aves (B9) 4B) ates (B13) Odor (C1) heres alon ced Iron (Cotion in Till ed Plants ((except MI) Ig Living Ro C4) Ied Soils (C	LRA pots (C3)	Secor W Dr Sa GG St FA	and then are loose be addressed to the are loose be addressed to the addre	more required) (B9) (MLRA 1, 2 0) ele (C2) erial Imagery (C5 02)
POROLOG Petland Hydrimary Indic Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely	GY Irology Indicator ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) it or Crust (B4) posits (B5) Soil Cracks (B6) in Visible on Aeria Vegetated Conca	rs: of one req	uired; ch	eck all that ar Water-S 1, 2, Aquatic Hydroge Oxidized Presenc Recent I Stunted	oply) tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizospl e of Redu ron Redu or Stresse	aves (B9) 4B) ates (B13) Odor (C1) heres alon ced Iron (Cotion in Till ed Plants ((except MI) Ig Living Ro C4) Ied Soils (C	LRA pots (C3)	Secor W Dr Sa GG St FA	and then are loose be addressed to the are loose be addressed to the addre	more required) (B9) (MLRA 1, 2 0) ele (C2) erial Imagery (CS 02)
POROLOG Petland Hydrimary Indic Surface V High Water Ma Sediment Drift Depo Algal Mat I ron Depo Surface S Inundatio Sparsely Peld Observe	GY Irology Indicator ators (minimum or Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) or Crust (B4) posits (B5) Goil Cracks (B6) n Visible on Aeria Vegetated Concar vations:	rs: of one req	uired; ch	eck all that ar Water-S 1, 2, Aquatic Hydroge Oxidized Presenc Recent I Stunted	tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizospl e of Redu ron Reduc or Stresse xplain in F	aves (B9) 4B) ates (B13) Odor (C1) heres alon ced Iron (ction in Till ed Plants (Remarks)	(except MI) Ig Living Ro C4) Ied Soils (C	LRA pots (C3)	Secor W Dr Sa GG St FA	and then are loose be addressed to the are loose be addressed to the addre	more required) (B9) (MLRA 1, 2 0) ele (C2) erial Imagery (CS 02)
POROLOG Petland Hydrimary Indic Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Peld Observ	re linings appear Frology Indicator Strology Indic	rs: one required the state of t	uired; ch	eck all that ap Water-S 1, 2, Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	oply) tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizospl e of Redu ron Redu or Stresse xplain in F	aves (B9) 4B) ates (B13) Odor (C1) heres alon ced Iron (Cotion in Tilled Plants (Remarks)	g Living Ro C4) led Soils (C (D1) (LRR	LRA pots (C3)	Secor W Dr Sa GG St FA	and then are loose be addressed to the are loose be addressed to the addre	more required) (B9) (MLRA 1, 2 0) ele (C2) erial Imagery (CS 02)
/DROLOG //etland Hyd rimary Indic Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely ield Observ //ater Table I	GY Irology Indicator ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) is Deposits (B2) posits (B3) or Crust (B4) posits (B5) Soil Cracks (B6) in Visible on Aeria Vegetated Concavations: er Present? Present?	rs: of one require Surface Yes	uired; chu (B7) ce (B8) No No	eck all that ap Water-S 1, 2, Salt Crue Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	aply) tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizospl e of Redu ron Redu or Stresse xplain in F	aves (B9) ates (B13) Odor (C1) heres alon ced Iron (C ction in Till ed Plants (Remarks)	g Living Ro C4) led Soils (C (D1) (LRR	LRA Dots (C3) C6) A)	Secor W Dr Sa GG St F#	and then are loose be addressed to the are loose be addressed to the addre	more required) (B9) (MLRA 1, 2 0) ele (C2) erial Imagery (CS 02) 6) (LRR A) es (D7)
PROLOGIC FERRORS: Policy Polic	GY Irology Indicator ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) it or Crust (B4) posits (B5) soil Cracks (B6) in Visible on Aeria Vegetated Conca Vations: er Present? Present? esent? elilary fringe)	rs: of one requires Surface Yes Tyes Tyes Tyes Tyes Tyes Tyes Tyes Ty	uired; chuired; chuir	eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenc I Stunted Other (E	aply) tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizospl e of Redu ron Redu or Stresse xplain in I	aves (B9) ates (B13) Odor (C1) heres alon ced Iron (Cition in Till ed Plants (Remarks)	g Living Ro C4) led Soils (C (D1) (LRR A	LRA Doots (C3) C6) A)	Secon W Di Sa Ga Str FA	and then are loose be and then are loose be adary Indicators (2 or ater-Stained Leaves 4A, and 4B) rainage Patterns (B10 ry-Season Water Tab aturation Visible on Are eomorphic Position (Danallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) ost-Heave Hummock	more required) (B9) (MLRA 1, 2 0) ele (C2) erial Imagery (CS 02) 6) (LRR A) es (D7)
PROLOGIC FERRORS: Policy Polic	GY Irology Indicator ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) or Crust (B4) posits (B5) Soil Cracks (B6) in Visible on Aeria Vegetated Concavations: er Present? Present?	rs: of one requires Surface Yes Tyes Tyes Tyes Tyes Tyes Tyes Tyes Ty	uired; chuired; chuir	eck all that ap Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidized Presenc I Stunted Other (E	aply) tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizospl e of Redu ron Redu or Stresse xplain in I	aves (B9) ates (B13) Odor (C1) heres alon ced Iron (Cition in Till ed Plants (Remarks)	g Living Ro C4) led Soils (C (D1) (LRR A	LRA Doots (C3) C6) A)	Secon W Di Sa Ga Str FA	and then are loose be and then are loose be adary Indicators (2 or ater-Stained Leaves 4A, and 4B) rainage Patterns (B10 ry-Season Water Tab aturation Visible on Are eomorphic Position (Danallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) ost-Heave Hummock	more required) (B9) (MLRA 1, 2 0) ele (C2) erial Imagery (CS 02) 6) (LRR A) es (D7)
/DROLOG /etland Hyd rimary Indic] Surface V] High Water Ma] Sediment] Water Ma] Sediment] Iron Depo] Algal Mat] Iron Depo] Surface S] Inundatio] Sparsely ield Observ urface Water /ater Table I aturation Princludes cap escribe Rec	GY Irology Indicator ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) is Deposits (B2) posits (B3) or Crust (B4) posits (B5) soil Cracks (B6) in Visible on Aeria Vegetated Concavations: er Present? Present? ersent? ersent? ersent? ersent? ersent? ersent? ersent? ersent?	in upper 3	uired; chuired; chuir	eck all that ap Water-S 1, 2, Salt Crue Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	poly) tained Lea 4A, and 4 st (B11) Invertebra n Sulfide I Rhizospl e of Redu ron Redu or Stresse xplain in f	aves (B9) 4B) ates (B13) Odor (C1) heres alon ced Iron (ction in Till ed Plants (Remarks)	g Living Ro C4) led Soils (C (D1) (LRR /	LRA pots (C3) C6) A)	Secor W Dr Sa Gu St FA Ra Fr	and then are loose be and then are loose be adary Indicators (2 or ater-Stained Leaves 4A, and 4B) rainage Patterns (B10 ry-Season Water Tab aturation Visible on Are eomorphic Position (Danallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) ost-Heave Hummock	more required) (B9) (MLRA 1, 2 0) erial Imagery (CS 02) 6) (LRR A) is (D7)

Investigator(s): E. Pritchard, J. Merriman, C. Wright Section, Township, Range: S5, T23N, R4EWM Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): concave Slope (%): 0 Subregion (LRR): Northwest Forests and Coasts (LRR A) Lat: 47.30.58 Long: 122.22.58 Datum: unknown Soil Map Unit Name: NRCS Soil Unit is Unavailable NWI classification: upland Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) Are Vegetation X, Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vegetation , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)	Project/Site: City of Seattle Meyers Way Remainder Proper	ty	City/Coun	nty: <u>Seattle</u>		Sampling Date: 05/04/2011
Landform (hillslope, terrace, etc.): Earl Landform (hillslope, terrace, etc.): Landform (hillslope, terrace, e	Applicant/Owner: City of Seattle				State: WA	Sampling Point: <u>UPL-14</u>
Solitive Continuence Co	Investigator(s): E. Pritchard, J. Merriman, C. Wright			_ Section, To	ownship, Range: <u>S5, T23N,</u>	R4EWM
Solitive Continuence Co	Landform (hillslope, terrace, etc.): flat		_Local rel	lief (concave	, convex, none): concave	Slope (%): <u>0</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.) Are vegetation X Soil or Hydrology significantly disturber? Are "Nomania Cicumstances" present? Yes No Are "Nomania any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Wetland Hydrology Present? Yes No Wetland						
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No					_	
Are Vegetation Sol or Hydrology significantly disturbed? Are 'Normal Circumstances' present? Yes No Are Vegetation Sol or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.						
Are Vegetation Soil or Hydrology naturally problematic?		•		,	·	es ⊠ No □
Hydrophytic Vegetation Present? Yes ☑ No ☐					·	
Hydric Soil Present?						
Second Present? Yes No	Livideophytic Venetation December 2				<u> </u>	
Wetland Hydrology Present? Yes				•		_
## Recent cutting of vegetation within Seattle City Light utility corridor, but vegetation has started to re-grow, therefore, normal circumstances still present Tree Stratum (Plot size: 5m)			wit	thin a Wetlar	nd? Yes ∐ No	
Recent cutting of vegetation within Seattle City Light utility corridor, but vegetation has started to re-grow, therefore, normal circumstances still present YEGETATION – Use scientific names of plants. Tree Stratum (Plot size: 5m) Absolute Species? Status Species? Status Species? Status Species Species? Status Species Status Species Species? Status Species Arcs All Strata Species Ar		rainy with 1	69% of no	ormal rainfall	for the two months combine	ed. This amounts to 4.42
VEGETATION - Use scientific names of plants. Absolute Species Status CPI Cover Species Status CPI C	Recent cutting of vegetation within Seattle City Light utility	corridor, bu	ıt vegetati	on has starte	ed to re-grow, therefore, nor	mal circumstances still
Absolute Species Statum Command Species Status Status Sp	present					
Number of Dominant Species Status	VEGETATION – Use scientific names of plan	ts.				
1	Tree Stratum (Plot size: 5m)					
2	, <u> </u>					
Sepcies Across All Strata: 4 (B)						
Sapling/Shrub Stratum (Plot size: 3m) 10						
Sapling/Shrub Stratum (Plot size: 3m) Salix sitchensis 10					,	. ,
1. Salix sitchensis 10				Cover		
2. Populus balsamifera 5 Y FAC Total % Cover of: Multiply by: 3. Rubus armeniacus 5 Y FACU OBL species x 1 =	`	10	Υ	FACW	Prevalence Index works	sheet:
3. Rubus armeniacus 5					Total % Cover of:	Multiply by:
4					OBL species	x 1 =
5	4.				FACW species	x 2 =
Herb Stratum (Plot size: 1.5m) UPL species				<u> </u>	FAC species	x 3 =
1. Cardimine oligosperma 20 Y FAC Column Totals:		20	= Total	Cover	FACU species	x 4 =
2. Equisetum arvense 3. Holcus lanatus 10 N FAC 3. Holcus lanatus 110 N FAC 4. Epilobium ciliatum 110 N FAC 5. Geum macrophyllum 5. N FACW 6. Ranunculs repens 7. Geranium robertianum 8.				=		
10 N FAC 4. Epilobium ciliatum 10 N FAC 5. Geum macrophyllum 5. N FACW 6. Ranunculs repens 7. Geranium robertianum 8.					Column Totals:	(A) (B)
4. Epilobium ciliatum 5. Geum macrophyllum 5. N FACW 6. Ranunculs repens 7. Geranium robertianum 8. Substituting 10 N FACW 7. Geranium robertianum 8. Substituting 10 N FACW 7. Geranium robertianum 8. Substituting 10 N FACW 9. Substituting 10 N FACW 11 - Rapid Test for Hydrophytic Vegetation 12 - Dominance Test is >50% 13 - Prevalence Index is ≤3.0¹ 14 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 10 Substituting 10 Substituting 10 Substituting 11 Substituting 12 Substituting 12 Substituting 13 Substituting 14 Substituting 15					Prevalence Index	= R/A =
5. Geum macrophyllum 5. N FACW 6. Ranunculs repens 7. Geranium robertianum 8. S N UPL 9. S N UPL 10. S - Wetland Non-Vascular Plants¹ 11. S - Woody Vine Stratum (Plot size: 3m) 1. S - Total Cover 8. Bare Ground in Herb Stratum 25						
6. Ranunculs repens 5 N FACW 7. Geranium robertianum 5 N UPL 8.					' ' '	
7. Geranium robertianum 8.		_			- '	1 , 0
8					3 - Prevalence Index	is ≤3.0 ¹
10						
10						·
11	10				-	
Woody Vine Stratum (Plot size: 3m) 1	11			<u> </u>		,
2	Woody Vine Stratum (Plot size: 3m)	<u>65</u>	= Total	Cover		
2	1				Hydronbytic	
© = Total Cover Present? Yes ⊠ No ☐ % Bare Ground in Herb Stratum 25				<u> </u>		
-	N/ Page Organish Harts Ottachara 05	0	= Total	Cover		⊠ No □
Tollians.						

Profile Desc	cription: (Describe	to the c	lepth ne	eded to docu	ment the i	ndicator	or confirm	the ab	sence of	findicators	s.)	
Depth	Matrix			Redo	x Feature							
(inches)	Color (moist)	%	Colc	or (moist)	%	Type ¹	Loc ²	Textu	re		Remarks	
0-9	10YR 3/2	100			_			sandy	loam			
9-24+	2.5Y 4/2	100						loamy	sand			
						·						
		_			-							
<u> </u>		_										
							<u> </u>					
1= 0.0									2, .	. 5. 5		
	oncentration, D=De Indicators: (Appli						ed Sand Gr				ore Lining, M ematic Hydri	
-		cable to				eu.)					illauc nyuri	c sons .
☐ Histosol	(AT) pipedon (A2)			Sandy Redox (S Stripped Matrix				_	_	luck (A10) arent Mater	ial (TF2)	
☐ Black His				Loamy Mucky N) (excent	MIRA 1)				k Surface (TF	:12)
	n Sulfide (A4)			Loamy Gleyed			MERA I)		_ ,	Explain in I	•	12)
	Below Dark Surfac	e (A11)		Depleted Matrix				_	,	. 1	,	
☐ Thick Da	ark Surface (A12)			Redox Dark Su	rface (F6)			³ l	ndicators	of hydroph	ytic vegetation	on and
-	lucky Mineral (S1)		□ I	Depleted Dark	Surface (F	7)			wetland	l hydrology	must be pres	sent,
-	leyed Matrix (S4)			Redox Depress	ions (F8)				unless	disturbed or	r problematio	•
Restrictive	Layer (if present):											
Type:			_									
Depth (in	ches):		_					Hydi	ic Soil P	resent?	Yes 🗌 No	
Remarks: .												
HYDROLO	GY											
	drology Indicators											
1	cators (minimum of		irad: ch	ack all that ann	W)				Second	any Indicato	ors (2 or more	required)
☐ Surface	-	one requ	iicu, cin			o (PO) (a	voont MI E) A		-	•	
_	iter Table (A2)			☐ Water-Stai	A, and 4B		xcept with	KA.		er-Stained 1 4A, and 4B	Leaves (B9)	(WILKA 1, 2,
☐ Saturation				☐ Salt Crust		,				nage Patte	•	
	arks (B1)			☐ Aquatic Inv		(B13)				•	ater Table (C	2)
	nt Deposits (B2)			☐ Hydrogen		` ,			_ ,		`	magery (C9)
	oosits (B3)			Oxidized F			Livina Roo	ts (C3)		morphic Po		agory (09)
	it or Crust (B4)			☐ Presence		_	_	10 (00)		llow Aquitar	. ,	
	osits (B5)			☐ Recent Iro		`	,)		-Neutral Te	` ,	
_	Soil Cracks (B6)			☐ Stunted or			,	,			unds (D6) (LI	RR A)
	on Visible on Aerial	Imagery	(B7)	Other (Exp			., (=:::: 7:,	,			ummocks (D7	*
	Vegetated Concav					,						,
Field Obser			- (/									
Surface Wat		Yes 🗌	No 🗵	Depth (inches	s):							
Water Table			No 🖾	Depth (inches								
Saturation P			No 🖾	Depth (inches			Wetl	and Hv	drology I	Present?	Yes □ No	
	pillary fringe)	162 🗀	NO 🖂	Deptil (illiche:	>)		Well	and my	urology i	resent:	165 🗀 140	
	corded Data (strear	n gauge,	monitor	ring well, aerial	photos, pr	evious ins	spections),	if availa	able:			
	Jse best profession											
	cility and infiltrates											
	groudwater within a season to meet the				a is iiul iik	ery to be	saluraled l	o ine St	mace of I	nunualeu 10	Sumcient a	uration during

Project/Site: City of Seattle Meyers Way Remainder Proper	ty	City/Cour	nty: <u>Seattle</u>		_ Sampling Date: <u>05/04/2011</u>
Applicant/Owner: City of Seattle				State: WA	_ Sampling Point: <u>UPL-15</u>
Investigator(s): E. Pritchard, J. Merriman, C. Wright			_ Section, To	ownship, Range: <u>S32, T2</u>	4N, R4EWM
Landform (hillslope, terrace, etc.): flat		_Local re	lief (concave	, convex, none): none	Slope (%): <u>0</u>
Subregion (LRR): Northwest Forests and Coasts (LRR A)	Lat: 47.3	1.02		Long: 122.20.01	Datum: unknown
Soil Map Unit Name: NRCS Soil Unit is Unavailable					
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology signifi	•		,	nal Circumstances" prese	
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers i	- -
SUMMARY OF FINDINGS – Attach site map					
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes ☐ No ☒			the Sampled		
Wetland Hydrology Present? Yes ☐ No ☒		Wi	thin a Wetlar	nd? Yes ☐ N	NO 🔯
Remarks: No recent disturbance. Mining operations ende result recent rainfall. March and April 2011 have been uns to 4.42 additional inches of precipitation during March and ruts. VEGETATION – Use scientific names of plan	seasonably April. Site	rainy with	169% of nor	mal rainfall for the two mo	onths combined. This amounts
	Absolute	Domina	nt Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size: 5m) 1			S? Status	Number of Dominant S	pecies or FAC: 3 (A)
2.					
3.				Total Number of Domin Species Across All Stra	
4.					 - , , ,
Sapling/Shrub Stratum (Plot size: 3m)	0			Percent of Dominant Sp That Are OBL, FACW,	or FAC: <u>60</u> (A/B)
1. Rubus armeniacus	10	Υ	FACU	Prevalence Index wor	ksheet:
2. Cytisus scoparius				Total % Cover of:	Multiply by:
3. Populus balsamifera					x 1 =
4				FACW species	x 2 =
5					x 3 =
Horb Stratum (Diet size 1 Em)	5	= Total	Cover		x 4 =
Herb Stratum (Plot size: 1.5m) 1. Agrostis capillaris	40	Υ	FAC	UPL species	
Agrostis capillaris Elymus repens	30		FAC	Column Totals:	(A) (B)
3. Holcus lanatus			FAC	Prevalence Index	= B/A =
4. Rumex crispus			FAC	Hydrophytic Vegetation	on Indicators:
5. Juncus effusus			FACW	☐ 1 - Rapid Test for H	lydrophytic Vegetation
6. Plantango lanceolata			FAC	□ 2 - Dominance Tes	t is >50%
7. Daucus carota	5	N	<u>UPL</u>	3 - Prevalence Inde	
8. Vicia sativa					daptations ¹ (Provide supporting s or on a separate sheet)
9				5 - Wetland Non-Va	• ,
10					phytic Vegetation ¹ (Explain)
11					il and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	94	= lotal	Cover	be present, unless distr	urbed or problematic.
1				Hydrophytic	
2				Vegetation	- N - □
% Bare Ground in Herb Stratum 6	0	= Total	Cover	Present? Ye	s⊠ No□
Remarks:				1	

Depth Matrix			Redox Features		. 2	-			_	
(inches) Color (moist)	%	Colc	or (moist) %	Type ¹	Loc ²	<u>Texture</u>			Remar	ks
0-3 <u>2.5Y 4/2</u>	100					sandy lo	am_			
3-6 <u>2.5Y 4/1</u>	100					loamy sa	and_			
6-12+ <u>2.5Y 4/2</u>	60					I. f. sand	<u></u>	mixed m	atrix	
6-12+ <u>2.5Y 5/2</u>	40					I. f. sand	<u> </u>	mixed m	atrix	
Type: C=Concentration, D=D	Depletion,	RM=Red	uced Matrix, CS=Covered	or Coated	Sand G	rains.	² Loca	ation: PL	=Pore Lin	ing, M=Matrix.
lydric Soil Indicators: (App	licable to	all LRR	s, unless otherwise note	ed.)		Ind	icator	s for Pro	blematic	Hydric Soils ³ :
☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A12)	ace (A11)		Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)		ILRA 1)		Red F Very S Other	Shallow I (Explain	aterial (TF Dark Surfa in Remar	ice (TF12)
☐ Sandy Mucky Mineral (S1))		Depleted Dark Surface (F7	7)				-		pe present,
Sandy Gleyed Matrix (S4)			Redox Depressions (F8)	,				-	d or probl	
Restrictive Layer (if present):									
Туре:										
Depth (inches):						Hydric	Soil F	Present?	Yes □] No ⊠
Remarks: Soil is compacted b	elow six ir	nches. A	erial photos indicate the a	rea was us	ed as eq	uipment y	ard.			
YDROLOGY Wetland Hydrology Indicato	rs:			rea was us	ed as eq					
YDROLOGY Vetland Hydrology Indicato Primary Indicators (minimum o	rs:		eck all that apply)				Second			or more require
YDROLOGY Wetland Hydrology Indicato Primary Indicators (minimum o	rs:		eck all that apply) Water-Stained Leave	es (B9) (exc			Second	ter-Stain	ed Leaves	or more require s (B9) (MLRA 1
YDROLOGY Vetland Hydrology Indicato Primary Indicators (minimum o Surface Water (A1) High Water Table (A2)	rs:		eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B)	es (B9) (exc		<u>S</u>	Second	iter-Stain	ed Leaves	s (B9) (MLRA 1
YDROLOGY Vetland Hydrology Indicato Primary Indicators (minimum of the content	rs:		eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11)	es (B9) (exc		<u>\$</u>	Second Wa	ater-Stain 4A, and ainage Pa	ed Leaves 4B) atterns (B	s (B9) (MLRA 1
YDROLOGY Vetland Hydrology Indicato Primary Indicators (minimum of the content	rs:		eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates	es (B9) (exc) s (B13)		<u>\$</u> RA [Secono Wa Dra Dry	ter-Stain 4A, and ainage Pa	ed Leaves 4B) atterns (B' Water Ta	s (B9) (MLRA 1
YDROLOGY Vetland Hydrology Indicato Primary Indicators (minimum of the second of the	rs:		eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Od	es (B9) (exc s (B13) or (C1)	ept MLF	2 RA [Secono Wa Dra Dra Dry Sat	ter-Stain 4A, and ainage Pa -Season turation \	ed Leaves 4B) atterns (B' Water Ta	s (B9) (MLRA 1 10) ble (C2) Aerial Imagery
YDROLOGY Vetland Hydrology Indicato Primary Indicators (minimum of the content	rs:		eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd	es (B9) (exc s (B13) or (C1) es along Liv	ept MLF	RA [Second Wa Dra Dry Sat	ter-Stain 4A, and ainage Pa -Season turation \ omorphic	ed Leaves 4B) atterns (B' Water Ta /isible on a	s (B9) (MLRA 1 10) ble (C2) Aerial Imagery (D2)
YDROLOGY Vetland Hydrology Indicato Primary Indicators (minimum of the content	rs:		eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Od	es (B9) (exc s (B13) or (C1) es along Liv d Iron (C4)	eept MLF	RA [[[[ots (C3) [Second Wa Dra Dry Sat Gee Sha	ter-Stain 4A, and ainage Pa -Season turation \ omorphic allow Aqu	ed Leaves 4B) atterns (B' Water Ta	s (B9) (MLRA 1 10) ble (C2) Aerial Imagery (D2)
YDROLOGY Wetland Hydrology Indicato Primary Indicators (minimum of the content	rs:		eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere	es (B9) (exc s (B13) or (C1) es along Liv d Iron (C4) on in Tilled S	eept MLF	RA [[[[[] [] [] [] [] [] [] []	Second Wa Dra Dry Sat Ge Sha FA	ater-Stain 4A, and ainage Pa /-Season turation \ omorphic allow Aqu C-Neutra	ed Leaves 4B) atterns (B' Water Ta /isible on A c Position uitard (D3)	s (B9) (MLRA 1 10) ble (C2) Aerial Imagery (D2)
YDROLOGY Vetland Hydrology Indicato Primary Indicators (minimum of the content	rs: of one req	uired; cho	eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio	es (B9) (exc s (B13) or (C1) es along Liv d Iron (C4) on in Tilled S Plants (D1)	eept MLF	RA [Secono Wa Dra Dry Sat Ge Sha FA	ater-Stain 4A, and ainage Pa y-Season turation \ omorphic allow Aqu C-Neutra ised Ant	ed Leaves 4B) atterns (B' Water Ta /isible on A c Position uitard (D3)	s (B9) (MLRA 1 l0) ble (C2) Aerial Imagery (D2))
YDROLOGY Vetland Hydrology Indicato Primary Indicators (minimum of the content	rs: of one req	uired; che	eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio	es (B9) (exc s (B13) or (C1) es along Liv d Iron (C4) on in Tilled S Plants (D1)	eept MLF	RA [Secono Wa Dra Dry Sat Ge Sha FA	ater-Stain 4A, and ainage Pa y-Season turation \ omorphic allow Aqu C-Neutra ised Ant	ed Leaves 4B) atterns (B' Water Ta /isible on a c Position uitard (D3) il Test (D5 Mounds (I	s (B9) (MLRA 1 l0) ble (C2) Aerial Imagery (D2))
YDROLOGY Vetland Hydrology Indicato Primary Indicators (minimum of the second of the	rs: of one req	uired; che	eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio	es (B9) (exc s (B13) or (C1) es along Liv d Iron (C4) on in Tilled S Plants (D1)	eept MLF	RA [Secono Wa Dra Dry Sat Ge Sha FA	ater-Stain 4A, and ainage Pa y-Season turation \ omorphic allow Aqu C-Neutra ised Ant	ed Leaves 4B) atterns (B' Water Ta /isible on a c Position uitard (D3) il Test (D5 Mounds (I	s (B9) (MLRA 1 l0) ble (C2) Aerial Imagery (D2))
YDROLOGY Vetland Hydrology Indicator (minimum of 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 Aeria Sparsely Vegetated Concarield Observations:	rs: of one req	uired; che	eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio	es (B9) (exc s (B13) or (C1) es along Liv d Iron (C4) on in Tilled S Plants (D1) marks)	eept MLF	RA [Secono Wa Dra Dry Sat Ge Sha FA	ater-Stain 4A, and ainage Pa y-Season turation \ omorphic allow Aqu C-Neutra ised Ant	ed Leaves 4B) atterns (B' Water Ta /isible on a c Position uitard (D3) il Test (D5 Mounds (I	s (B9) (MLRA 1 l0) ble (C2) Aerial Imagery (D2))
YDROLOGY Wetland Hydrology Indicato Primary Indicators (minimum of the state of	rs: of one req al Imagery ave Surface	uired; che	eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio Stunted or Stressed F Other (Explain in Ren	es (B9) (exc s (B13) or (C1) es along Liv d Iron (C4) on in Tilled S Plants (D1) marks)	eept MLF	RA [Secono Wa Dra Dry Sat Ge Sha FA	ater-Stain 4A, and ainage Pa y-Season turation \ omorphic allow Aqu C-Neutra ised Ant	ed Leaves 4B) atterns (B' Water Ta /isible on a c Position uitard (D3) il Test (D5 Mounds (I	s (B9) (MLRA 1 l0) ble (C2) Aerial Imagery (D2))
YDROLOGY Wetland Hydrology Indicato Primary Indicators (minimum of the second primary Indicators (Max) 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 Aeria Sparsely Vegetated Concast Set Table Present? Water Table Present? Saturation Present?	rs: of one req al Imagery ave Surfac	uired; che / (B7) ce (B8)	eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio Stunted or Stressed F Other (Explain in Rer	es (B9) (exc s (B13) or (C1) es along Liv d Iron (C4) on in Tilled s Plants (D1) marks)	ving Roo Soils (C6 (LRR A)	RA [Second War Dray Sat Ge Sha FAi	tter-Stain 4A, and ainage Pa /-Season turation \ omorphic allow Aqu C-Neutra ised Ant ost-Heave	ed Leaves 4B) atterns (B' Water Ta /isible on a c Position uitard (D3) il Test (D5 Mounds (I	s (B9) (MLRA 1 10) ble (C2) Aerial Imagery (D2))))))))))))))))))
□ 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 Aeria	rs: of one req al Imagery ave Surface Yes Yes Yes Yes Yes Yes Yes Yes	uired; che / (B7) ce (B8) No eck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Od Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio Stunted or Stressed F Other (Explain in Rer	es (B9) (exc s (B13) or (C1) es along Liv d Iron (C4) on in Tilled s Plants (D1) marks)	ving Roo Soils (C6 (LRR A)	RA [Second Wa Dra Dry Sat Ge Sha FA	tter-Stain 4A, and ainage Pa /-Season turation \ omorphic allow Aqu C-Neutra ised Ant ost-Heave	ed Leaves 4B) atterns (B ² Water Ta /isible on a c Position uitard (D3) al Test (D5 Mounds (I e Hummod	s (B9) (MLRA 1 10) ble (C2) Aerial Imagery (D2))))))))))))))))))	

Project/Site: City of Seattle Meyers Way Remainder Propert	y	City/Co	ounty	Seattle	;	Sampling Date:05/04/2011
					State: WA	
Investigator(s): E. Pritchard, J. Merriman, C. Wright						
Landform (hillslope, terrace, etc.): toe of slope						
Subregion (LRR): Northwest Forests and Coasts (LRR A)						
Soil Map Unit Name: NRCS Soil Unit is Unavailable					-	
•						on. <u>upianu</u>
Are climatic / hydrologic conditions on the site typical for this	-					
Are Vegetation, Soil, or Hydrology sign					ormal Circumstances" prese	
Are Vegetation, Soil, or Hydrology natu	rally probler	natic?		(If neede	ed, explain any answers in I	Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samı	pling	g point le	ocations, transects, i	important features, etc.
Hydrophytic Vegetation Present? Yes ⊠ No □						
Hydric Soil Present? Yes ☐ No ☐				Sampled		_
Wetland Hydrology Present? Yes ☐ No ☒			withi	n a Wetlar	nd? Yes ☐ No	
Remarks: March and April 2011 have been unseasonably						
additional inches of precipitation during March and April. S			-		•	•
Area was graded for construction of Joint Training Facility. compaction by heavy equipment. Puddles at surface appe					ing, and puddles at surface	appears to be result of soil
1 3 3 1 1						
VEGETATION – Use scientific names of plant		Dami		la di a atau	Daminana Taat wantah	
Tree Stratum (Plot size: 5m)	Absolute % Cover			Indicator Status	Dominance Test worksh Number of Dominant Spe	
1						FAC: <u>2</u> (A)
2					Total Number of Dominar	nt .
3					Species Across All Strata	
4					Percent of Dominant Spe	cies
	0	= To	tal Co	over	That Are OBL, FACW, or	
Sapling/Shrub Stratum (Plot size: 3m)					Prevalence Index works	hoot
1						Multiply by:
2					OBL species	
4.					FACW species	
5.					FAC species	
					FACU species	
Herb Stratum (Plot size: 1.5m)						x 5 =
Agrostis capillaris	85			FAC	Column Totals:	(A) (B)
2. Rumex crispus				<u>FAC</u>	December of lasters	D/A
3. Plantango lanceolata						B/A =
4. Cardimine oligosperma				FAC	Hydrophytic Vegetation 1 - Rapid Test for Hyd	
5					☐ 1 - Rapid Test for Hyd	
6					☐ 3 - Prevalence Index	4
7						aptations ¹ (Provide supporting
8 9					data in Remarks of	or on a separate sheet)
10					5 - Wetland Non-Vaso	cular Plants ¹
11.					☐ Problematic Hydrophy	ytic Vegetation ¹ (Explain)
	100				¹ Indicators of hydric soil a be present, unless disturb	and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)					be present, unless disturt	ed of problematic.
1					Hydrophytic	
2					Vegetation	
% Bare Ground in Herb Stratum 0	0	= To	tal Co	over	Present? Yes	⊠ No □
Remarks:						

(in ale \	Matrix			Red	0/ -	12	T +	D
(inches)	Color (moist)	%	Cold	or (moist)	% Type	Loc ²	Texture	Remarks
)-3	2.5Y 4/2	100					sandy loa	<u> </u>
3-7	2.5Y 5/1	40			_		I. f. sand	mixed matrix
-7	2.5Y 5/2	60					I. f. sand	mixed matrix
	oncentration, D=D				S=Covered or Co	ated Sand G		² Location: PL=Pore Lining, M=Matrix. cators for Problematic Hydric Soils ³ :
Histosol	` '			Sandy Redox (2 cm Muck (A10)
	pipedon (A2)			Stripped Matrix	, ,			Red Parent Material (TF2)
_ ,	n Sulfide (A4)	44.44		Loamy Gleyed		ept MLRA 1)		Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
•	l Below Dark Surfa erk Surface (A12)	ace (A11)		Depleted Matri: Redox Dark Su	, ,		³ Indi	cators of hydrophytic vegetation and
	lucky Mineral (S1)			Depleted Dark				etland hydrology must be present,
-	leyed Matrix (S4)			Redox Depress				nless disturbed or problematic.
	Layer (if present)	:			(- /			р
Type:								
• •	ches):						Hydric	Soil Present? Yes ☐ No ☒
	oil is compacted be						17	
YDROLO Vetland Hy	GY drology Indicato	elow seve	en inches					
YDROLO Vetland Hy	GY drology Indicator	elow seve	en inches	eck all that app			<u>s</u>	econdary Indicators (2 or more required)
PROLO Vetland Hy rimary India	GY drology Indicator cators (minimum c	elow seve	en inches	eck all that app	nined Leaves (B9)	(except MLF	<u>s</u>	econdary Indicators (2 or more required)] Water-Stained Leaves (B9) (MLRA 1 , 4A, and 4B)
PROLO Vetland Hy rimary India Surface	GY drology Indicator cators (minimum o Water (A1) ter Table (A2)	elow seve	en inches	eck all that app	ained Leaves (B9) A, and 4B)	(except MLF	<u>S</u>	Water-Stained Leaves (B9) (MLRA 1,
/DROLO /etland Hy rimary India // Surface India // High Wa // Saturation	GY drology Indicator eators (minimum of Water (A1) ter Table (A2) on (A3)	elow seve	en inches	eck all that app ☐ Water-Sta 1, 2, 4 ☐ Salt Crust	ained Leaves (B9) A, and 4B)		<u>S</u> RA [Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B)
/DROLO /etland Hy rimary India // Surface ' // High Wa // Saturatic // Water M	GY drology Indicator eators (minimum of Water (A1) ter Table (A2) on (A3)	elow seve	en inches	eck all that app Water-Sta 1, 2, 4 Salt Crust Aquatic In	nined Leaves (B9) A, and 4B) (B11)		<u>S</u> RA [Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10)
/DROLO /etland Hy rimary India // Surface ' // High Wa // Saturation // Water M // Sedimen	GY drology Indicator cators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1)	elow seve	en inches	eck all that app Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen	ined Leaves (B9) A, and 4B) (B11) evertebrates (B13))	<u>S</u> RA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLO Wetland Hy Irimary India Surface High Wa Saturatic Water M Sedimen Drift Dep	GY drology Indicator cators (minimum c Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2)	elow seve	en inches	eck all that app Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I	A, and 4B) ((B11) (Wertebrates (B13) (Sulfide Odor (C1)) ng Living Roc	RA C	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
POROLO Vetland Hy Irimary India Surface High Wa Saturatic Water M Sedimen Drift Dep Algal Ma	GY drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3)	elow seve	en inches	eck all that app Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I	ined Leaves (B9) A, and 4B) (B11) evertebrates (B13) Sulfide Odor (C1) Rhizospheres alor) ng Living Roc C4)	SRA C	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2)
YDROLO Vetland Hydrimary India Surface S High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface S	GY drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6)	rs: If one req	uired; che	eck all that app Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	ined Leaves (B9) A, and 4B) (B11) evertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron () ng Living Roc C4) Iled Soils (C6	SRA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Ca) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
/DROLO /etland Hy rimary India // Surface ' // High Wa // Saturatio // Water M // Sedimen // Drift Dep // Algal Ma // Iron Dep // Surface : // Inundation	GY drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria	rs: If one req	uired; cho	eck all that app Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc	ined Leaves (B9) A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Til) ng Living Roc C4) Iled Soils (C6	SRA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Ca) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
/DROLO /etland Hy rimary India 3 Surface 1 3 High Wa 3 Saturatio 4 Water M 5 Sedimen 6 Drift Dep 7 Algal Ma 8 Iron Dep 7 Surface 1 8 Inundatio 8 Sparsely	drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aeria	rs: If one req	uired; cho	eck all that app Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc	Ained Leaves (B9) A, and 4B) (B11) E(B11) Evertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Til r Stressed Plants) ng Living Roc C4) Iled Soils (C6	SRA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Ca) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
/DROLO /etland Hy rimary India Surface High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely ield Obser	GY drology Indicator cators (minimum of water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) art Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria vectors:	rs: If one required limagery	uired; cho	eck all that app Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex	inined Leaves (B9) A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Til r Stressed Plants plain in Remarks)) ng Living Roc C4) Iled Soils (C6	SRA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Ca) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLO Wetland Hydrimary India Surface Saturation Water M Sediment Drift Dep Algal Ma Iron Dep Surface S Inundation Sparsely ield Obser	GY drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) ot or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concavations: er Present?	elow seve	uired; che (B7) ce (B8)	eck all that app Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	sined Leaves (B9) A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Til r Stressed Plants plain in Remarks)) ng Living Roo C4) Illed Soils (C6 (D1) (LRR A	SRA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Ca) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLO Vetland Hy Primary India Surface High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser	GY drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concavations: er Present? Present?	elow seve	uired; cho	eck all that app Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted oo Other (Ex	ained Leaves (B9) A, and 4B) (B11) Evertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Til or Stressed Plants plain in Remarks) es): 1) ng Living Roo C4) Iled Soils (C6 (D1) (LRR A	<u>S</u> RA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Carron Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLO Vetland Hyv Primary India Surface High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser Surface Water Table Saturation P	GY drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concavations: er Present? Present?	elow seve	uired; che (B7) ce (B8)	eck all that app Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted oo Other (Ex	sined Leaves (B9) A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Til r Stressed Plants plain in Remarks)) ng Living Roo C4) Iled Soils (C6 (D1) (LRR A	<u>S</u> RA	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Ca) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLO Wetland Hy Primary India Surface High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser Surface Wat Water Table Saturation P includes cap	GY drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) ot Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concator vations: er Present? Present? resent? pillary fringe)	elow several selow several limagery live Surface Yes Yes Yes Yes	uired; che (B7) ce (B8) No eck all that app Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex	ained Leaves (B9) A, and 4B) (B11) Evertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Til or Stressed Plants plain in Remarks) es): 1) ng Living Roc C4) Illed Soils (C6 (D1) (LRR A	SRA COSS COSS (C3) COSS (C	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)	
YDROLO Wetland Hy Primary India Surface High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser Surface Water Table Saturation P includes cap Describe Re	drology Indicator cators (minimum of water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) ot or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Conca vations: er Present? Present? Present? resent? corded Data (strea	rs: If one required yes \(\text{Yes} \) Yes \(\text{Yes} \) Yes \(\text{Tes} \) The second yes \(\text{Tes} \)	uired; che (B7) ce (B8) No No No o e, monitor	eck all that app Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex Depth (inche Depth (inche	inined Leaves (B9) A, and 4B) (B11) Evertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Til or Stressed Plants plain in Remarks) Es): photos, previous	ng Living Roc C4) Illed Soils (C6 (D1) (LRR A	RA S Cots (C3) C Cots (C4) C C C Cots (C4) C C C C C C C C C C C C C C C C C C C	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: City of Seattle Meyers Way Remainder Propert	y (City/Cou	ınty: <u>Seattle</u>	S	ampling Date: <u>05/04/2011</u>
Applicant/Owner: City of Seattle				State: WA S	ampling Point: <u>UPL-17</u>
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	ownship, Range: S31, T24N,	R4EWM
Landform (hillslope, terrace, etc.): depression					
Subregion (LRR): Northwest Forests and Coasts (LRR A)	Lat: 47.3	1.04		Long: 122.20.11	Datum: unknown
Soil Map Unit Name: NRCS Soil Unit is Unavailable				-	
Are climatic / hydrologic conditions on the site typical for this	time of vea	r? Yes	Π No⊠ (I	f no. explain in Remarks.)	
Are Vegetation, Soil, or Hydrology sign	-		,	ormal Circumstances" presen	t? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in R	
SUMMARY OF FINDINGS – Attach site map s					
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes ☐ No ☒			the Sampled ithin a Wetlar		7
Wetland Hydrology Present? Yes ☐ No ☒		W	illilli a vvellai	id: Tes 🗌 No 🛭	7
Remarks: March and April 2011 have been unseasonably additional inches of precipitation during March and April. S					
Sample plot is located at toe of steep slope. Area was grapuddles at surface appears to be result of soil compaction					
VEGETATION – Use scientific names of plant	s.				
			ant Indicator	Dominance Test workshe	et:
Tree Stratum (Plot size: 5m) 1			es? Status	Number of Dominant Speci That Are OBL, FACW, or F	
2				Total Number of Dominant	
3				Species Across All Strata:	<u>3</u> (B)
4			<u> </u>	Percent of Dominant Speci	es
Sapling/Shrub Stratum (Plot size: 3m)	0	= Tota	l Cover	That Are OBL, FACW, or F	
1. Cytisus scoparius	40	Υ	UPL	Prevalence Index worksh	eet:
2				Total % Cover of:	Multiply by:
3.				OBL species	x 1 =
4				FACW species	x 2 =
5				FAC species	x 3 =
	40	= Tota	l Cover	FACU species	x 4 =
Herb Stratum (Plot size: 1.5m)	50	.,	540		x 5 =
1. Festuca rubra	50			Column Totals:	(A) (B)
2. Phalaris arundinacea				Prevalence Index = E	3/A =
Equisetum arvense Rumex crispus				Hydrophytic Vegetation I	
Rumex crispus Polygonum cuspidatum				☐ 1 - Rapid Test for Hydro	
6				□ 2 - Dominance Test is :	· ·
7				☐ 3 - Prevalence Index is	
8.					tations ¹ (Provide supporting on a separate sheet)
9				5 - Wetland Non-Vascu	• .
10				☐ Problematic Hydrophyti	
11				¹ Indicators of hydric soil an	• • • •
Woody Vine Stratum (Plot size: 3m)	100	= Tota	l Cover	be present, unless disturbe	
1		-		Hydrophytic	
2				Vegetation	7 N 🗆
% Bare Ground in Herb Stratum 0	0	= Tota	l Cover	Present? Yes	No □
Remarks:				l	

Profile Desc	ription: (Describe	e to the	depth ne	eded to docur	nent the i	ndicator	or confirm	the ab	sence of indicators.)
Depth	Matrix				x Feature:				
(inches)	Color (moist)	%	Colo	r (moist)	%	Type ¹	Loc ²	Textu	re Remarks
0-2	2.5Y 4/2	100						loamy	sand_
2-12	2.5Y 5/2	100	_					loamy	sand
12-20+	2.5Y 5/3	100						loamy	sand
	-								
	-				-				
	-				_				
					_				
		_							
¹ Type: C=C	oncentration, D=De	pletion. F	RM=Red	uced Matrix. CS	S=Covered	d or Coate	ed Sand Gr	rains.	² Location: PL=Pore Lining, M=Matrix.
	Indicators: (Appli								ndicators for Problematic Hydric Soils ³ :
☐ Histosol	(A1)			Sandy Redox (S	S5)				☐ 2 cm Muck (A10)
☐ Histic Ep	ipedon (A2)			Stripped Matrix	. ,				Red Parent Material (TF2)
☐ Black His				oamy Mucky N			MLRA 1)		☐ Very Shallow Dark Surface (TF12)
	n Sulfide (A4)	(8.4.4)		oamy Gleyed I)		L	Other (Explain in Remarks)
	l Below Dark Surfac irk Surface (A12)	ce (A11)		Depleted Matrix Redox Dark Sui	` '			31	Indicators of hydrophytic vegetation and
_	lucky Mineral (S1)			Depleted Dark Sui	, ,	7)		ı	wetland hydrology must be present,
	leyed Matrix (S4)			Redox Depress	•	.,			unless disturbed or problematic.
-	Layer (if present):			· · · · · · · · · · · · · · · · · · ·					· ·
Type:									
Depth (in	ches):							Hydr	ric Soil Present? Yes ☐ No ⊠
Remarks:									
	0.7								
HYDROLO									
•	drology Indicators								
	cators (minimum of	one requ	ired; che		-				Secondary Indicators (2 or more required)
	Water (A1)			☐ Water-Stai			xcept MLR	RA	Water-Stained Leaves (B9) (MLRA 1, 2,
_	ter Table (A2)				A, and 4B))			4A, and 4B)
☐ Saturation	` '			☐ Salt Crust	` '	(D40)			☐ Drainage Patterns (B10)
	arks (B1)			☐ Aquatic In\		, ,			Dry-Season Water Table (C2)
	t Deposits (B2)			☐ Hydrogen			Living Boo	to (C2)	Saturation Visible on Aerial Imagery (C9)
-	osits (B3)			☐ Oxidized R☐ Presence of		_	_	is (C3)	Geomorphic Position (D2)
	t or Crust (B4) osits (B5)			☐ Recent Iro		,	,	١	☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5)
-	Soil Cracks (B6)			☐ Stunted or			`	,	Raised Ant Mounds (D6) (LRR A)
	on Visible on Aerial	Imagery	(B7)	Other (Exp			1) (L IXIX A)	'	Frost-Heave Hummocks (D7)
	Vegetated Concav			_ Other (Exp	idiii iii i toi	narko)			- 1100t Fleave Hammooks (21)
Field Obser			(20)						
Surface Wat		Yes 🗌	No 🛛	Depth (inches	;)·				
Water Table		Yes 🗌	No 🖾	Depth (inches					
Saturation P		Yes 🗌	No 🖾	Depth (inches			Wetl	and Hv	drology Present? Yes ☐ No ⊠
(includes ca		162 🗀	INO 🖂	Deptil (iliches	·)·		Well	and my	urology rresent: res 🗀 No 🖂
	corded Data (stream	n gauge	monitor	ing well, aerial	photos, pr	evious ins	spections),	if availa	able:
Remarks:									

Project/Site: City of Seattle Meyers Way Remainder Propert	ty	City/Coun	ty: <u>Seattle</u>		Sampling Date: 05/04/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: <u>UPL-18</u>
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	ownship, Range: <u>S5, T23N</u>	, R4EWM
Landform (hillslope, terrace, etc.): flat		_Local rel	ief (concave	, convex, none): none	Slope (%): <u>0</u>
Subregion (LRR): Northwest Forests and Coasts (LRR A)	Lat: 47.3	0.58		Long: <u>122.20.00</u>	Datum: unknown
Soil Map Unit Name: NRCS Soil Unit is Unavailable					
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	-			ormal Circumstances" pres	
Are Vegetation, Soil, or Hydrology natu			(If need	ed, explain any answers ir	Remarks.)
SUMMARY OF FINDINGS – Attach site map			•		•
Hydrophytic Vegetation Present? Yes ☐ No ☒					
Hydric Soil Present? Yes \(\text{No } \text{\(\text{\sigma} \)			he Sampled		_
Wetland Hydrology Present? Yes ☐ No ☒		wit	hin a Wetlar	nd? Yes □ N	0 ⊠
Remarks: No recent disturbance. Mining operations ende result recent rainfall. March and April 2011 have been uns to 4.42 additional inches of precipitation during March and ruts. VEGETATION – Use scientific names of plan	seasonably April. Site	rainy with	169% of nor	mal rainfall for the two mor	nths combined. This amounts
		Dominan	nt Indicator	Dominance Test works	sheet:
Tree Stratum (Plot size: 5m) 1			? Status	Number of Dominant Sp That Are OBL, FACW, o	pecies or FAC: 1 (A)
2.				Total Number of Domina	` , ,
3				Species Across All Strat	
4				Percent of Dominant Sp	ecies
Conling/Shrub Stratum (Dlat size: 2m)	0	= Total (Cover		or FAC: <u>50</u> (A/B)
Sapling/Shrub Stratum (Plot size: 3m) 1. Rubus armeniacus	20	Y	FAC	Prevalence Index work	sheet:
Populus balsamifera				Total % Cover of:	
3.					x 1 = 0
4.				FACW species 15	x 2 = <u>30</u>
5				FAC species 45	x 3 = <u>135</u>
Harb Chatring (Diet sings 4 5m)	25	= Total (Cover		x 4 = <u>80</u>
Herb Stratum (Plot size: 1.5m) 1. Elyums repens	30	Υ	NI	UPL species 15	
Elyums repens Agrostis capillaris	15	. <u> </u>	FAC	Column Totals: 95	(A) <u>320</u> (B)
Hypochaeris radicata	15	N	FACU	Prevalence Index	= B/A = 3.4
4. Juncus effusus	15	N	FACW	Hydrophytic Vegetatio	n Indicators:
5. Rumex crispus	5		FAC	☐ 1 - Rapid Test for H	ydrophytic Vegetation
6. Senecio jacobaea			FACU	2 - Dominance Test	
7. Geranium carolinianum			UPL	3 - Prevalence Index	
8. Daucus carota			UPL		daptations ¹ (Provide supporting or on a separate sheet)
9. <u>Plantango lanceolata</u>			FAC	5 - Wetland Non-Va	·
10					hytic Vegetation ¹ (Explain)
11.		= Total 0	Cover	¹ Indicators of hydric soil be present, unless distu	and wetland hydrology must rbed or problematic.
Woody Vine Stratum (Plot size: 3m)					
1 2			· ——	Hydrophytic	
		= Total (Cover	Vegetation Present? Yes	s □ No ⊠
% Bare Ground in Herb Stratum 0	-				
Remarks:					

	atrix			dox Features					
(inches) Color (moist)		Colo	or (moist)	%Type	_Loc ²	Texture	<u> </u>	Remarks	
)-4 <u>2.5Y 4/2</u>						loam			
1-12 <u>2.5Y 5/2</u>						loam			
12-18+ 2.5Y 5/2	60					I. f. sand	d	mixed matrix	
12-18+ <u>2.5Y 5/1</u>	40							mixed matrix	
Type: C=Concentration, I					ated Sand G			ation: PL=Pore Lining,	
Hydric Soil Indicators: (A	Applicable to							s for Problematic Hyd	dric Soils ^a :
Histosol (A1)			Sandy Redox					Muck (A10)	
Histic Epipedon (A2)			Stripped Matri	` '				Parent Material (TF2)	TE40\
Black Histic (A3)				Mineral (F1) (exce	pt MLRA 1)		•	Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	turfoos (A11)		_oamy Gleyed	, ,		Ш	Otner	(Explain in Remarks)	
☐ Depleted Below Dark S☐ Thick Dark Surface (A1	, ,		Depleted Matr Redox Dark S	` '		3 _{In}	dicator	s of hydrophytic vegeta	ation and
☐ Sandy Mucky Mineral (•			Surface (F7)				id hydrology must be pr	
☐ Sandy Gleyed Matrix (\$			Redox Depres					disturbed or problema	
Restrictive Layer (if pres				()					
Type:	•								
Depth (inches):						Hydrid	c Soil I	Present? Yes 🗌 N	No ⊠
Remarks: Soils appear to b									
iories.									
YDROLOGY	ators:								
YDROLOGY Wetland Hydrology Indic		uired; ch	eck all that ap	ply)			Secon	dary Indicators (2 or mo	ore required)
YDROLOGY Wetland Hydrology Indic Primary Indicators (minimu		uired; che			(except MLI				
YDROLOGY Vetland Hydrology Indic Primary Indicators (minimu ☑ Surface Water (A1)		uired; cho	☐ Water-St	ained Leaves (B9)	(except MLF			ater-Stained Leaves (BS	
YDROLOGY Vetland Hydrology Indicators (minimus) Surface Water (A1) High Water Table (A2)		uired; cho	☐ Water-St	ained Leaves (B9) 4A, and 4B)	(except MLI	RA	☐ Wa	ater-Stained Leaves (B9	
YDROLOGY Vetland Hydrology Indic. Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3)		uired; ch	☐ Water-St 1, 2,	ained Leaves (B9) 4A, and 4B) it (B11)	(except MLF	RA	☐ Wa	ater-Stained Leaves (BS 4A, and 4B) ainage Patterns (B10)	9) (MLRA 1, 2,
YDROLOGY Vetland Hydrology Indicators (minimus Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	m of one req	uired; cho	☐ Water-St 1, 2, 4 ☐ Salt Crus ☐ Aquatic I	ained Leaves (B9) 4A, and 4B) at (B11) envertebrates (B13)		RA	☐ Wa	atter-Stained Leaves (BS 4A, and 4B) ainage Patterns (B10) y-Season Water Table ((C2)
YDROLOGY Vetland Hydrology Indicators (minimumary Indicators (minimumary Indicators (Minimumary Indicators (Mater Table (A2)) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	m of one req	uired; cho	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger	ained Leaves (B9) 4A, and 4B) st (B11) nvertebrates (B13) n Sulfide Odor (C1)		RA	☐ Wa	atter-Stained Leaves (BS 4A, and 4B) ainage Patterns (B10) y-Season Water Table (turation Visible on Aeria	(C2) al Imagery (C9
YDROLOGY Vetland Hydrology Indice Primary Indicators (minimus) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	m of one req	uired; che	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized	ained Leaves (B9) 4A, and 4B) st (B11) nvertebrates (B13) n Sulfide Odor (C1) Rhizospheres alor	ng Living Roc	RA ots (C3)	☐ Wa	tter-Stained Leaves (B9 4A, and 4B) ainage Patterns (B10) y-Season Water Table (turation Visible on Aeria omorphic Position (D2)	(C2) al Imagery (C9)
YDROLOGY Vetland Hydrology Indice Primary Indicators (minimus) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	m of one req	uired; cho	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence	ained Leaves (B9) 4A, and 4B) It (B11) Invertebrates (B13) In Sulfide Odor (C1) Rhizospheres alor It of Reduced Iron (g Living Roc C4)	RA ots (C3)	☐ Wa	ter-Stained Leaves (BS 4A, and 4B) ainage Patterns (B10) /-Season Water Table (turation Visible on Aeria omorphic Position (D2) allow Aquitard (D3)	(C2) al Imagery (C9
YDROLOGY Wetland Hydrology Indicators (minimu 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)	m of one req	uired; ch	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir	ained Leaves (B9) 4A, and 4B) It (B11) Invertebrates (B13) In Sulfide Odor (C1) Rhizospheres alor It of Reduced Iron (It on Reduction in Tile	ng Living Roo C4) Ied Soils (C6	RA ots (C3)	☐ Wa ☐ Dra ☐ Dry ☐ Sa ☐ Ge ☐ Sh	atter-Stained Leaves (BS 4A, and 4B) ainage Patterns (B10) y-Season Water Table (turation Visible on Aeria omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5)	(C2) (Magery (C9)
YDROLOGY Vetland Hydrology Indicators (minimumal 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 (B	m of one req		Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir	ained Leaves (B9) 4A, and 4B) at (B11) nvertebrates (B13) n Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Til or Stressed Plants	ng Living Roo C4) Ied Soils (C6	RA ots (C3)	Dra Dra Dry Sa Ge Sh Ra	Atter-Stained Leaves (BS) 4A, and 4B) Ainage Patterns (B10) A-Season Water Table (Atturation Visible on Aeria Comorphic Position (D2) Allow Aquitard (D3) C-Neutral Test (D5) Aissed Ant Mounds (D6) ((C2) al Imagery (C9
YDROLOGY Vetland Hydrology Indicators (minimus 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 (B	m of one req) 6) erial Imagery	/ (B7)	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir	ained Leaves (B9) 4A, and 4B) It (B11) Invertebrates (B13) In Sulfide Odor (C1) Rhizospheres alor It of Reduced Iron (It on Reduction in Tile	ng Living Roo C4) Ied Soils (C6	RA ots (C3)	Dra Dry Sa Ge Sh Ra	atter-Stained Leaves (BS 4A, and 4B) ainage Patterns (B10) y-Season Water Table (turation Visible on Aeria omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5)	(C2) al Imagery (C9
YDROLOGY Vetland Hydrology Indice Primary Indicators (minimus 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 (B1) Inundation Visible on A1 Sparsely Vegetated Cc	m of one req) 6) erial Imagery	/ (B7)	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir	ained Leaves (B9) 4A, and 4B) at (B11) nvertebrates (B13) n Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Til or Stressed Plants	ng Living Roo C4) Ied Soils (C6	RA ots (C3)	Dra Dry Sa Ge Sh Ra	Atter-Stained Leaves (BS) 4A, and 4B) Ainage Patterns (B10) A-Season Water Table (Atturation Visible on Aeria Comorphic Position (D2) Allow Aquitard (D3) C-Neutral Test (D5) Aissed Ant Mounds (D6) ((C2) al Imagery (C9
YDROLOGY Vetland Hydrology Indice Primary Indicators (minimu 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 (B Inundation Visible on A Sparsely Vegetated Co	m of one req) 6) erial Imagery	/ (B7) ce (B8)	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted of	ained Leaves (B9) 4A, and 4B) It (B11) Invertebrates (B13) In Sulfide Odor (C1) Rhizospheres alor It of Reduced Iron (Iron Reduction in Tile Tor Stressed Plants Explain in Remarks)	ng Living Roo C4) Ied Soils (C6	RA ots (C3)	Dra Dry Sa Ge Sh Ra	Atter-Stained Leaves (BS) 4A, and 4B) Ainage Patterns (B10) A-Season Water Table (Atturation Visible on Aeria Comorphic Position (D2) Allow Aquitard (D3) C-Neutral Test (D5) Aissed Ant Mounds (D6) ((C2) al Imagery (C9)
YDROLOGY Vetland Hydrology Indicators (minimus 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 (B1) ☐ Inundation Visible on A1 ☐ Sparsely Vegetated Coffield Observations: Surface Water Present?	m of one req 6) erial Imagery ncave Surfac	/ (B7) ce (B8)	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted C Other (Ex	ained Leaves (B9) 4A, and 4B) at (B11) nvertebrates (B13) n Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Til or Stressed Plants oplain in Remarks) es): 1	ng Living Roo C4) Ied Soils (C6	RA ots (C3)	Dra Dry Sa Ge Sh Ra	Atter-Stained Leaves (BS) 4A, and 4B) Ainage Patterns (B10) A-Season Water Table (Atturation Visible on Aeria Comorphic Position (D2) Allow Aquitard (D3) C-Neutral Test (D5) Aissed Ant Mounds (D6) ((C2) al Imagery (C9)
YDROLOGY Vetland Hydrology Indic Primary Indicators (minimu 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 (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present?	m of one req 6) erial Imagery oncave Surface Yes Yes Yes	/ (B7) ce (B8) No □ No ⊠	Water-St 1, 2, 4 Salt Crus Aquatic li Hydroger Oxidized Presence Recent Ir Stunted of Other (Ex	ained Leaves (B9) 4A, and 4B) at (B11) nvertebrates (B13) n Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (fon Reduction in Til or Stressed Plants oxplain in Remarks) es): 1 es): 1 es): 18	g Living Roc C4) led Soils (C6 (D1) (LRR A	era (C3)	☐ Wa ☐ Dra ☐ Dry ☐ Sa ☐ Ge ☐ Sh: ☐ FA ☐ Ra ☐ Frc	Atter-Stained Leaves (BS) 4A, and 4B) ainage Patterns (B10) A-Season Water Table (turation Visible on Aeria omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (ost-Heave Hummocks ((C2) (al Imagery (C9) (LRR A) (D7)
YDROLOGY Netland Hydrology Indicators (minimus Primary Indicators (minimus 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 (B1) ☐ Inundation Visible on A1 ☐ Sparsely Vegetated Coffield Observations: Surface Water Present? Nater Table Present? Saturation Present?	m of one req 6) erial Imagery ncave Surfac	/ (B7) ce (B8)	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted C Other (Ex	ained Leaves (B9) 4A, and 4B) at (B11) nvertebrates (B13) n Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (fon Reduction in Til or Stressed Plants oxplain in Remarks) es): 1 es): 1 es): 18	g Living Roc C4) led Soils (C6 (D1) (LRR A	era (C3)	☐ Wa ☐ Dra ☐ Dry ☐ Sa ☐ Ge ☐ Sh: ☐ FA ☐ Ra ☐ Frc	ter-Stained Leaves (BS 4A, and 4B) ainage Patterns (B10) bi-Season Water Table (turation Visible on Aeria omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (pst-Heave Hummocks ((C2) al Imagery (C9
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B	m of one req	/ (B7) ce (B8) No □ No ⊠ No ⊠	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted C Other (Ex	ained Leaves (B9) 4A, and 4B) at (B11) nvertebrates (B13) n Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Til or Stressed Plants explain in Remarks) es): 1 es): 18 es): 15	ig Living Roc C4) led Soils (C6 (D1) (LRR A	ets (C3) i) land Hyd	☐ Wa ☐ Dra ☐ Dry ☐ Sa ☐ Ge ☐ Sha ☐ FA ☐ FA	Atter-Stained Leaves (BS) 4A, and 4B) ainage Patterns (B10) A-Season Water Table (turation Visible on Aeria omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (ost-Heave Hummocks ((C2) (al Imagery (C9) (LRR A) (D7)
YDROLOGY Wetland Hydrology Indicators (minimus Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B☐ Inundation Visible on A☐ Sparsely Vegetated Coffield Observations: Surface Water Present? Water Table Present? Saturation Present? Includes capillary fringe)	m of one req	/ (B7) ce (B8) No □ No ⊠ No ⊠	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted C Other (Ex	ained Leaves (B9) 4A, and 4B) at (B11) nvertebrates (B13) n Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Til or Stressed Plants explain in Remarks) es): 1 es): 18 es): 15	ig Living Roc C4) led Soils (C6 (D1) (LRR A	ets (C3) i) land Hyd	☐ Wa ☐ Dra ☐ Dry ☐ Sa ☐ Ge ☐ Sha ☐ FA ☐ FA	Atter-Stained Leaves (BS) 4A, and 4B) ainage Patterns (B10) A-Season Water Table (turation Visible on Aeria omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (ost-Heave Hummocks ((C2) (al Imagery (C9) (LRR A) (D7)
YDROLOGY Netland Hydrology Indic Primary Indicators (minimu 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 (B Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Nater Table Present? Saturation Present? Saturation Present? Secribe Recorded Data (Secretary) Remarks: Use best profes	m of one req () 6) erial Imagery encave Surfact Yes Yes Yes Stream gauge essional judge	/ (B7) ce (B8) No □ No ⊠ No ⊠ e, monitor	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted of Other (Ex) Depth (inched)	ained Leaves (B9) 4A, and 4B) It (B11) Invertebrates (B13) In Sulfide Odor (C1) Rhizospheres alor It of Reduced Iron (Iron Reduction in Tillor Stressed Plants It (page 15): 18 It (page 15): 18 It (page 15): 15 It (page 15): 16 It (page 15): 17 It (page 15): 18 It (page 15): 1	g Living Roc C4) led Soils (C6 (D1) (LRR A Wetl inspections),	etrology c	☐ Wa ☐ Dra ☐ Dry ☐ Sar ☐ Ge ☐ Shr ☐ FA ☐ Fac	AA, and 4B) ainage Patterns (B10) A-Season Water Table (turation Visible on Aeria omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (ost-Heave Hummocks ((C2) al Imagery (C9 (LRR A) D7)
Vetland Hydrology Indication of Indicators (Minimus) 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 (B2) Inundation Visible on A2 Sparsely Vegetated Cocield Observations: urface Water Present? Vater Table Present? Vater Table Present? Includes capillary fringe) Vescribe Recorded Data (Secribe Recorded	m of one req () 6) erial Imagery encave Surfact Yes Yes Yes Stream gauge essional judge	/ (B7) ce (B8) No □ No ⊠ No ⊠ e, monitor	Water-St 1, 2, 4 Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted of Other (Ex) Depth (inched)	ained Leaves (B9) 4A, and 4B) It (B11) Invertebrates (B13) In Sulfide Odor (C1) Rhizospheres alor It of Reduced Iron (Iron Reduction in Tillor Stressed Plants It (page 15): 18 It (page 15): 18 It (page 15): 15 It (page 15): 16 It (page 15): 17 It (page 15): 18 It (page 15): 1	g Living Roc C4) led Soils (C6 (D1) (LRR A Wetl inspections),	etrology c	☐ Wa ☐ Dra ☐ Dry ☐ Sar ☐ Ge ☐ Shr ☐ FA ☐ Fac	AA, and 4B) ainage Patterns (B10) A-Season Water Table (turation Visible on Aeria omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (ost-Heave Hummocks ((C2) al Imagery (C9 (LRR A) D7)

Project/Site: City of Seattle Meyers Way Remainder Propert	У	City/Count	y: <u>Seattle</u>		Sampling Date: 05/04/2011
Applicant/Owner: City of Seattle				State: WA	Sampling Point: <u>UPL-19</u>
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	ownship, Range: <u>S5, T23N</u>	, R4EWM
Landform (hillslope, terrace, etc.): flat		Local reli	ef (concave	, convex, none): none	Slope (%): <u>0</u>
Subregion (LRR): Northwest Forests and Coasts (LRR A)	_ Lat: <u>47.3</u>	0.60		Long: <u>122.20.02</u>	Datum: unknown
Soil Map Unit Name: NRCS Soil Unit is Unavailable				NWI classifica	tion: upland
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	nificantly dis	turbed?	Are "No	ormal Circumstances" pres	sent? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology natu			(If need	ed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS – Attach site map			g point l	ocations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes ⊠ No □		1- 4	0 1 1	1.4	
Hydric Soil Present? Yes ☐ No ☒			ne Sampled nin a Wetlar		o M
Wetland Hydrology Present? Yes ☐ No ☒				_	_
Remarks: No recent disturbance. Mining operations ender result recent rainfall. March and April 2011 have been uns to 4.42 additional inches of precipitation during March and ruts. VEGETATION – Use scientific names of plan	seasonably April. Site	rainy with 1	169% of nor	mal rainfall for the two mor	nths combined. This amounts
VEGETATION – Ose scientific flames of plan		Dominant	Indicator	Dominance Test works	choot:
Tree Stratum (Plot size: 5m)	% Cover			Number of Dominant Sp	
1					r FAC: <u>3</u> (A)
2				Total Number of Domina	ant
3				Species Across All Strat	
4				Percent of Dominant Sp	ecies
Sapling/Shrub Stratum (Plot size: 3m)	0	= Total C	Cover	That Are OBL, FACW, o	r FAC: <u>100</u> (A/B)
1. Rubus armeniacus	30	Y	FAC	Prevalence Index work	sheet:
2. Cytisus scoparius		Y	UPL	Total % Cover of:	Multiply by:
3				OBL species	x 1 =
4				*	x 2 =
5					x 3 =
Herb Stratum (Plot size: 1.5m)	40	= Total C	Cover		x 4 =
1. Agrostis capillaris	40	Υ	FAC	UPL species	x 5 =
2. Holcus lanatus	20	Y	FAC	Column Totals:	(A) (B)
Hypochaeris radicata	10		FACU	Prevalence Index	= B/A =
4. Tanacetum vulgare	10	N	NI	Hydrophytic Vegetatio	n Indicators:
5. Plantango major			FACU	☐ 1 - Rapid Test for Hy	drophytic Vegetation
6. Trifolim repens	5	<u>N</u>	FACU	2 - Dominance Test	
7				3 - Prevalence Index	
8				4 - Morphological Ac	daptations ¹ (Provide supporting or on a separate sheet)
9				5 - Wetland Non-Vas	•
10					nytic Vegetation ¹ (Explain)
11					and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	90	= Total C	over	be present, unless distu	rbed or problematic.
1				Hydrophytic	
2				Vegetation	
% Bare Ground in Herb Stratum 10	0	= Total C	Cover	Present? Yes	s⊠ No □
Remarks:				1	

			depth n		iment the indicato	r or confirn	n the abs	sence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Cold	or (moist)	ox Features W Type ¹	Loc ²	Texture	е	Remarks
0-4	2.5Y 4/2								
4-9+	2.5Y 5/2						v.gr.s. l	oam	<u> </u>
		<u> </u>					-		
			_						
									
1								2.	
	oncentration, D=D Indicators: (App				CS=Covered or Coa	ited Sand Gi			cation: PL=Pore Lining, M=Matrix. prs for Problematic Hydric Soils ³ :
☐ Histosol		ilcable to							n Muck (A10)
	oipedon (A2)			Sandy Redox (Stripped Matrix					Parent Material (TF2)
☐ Black Hi					Mineral (F1) (exce	ot MLRA 1)			/ Shallow Dark Surface (TF12)
	en Sulfide (A4)			Loamy Gleyed					er (Explain in Remarks)
	d Below Dark Surfa	ace (A11)		Depleted Matri					,
☐ Thick Da	ark Surface (A12)			Redox Dark St	urface (F6)		³ In	dicate	ors of hydrophytic vegetation and
	lucky Mineral (S1)		_	Depleted Dark	` '				and hydrology must be present,
	Bleyed Matrix (S4)			Redox Depres	sions (F8)			unles	ss disturbed or problematic.
	Layer (if present)								
	iches):						Hydri	c Soil	l Present? Yes ☐ No ☒
Remarks: S	oils become very c	ompact be	eginning	at 8 inches					
HYDROLO	GY								
Wetland Hy	drology Indicator	s:							
Primary Indi	cators (minimum o	f one requ	ired; ch	eck all that app	oly)			Seco	ndary Indicators (2 or more required)
☐ Surface	•		•		ained Leaves (B9) (except MLF	RA		/ater-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A2)				IA, and 4B)				4A, and 4B)
☐ Saturation				☐ Salt Crus				Пр	rainage Patterns (B10)
☐ Water M	` '				nvertebrates (B13)				ry-Season Water Table (C2)
	nt Deposits (B2)				Sulfide Odor (C1)				aturation Visible on Aerial Imagery (C9)
	posits (B3)				Rhizospheres along	g Living Roo	ts (C3)	☐ G	eomorphic Position (D2)
	at or Crust (B4)			☐ Presence	of Reduced Iron (C	24)		□ s	hallow Aquitard (D3)
☐ Iron Dep	oosits (B5)			☐ Recent In	on Reduction in Till	ed Soils (C6	i)	□ F.	AC-Neutral Test (D5)
Surface	Soil Cracks (B6)			☐ Stunted of	r Stressed Plants (I	D1) (LRR A))	□R	aised Ant Mounds (D6) (LRR A)
☐ Inundati	on Visible on Aeria	l Imagery	(B7)	☐ Other (Ex	plain in Remarks)			☐ F	rost-Heave Hummocks (D7)
☐ Sparsely	Vegetated Conca	ve Surfac	e (B8)						
Field Obser	rvations:								
Surface Wat	ter Present?	Yes □	No 🛛	Depth (inche	es):				
Water Table	Present?	Yes 🗌	No 🛛	Depth (inche	es):				
Saturation F	resent?	Yes □	No 🛛	Depth (inche	es):	Wetl	and Hyd	rolog	y Present? Yes ☐ No ⊠
	pillary fringe)				Labata a anadasa t		16 11 - I	.1	
Describe Re	ecorded Data (strea	am gauge,	monitoi	ring well, aeria	l photos, previous ii	nspections),	if availar	oie:	
Remarks:									

Project/Site: City of Seattle Meyers Way Remainder Proper	ty	City/Count	ty: <u>Seattle</u>		Sampling Date: <u>05/03/2011</u>
Applicant/Owner: City of Seattle				State: WA	Sampling Point: <u>UPL-20</u>
Investigator(s): E. Pritchard, J. Merriman, C. Wright			Section, To	ownship, Range: <u>S5, T23N,</u>	R4EWM
Landform (hillslope, terrace, etc.): flat		Local reli	ef (concave	, convex, none): concave	Slope (%): 2
Subregion (LRR): Northwest Forests and Coasts (LRR A)					
Soil Map Unit Name: NRCS Soil Unit is Unavailable				_	
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	-			ormal Circumstances" prese	ent? Yes⊠ No □
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in	
SUMMARY OF FINDINGS – Attach site map				•	•
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes \(\text{No } \text{\tince{\text{\tint}\xititt{\text{\tin}\text{\text{\text{\text{\text{\tex{\text{\text{\text{\text{\text{\tinit}}}}}}}}}}} \times\text{\texict{\text{\text{\text{\texicl{\text{\text{\text{\text{\texi}\text{\text{\texi}\text{\texitin}}}}}}}}}}}}}} \end{\text{\text{\text{\text{\text{\texitit{\texi{\tii}\texititt{\text{\texitit{\texitet{\texit{\texi{\tex			he Sampled		
Wetland Hydrology Present? Yes ☐ No ☒		Witi	hin a Wetlaı	nd? Yes ☐ No	
Remarks: March and April 2011 have been unseasonably additional inches of precipitation during March and April.	rainy with 1	69% of no	rmal rainfall	for the two months combine	ed. This amounts to 4.42
Recent cutting of vegetation within Seattle City Light utility present.	corridor, bu	ıt vegetatio	on has starte	ed to re-grow, therefore, nor	mal circumstances still
VEGETATION – Use scientific names of plan	ts.				
	Absolute		t Indicator	Dominance Test worksl	heet:
Tree Stratum (Plot size: 5m)			? Status	Number of Dominant Spe	
1				That Are OBL, FACW, or	FAC: <u>4</u> (A)
2				Total Number of Dominar	
3 4				Species Across All Strata	i: <u>4</u> (B)
Sapling/Shrub Stratum (Plot size: 3m)		= Total (Cover	Percent of Dominant Spe That Are OBL, FACW, or	
1. Populus balsamifera	20	Υ	FAC	Prevalence Index works	sheet:
2. Salix sitchensis				Total % Cover of:	Multiply by:
3. Rubus armeniacus				OBL species	x 1 =
4.				FACW species	x 2 =
5			<u> </u>	FAC species	x 3 =
	28	= Total 0	Cover	FACU species	x 4 =
Herb Stratum (Plot size: 1.5m)	4.0			· -	x 5 =
1. Cardimine oligosperma		<u>Y</u>	FAC	Column Totals:	(A) (B)
2. Holcus lanatus				Prevalence Index =	= B/A =
Equisetum arvense Epilobium ciliatum				Hydrophytic Vegetation	
5				☐ 1 - Rapid Test for Hyd	
6				□ 2 - Dominance Test is	, , ,
7				3 - Prevalence Index	is ≤3.0 ¹
8.					aptations ¹ (Provide supporting
9				5 - Wetland Non-Vase	or on a separate sheet)
10					ytic Vegetation ¹ (Explain)
11	-				and wetland hydrology must
Woody Vine Stratum (Plot size: 3m)	30	= Total (Cover	be present, unless disturt	
1			. <u></u>	Hydrophytic	
2				Vegetation	
% Bare Ground in Herb Stratum 70	0	= Total (Cover	Present? Yes	⊠ No □
Remarks:				1	

(inches) 0-9 9-23+	0 1 1 1				Features	1 . ^			
	Color (moist)	%	Colo	r (moist)	<u>%</u> <u>Ty</u>	rpe ¹ Loc ²	Textur	<u> </u>	Remarks
)-23+	10YR 3/2	100					sandy	oam_	
<u>, 20 · </u>	2.5Y 4/2	100					loamy	sand_	
	-		_						
Type: C=Co	oncentration, D=De	pletion, I	RM=Red	uced Matrix, CS	=Covered or	Coated Sand	d Grains.	² Location: PL=	Pore Lining, M=Matrix.
lydric Soil I	Indicators: (Appli	cable to	all LRR	s, unless other	wise noted.)		In	dicators for Prol	olematic Hydric Soils ³ :
☐ Histosol (Sandy Redox (S	5)] 2 cm Muck (A10))
	ipedon (A2)			Stripped Matrix (,			Red Parent Mat	, ,
☐ Black His				₋oamy Mucky Mi	, , ,	xcept MLRA	,		ark Surface (TF12)
	n Sulfide (A4)			oamy Gleyed M				Other (Explain i	n Remarks)
•	Below Dark Surface	ce (A11)		Depleted Matrix (. ,		3.		
	rk Surface (A12)			Redox Dark Surf			٩lı		phytic vegetation and
•	lucky Mineral (S1) leyed Matrix (S4)			Depleted Dark Si Redox Depressio				wetland hydrolog	gy must be present,
-	Layer (if present):			Redux Depression)IIS (FO)			uniess disturbed	or problematic.
	Layor (ii procont).								
	ches):						Hydr	c Soil Present?	Yes □ No ⊠
Remarks:									
YDROLO	GY								
•	drology Indicators								
	cators (minimum of	one requ	<u>ıired; che</u>	eck all that apply)			Secondary Indica	
	Water (A1)			_				-	ators (2 or more required)
	ter Table (A2)			☐ Water-Stain		39) (except N	MLRA	☐ Water-Staine	d Leaves (B9) (MLRA 1, 2,
☐ High Wat	ter Table (A2) on (A3)			1, 2, 4A	, and 4B)	39) (except N	MLRA	☐ Water-Staine	d Leaves (B9) (MLRA 1, 2,
☐ High Wat	on (A3)			1, 2, 4A	, and 4B) 311)		MLRA	☐ Water-Staine 4A, and 4 ☐ Drainage Pat	d Leaves (B9) (MLRA 1, 2, IB) terns (B10)
☐ High Wat☐ Saturatio☐ Water Ma	on (A3) arks (B1)			1, 2, 4A	, and 4B) B11) ertebrates (B	13)	MLRA	Water-Staine 4A, and 4 Drainage Pat Dry-Season	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2)
☐ High Wat☐ Saturatio☐ Water Ma	on (A3) arks (B1) tt Deposits (B2)			1, 2, 4A Salt Crust (E Aquatic Inve	, and 4B) 311) ertebrates (B ^o ulfide Odor (13) C1)		Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9)
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High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely	on (A3) arks (B1) at Deposits (B2) sosits (B3) t or Crust (B4) sosits (B5) Soil Cracks (B6) on Visible on Aerial vegetated Concav vations: er Present? Present?	e Surfac	e (B8)	1, 2, 4A Salt Crust (II Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	and 4B) 311) ertebrates (B' ulfide Odor (inizospheres af Reduced Iro Reduction in Stressed Plar ain in Remark	13) C1) along Living Fon (C4) a Tilled Soils ats (D1) (LRF	(C6) (R A)	Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)
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High Water May Sediment Sediment Algal Mater Table Sediment Surface Sediment Surface Sediment	on (A3) arks (B1) at Deposits (B2) posits (B3) t or Crust (B4) posits (B5) Soil Cracks (B6) por Visible on Aerial vegetated Concav vations: er Present? Present?	ye Surfac Yes Yes Yes Yes Yes Yes	No 🖂 No 🖂 No 🖂	1, 2, 4A Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	and 4B) 311) ertebrates (B' ulfide Odor (inizospheres and feduction in Stressed Plarmain in Remark	13) C1) along Living F on (C4) a Tilled Soils ats (D1) (LRF	Roots (C3) (C6) R A)	Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)
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High Waf Saturatio Water Ma Sediment Drift Dep Algal Maf Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Water Table Saturation Princludes cap Describe Rec	on (A3) arks (B1) at Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Vegetated Concav vations: er Present? Present? present? corded Data (streat	Yes	No \(\square\) No \(\square\) No \(\square\) monitor ment to d y quickly	1, 2, 4A Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla	and 4B) 311) ertebrates (Bartebrates (Bartebrates (Bartebrates (Bartebrates (Bartebrates and Inc.) Reduction in Reduction in Remarkain	13) C1) along Living Fon (C4) a Tilled Soils ats (D1) (LRF cs) us inspection meet wetland reas that are	Roots (C3) (C6) R A) Wetland Hydrology widespread widespread	Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) Iounds (D6) (LRR A) Hummocks (D7)

APPENDIX B

Washington Department of Ecology Wetland Rating Forms for Western Washington

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):	Wetland 1	Date of	site visit: <u>04/29</u> /11
Rated by Emmett Pritchard	Trained	l by Ecology? Yes X No	Date of training Oct. 2007
SEC: 32 TWNSHP: 24N RNG	E: <u>4E</u> Is S/T/R	in Appendix D? Yes N	IoX_
Map of wetlan	d unit: Figure <u>6</u>	$\frac{\&7}{}$ Estimated size $\frac{0}{}$.25 ac.
	SUMMARY	OF RATING	
Category based on FUNC	ΓΙΟΝS provide	d by wetland	
I II III <u>X</u>	IV		
Category I = Score >=70 Category II = Score 51-69 Category III = Score 30-50 Category IV = Score < 30 Category based on SPECI	AL CHARACT	ore for Water Quality Functions Score for Hydrologic Function Score for Habitat Function TOTAL score for Function ERISTICS of wetland	ions 10 19
I II Does no	ot Apply_X_		
Final Catego	ry (choose the "h	ighest" category from abov	ve)
Summary	of basic informati	on about the wetland unit	
Wetland Unit has		Wetland HGM Class	
Characteristics		used for Rating	
Estuarine	XX7 41 1	Depressional	

	Wetland HGM Class	
	used for Rating	
	Depressional	
	Riverine	
	Lake-fringe	
	Slope	Х
	Flats	
	Freshwater Tidal	
	Check if unit has multiple	
Х	HGM classes present	
	X	used for Rating Depressional Riverine Lake-fringe Slope Flats Freshwater Tidal Check if unit has multiple

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		х
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		Х
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		Х
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		х

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

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

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? YES – the wetland class is Tidal Fringe NO - go to 2

It yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)

If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).

- 2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. roundwater and surface water runoff are NOT sources of water to the unit.
 - NO go to 3**YES** – The wetland class is **Flats**

If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

- 3. Does the entire wetland unit **meet both** of the following criteria?
 - The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;
 - Least 30% of the open water area is deeper than 6.6 ft (2 m)?

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?
 - X The wetland is on a slope (slope can be very gradual),
 - X 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.
 - X The water leaves the wetland without being impounded?

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

< 3ft diameter and less than 1 foot doen).

NO - go to 5 YES - The wetland class is Slope

An approx. 500 s. f. area is impounded at the outlet (bird-cage stormwater drain), but this area is less than 10% of the total area of the wetland and does not qualify as an HGM class because of its small size.

- 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 two years.

 NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.

 NO go to 6 YES The wetland class is Riverine
- 6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. This means that any outlet, if present, is higher than the interior of the wetland.
 NO go to 7
 YES The wetland class is Depressional
- 7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural extlet

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 clases. 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 your wetland. 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 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 being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still 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.

S	Slope Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
S	S 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.64)
S	S 1.1 Characteristics of average slope of unit: Slope is 1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance) Slope is 1% - 2% Slope is 2% - 5% Slope is 2% - 5% Slope is greater than 5% points = 1 points = 0	1
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic <i>(use NRCS definitions)</i> YES = 3 points X NO = 0 points	
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 X Dense, woody, vegetation > 1/2 of area points = 1 Does not meet any of the criteria above for vegetation points = 0 Aerial photo or map with vegetation polygons	Figure
S	Total for S 1 Add the points in the boxes above	3
S	S 2. Does the wetland unit have the <u>opportunity</u> to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.	(see p.67)
	 Grazing in the wetland or within 150ft Untreated stormwater discharges to wetland Tilled fields, logging, or orchards within 150 feet of wetland Residential, urban areas, or golf courses are within 150 ft upslope of wetland Other X YES multiplier is 2 NO multiplier is 1 	multiplier 2
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2 Add score to table on p. 1	6

S	Slope Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score
	reduce flooding and stream erosion	per box)
	S 3. Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?	(see p.68)
S	S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms. Choose the points appropriate for the description that best fit conditions in the wetland. (stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows) Dense, uncut, rigid vegetation covers > 90% of the area of the wetland. Dense, uncut, rigid vegetation > 1/2 area of wetland Dense, uncut, rigid vegetation > 1/4 area Dense, uncut, rigid vegetation > 1/4 area More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0	3
S	S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows: The slope wetland has small surface depressions that can retain water over at least 10% of its area. X YES points = 2 NO points = 0	2
S	Add the points in the boxes above	5
S	S 4. Does the wetland have the <u>opportunity</u> to reduce flooding and erosion? Is the wetland in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows? <i>Note which of the following conditions apply.</i> X Wetland has surface runoff that drains to a river or stream that has flooding problems — Other	(see p. 70) multiplier
	X YES multiplier is 2 NO multiplier is 1	
S	TOTAL - Hydrologic Functions Multiply the score from S 3 by S 4 <i>Add score to table on p. 1</i>	10

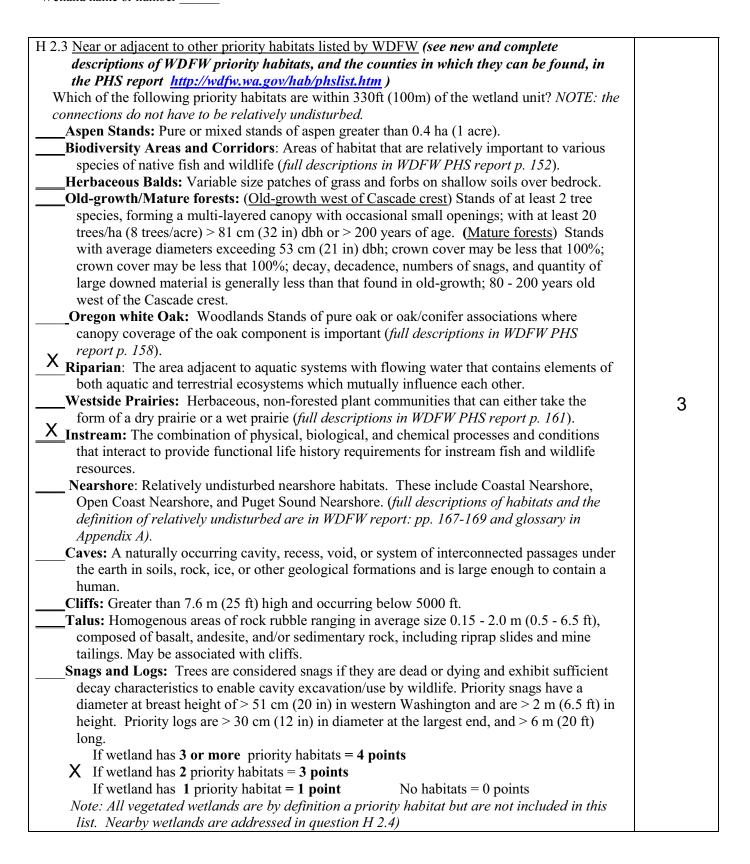
These questions apply to wetlands of all HG HABITAT FUNCTIONS - Indicators that unit funct		habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to p			
H 1.1 Vegetation structure (see p. 72) Check the types of vegetation classes present (as define class is ¼ acre or more than 10% of the area if unit Aquatic bed Emergent plants Scrub/shrub (areas where shrubs have >30%	is smaller than 2.5 acres.	old for each	Figure
X Forested (areas where trees have >30% covered the unit has a forested class check if: X The forested class has 3 out of 5 strata (can	er)	baceous,	1
moss/ground-cover) that each cover 20%	1	l	
Add the number of vegetation structures that qualify. If Map of Cowardin vegetation classes	4 structures or more 3 structures X 2 structures 1 structure	points = 4 points = 2 points = 1 points = 0	
H 1.2. <u>Hydroperiods</u> (see p. 73)	1 Structure	points – 0	Figure
Check the types of water regimes (hydroperiods) p regime has to cover more than 10% of the wetland of descriptions of hydroperiods) Permanently flooded or inundated Seasonally flooded or inundated Occasionally flooded or inundated X Saturated only Permanently flowing stream or river in, or ad Seasonally flowing stream in, or adjacent to, Lake-fringe wetland = 2 points Freshwater tidal wetland = 2 points	4 or more types present 3 types present 2 types present X1 type present	points = 3 points = 2 point = 1 points = 0	0
H 1.3. Richness of Plant Species (see p. 75) Count the number of plant species in the wetland the same species can be combined to meet the single You do not have to name the species. Do not include Eurasian Milfoil, reed canaryge If you counted: List species below if you want to:	ze threshold)	•	1

Total for page ___2__

X None = 0 points Low = 1 point Moderate = 2 points [riparian braided channels]	
Noderate - 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77)	
Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.	
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	
X Standing snags (diameter at the bottom > 4 inches) in the wetland	
Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) At least ½ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians)	
X Invasive plants cover less than 25% of the wetland area in each stratum of plants	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 Buffers (see p. 80)	Figure
Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."	
 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. 	4
50% circumference. — 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . Points = 4 Points = 3	
 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. Points = 3	
If buffer does not meet any of the criteria above - No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. - No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. - Heavy grazing in buffer. - Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland - Buffer does not meet any of the criteria above. - Points = 1 - Aerial photo showing buffers	
H 2.2 Corridors and Connections (see p. 81) H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to H 2.3) NO = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in the question above? X YES = 2 points (go to H 2.3) NO = H 2.2.3 H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres? YES = 1 point NO = 0 points	2

Total for page 6



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5 There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2 There are no wetlands within ½ mile. points = 0	5
H 2 . TOTAL Score - opportunity for providing habitat <i>Add the scores from H2.1,H2.2, H2.3, H2.4</i>	14
TOTAL for H 1 from page 14	5
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	19

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit 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 	
SC 1.1 Is the wetland unit 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?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	Dual rating I/II
 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 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. 	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D or accessed from WNHP/DNR web site YES contact WNHP/DNR (see p. 79) and go to SC 2.2 NO SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NO not a Heritage Wetland	Cat. I
SC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions. 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the	
soil profile? (See Appendix B for a field key to identify organic soils)? Yes - go to Q. 3	
3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?	
Yes – Is a bog for purpose of rating No - go to Q. 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" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.	
1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?	
2. YES = Category I No Is not a bog for purpose of rating	Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the 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/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more. NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR"	
so old-growth forests do not necessarily have to have trees of this diameter.]
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO X not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
 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 surface 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 X not a wetland in a coastal lagoon	
 SC 5.1 Does the wetland meets 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 invasive plant species (see list of invasive species on p. 74). — 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.	Cat. I
— The wetland is larger than 1/10 acre (4350 square feet) YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO \underline{X} not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
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 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go \text{ to } SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cut. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics Choose the "highest" rating if wetland falls into several categories, and record on p. 1. If you answered NO for all types enter "Not Applicable" on p.1	

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):	Wetland 2	Date of site	visit: <u>05/06</u> /11	
Rated by Emmett Pritchard	Traine	d by Ecology? Yes X No Da	te of training Oct. 2007	
SEC: <u>06</u> TWNSHP: <u>23N</u> RN	IGE: <u>4E</u> Is S/T/R	in Appendix D? Yes No_X	_	
Map of wetla	ınd unit: Figure <u>6</u>	& 7 Estimated size 0.75 a	ac.	
	SUMMARY	OF RATING		
Category based on FUN	CTIONS provide	ed by wetland		
і <u> </u>	_ IV			
Category I = Score >=70 Category II = Score 51-69 Category III = Score 30-50 Category IV = Score < 30	So	Score for Water Quality Functions Score for Hydrologic Functions Score for Habitat Functions TOTAL score for Functions	4 10 16 30	
Category based on SPECIAL CHARACTERISTICS of wetland I II Does not Apply X_				
Final Category (choose the "highest" category from above)				
Summary of basic information about the wetland unit				
Wetland Unit he Characteristics		Wetland HGM Class used for Rating		
Estuarine		Depressional Depressional		

Summary of basic mormation about the wettand unit			
Wetland Unit has Special		Wetland HGM Class	
Characteristics		used for Rating	
Estuarine		Depressional	
Natural Heritage Wetland		Riverine	
Bog		Lake-fringe	
Mature Forest		Slope	Х
Old Growth Forest		Flats	
Coastal Lagoon		Freshwater Tidal	
Interdunal			
None of the above		Check if unit has multiple	
	X	HGM classes present	
		l l	

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		х
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		Х
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		Х
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		х

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

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

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? NO - go to 2YES – the wetland class is Tidal Fringe

It yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)

If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it.

coundwater and surface water runoff are NOT sources of water to the unit.

NO - go to 3**YES** – The wetland class is **Flats**

If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland unit **meet both** of the following criteria?

The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

Least 30% of the open water area is deeper than 6.6 ft (2 m)?

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?
 - X The wetland is on a slope (slope can be very gradual),
 - X 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 X¹ distinct banks.
 - The water leaves the wetland without being impounded?

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

< 3ft diameter and less than 1 food

NO - go to 5 YES - The wetland class is Slope

- 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 two years.

 NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.
 NO go to 6 YES The wetland class is Riverine
- 6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. This means that any outlet, if present, is higher than the interior of the wetland.
 NO go to 7 YES The wetland class is Depressional
- 7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious
 - natural sutlet 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 clases. 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 your wetland. 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 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 being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still 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.

S	Slope Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)	
S	S 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.64)	
S	S 1.1 Characteristics of average slope of unit: Slope is 1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance) Slope is 1% - 2% Slope is 2% - 5% Slope is 2% - 5% X Slope is greater than 5% points = 1 points = 0	0	
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES = 3 points X NO = 0 points	0	
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 X Dense, woody, vegetation > 1/2 of area points = 2 Dense, uncut, herbaceous vegetation > 1/4 of area points = 1 Does not meet any of the criteria above for vegetation points = 0 Aerial photo or map with vegetation polygons	Figure	
S	Total for S 1 Add the points in the boxes above	2	
S	S 2. Does the wetland unit have the <u>opportunity</u> to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft		
	 Untreated stormwater discharges to wetland Tilled fields, logging, or orchards within 150 feet of wetland Residential, urban areas, or golf courses are within 150 ft upslope of wetland Other YES multiplier is 2 NO multiplier is 1 		
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2 Add score to table on p. 1	4	

S	Slope Wetlands	Points		
	HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream erosion	(only 1 score per box)		
	S 3. Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?	(see p.68)		
S	S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms. Choose the points appropriate for the description that best fit conditions in the wetland. (stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows) Dense, uncut, rigid vegetation covers > 90% of the area of the wetland. Dense, uncut, rigid vegetation > 1/2 area of wetland Dense, uncut, rigid vegetation > 1/4 area points = 3 Dense, uncut, rigid vegetation > 1/4 area points = 1 More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0	3		
S	S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows: The slope wetland has small surface depressions that can retain water over at least 10% of its area. X YES points = 2 NO points = 0			
S	Add the points in the boxes above	5		
S	S 4. Does the wetland have the opportunity to reduce flooding and erosion? Is the wetland in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows? Note which of the following conditions apply. X Wetland has surface runoff that drains to a river or stream that has flooding problems Other (Answer NO if the major source of water is controlled by a reservoir (e.g. wetland is a seep that is on the downstream side of a dam) X YES multiplier is 2 NO multiplier is 1	(see p. 70) multiplier 2		
S	TOTAL - Hydrologic Functions Multiply the score from S 3 by S 4 Add score to table on p. 1	10		

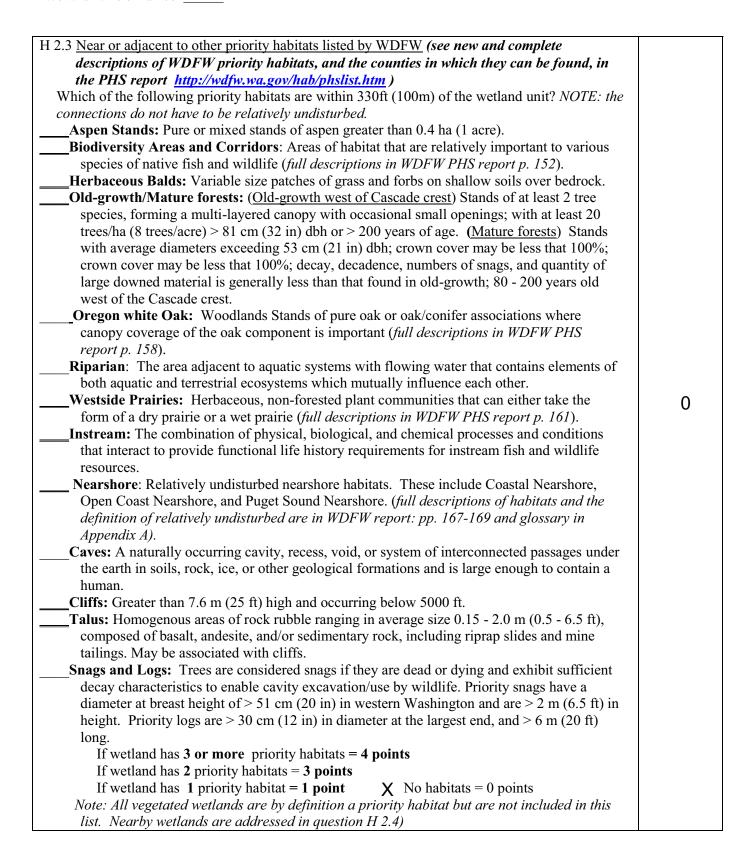
These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat			Points (only 1 score per box)
H 1. Does the wetland unit have the potential to pre	ovide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72) Check the types of vegetation classes present (as defined class is ¼ acre or more than 10% of the area if unit is Aquatic bed Emergent plants X Scrub/shrub (areas where shrubs have >30% cover X Forested (areas where trees have >30% cover	s smaller than 2.5 acres.	hold for each	Figure
If the unit has a forested class check if: X The forested class has 3 out of 5 strata (canop moss/ground-cover) that each cover 20% and the number of vegetation structures that qualify. If	py, sub-canopy, shrubs, he within the forested polygo		2
Map of Cowardin vegetation classes X	3 structures 2 structures 1 structure	points = 2 points = 1 points = 0	
H 1.2. Hydroperiods (see p. 73) Check the types of water regimes (hydroperiods) pre regime has to cover more than 10% of the wetland or descriptions of hydroperiods) Permanently flooded or inundated Seasonally flooded or inundated Occasionally flooded or inundated X Saturated only Permanently flowing stream or river in, or adjacent to, the Lake-fringe wetland = 2 points	4 or more types present 3 types present 2 types present X1 type present acent to, the wetland he wetland	for t points = 3 points = 2 point = 1 points = 0	Figure
Freshwater tidal wetland = 2 points H 1.3. Richness of Plant Species (see p. 75) Count the number of plant species in the wetland that of the same species can be combined to meet the size You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrat If you counted: List species below if you want to:	e threshold)	fferent patches	1

Total for page __3__

Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	gure
None = 0 points Low = 1 point X Moderate = 2 points	2
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water	
the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77)	
Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.	
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	
X Standing snags (diameter at the bottom > 4 inches) in the wetland	
Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m)	3
Stable steep banks of fine material that might be used by beaver or muskrat for denning	
(>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown)	
At least ¼ acre of thin-stemmed persistent vegetation 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 each stratum of plants	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	8

H 2. Does the wetland unit have the opportunity to prov	ide habitat for many species?	
H 2.1 Buffers (see p. 80)		Figure
Choose the description that best represents condition of buffer of		
criterion that applies to the wetland is to be used in the rating. S	ee text for aefinition of	
"undisturbed."	1	
— 100 m (330ft) of relatively undisturbed vegetated areas,		
of circumference. No structures are within the undistur-	•	
 undisturbed also means no-grazing, no landscaping, no c 100 m (330 ft) of relatively undisturbed vegetated areas, 		4
50% circumference.	Points = 4	
 50 m (170ft) of relatively undisturbed vegetated areas, r circumference. 	Points = 4	
 — 100 m (330ft) of relatively undisturbed vegetated areas, circumference, . 	Points = 3	
— 50 m (170ft) of relatively undisturbed vegetated areas, r		
50% circumference.	Points = 3	
If buffer does not meet any of the cr		
No paved areas (except paved trails) or buildings within		
circumference. Light to moderate grazing, or lawns are		
 No paved areas or buildings within 50m of wetland for > 		
Light to moderate grazing, or lawns are OK.	Points = 2	
 Heavy grazing in buffer. 	Points = 1	
 Vegetated buffers are <2m wide (6.6ft) for more than 95 		
fields, paving, basalt bedrock extend to edge of wetland	Points = 0 .	
 Buffer does not meet any of the criteria above. 	Points = 1	
•	showing buffers	
H 2.2 Corridors and Connections (see p. 81)	3	
H 2.2.1 Is the wetland part of a relatively undisturbed and	unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wide, has a	t least 30% cover of shrubs, forest	
or native undisturbed prairie, that connects to estuaries, oth	er wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in riparia	an corridors, heavily used gravel	
roads, paved roads, are considered breaks in the corridor)		
	NO = go to H 2.2.2	
H 2.2.2 Is the wetland part of a relatively undisturbed and		
(either riparian or upland) that is at least 50ft wide, has at l		
forest, and connects to estuaries, other wetlands or undistu	•	
acres in size? OR a Lake-fringe wetland, if it does not ha	ve an undisturbed corridor as in	2
the question above?	NO HAAA	_
X YES = 2 points (go to H 2.3)	NO = H 2.2.3	
H 2.2.3 Is the wetland:	v OP	
within 5 mi (8km) of a brackish or salt water estuar within 3 mi of a large field or pasture (>40 acres) C	•	
within 1 mi of a lake greater than 20 acres?	IX	
	NO = 0 points	
1 LO 1 point	110 o points	1

Total for page 6



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. X points = 5 The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5 There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2 There are no wetlands within ½ mile.	
H 2. TOTAL Score - opportunity for providing habitat	11
Add the scores from H2.1,H2.2, H2.3, H2.4 TOTAL for H 1 from page 14	5
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	16

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit 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 X 	
SC 1.1 Is the wetland unit 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?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— 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 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D or accessed from WNHP/DNR web site YES contact WNHP/DNR (see p. 79) and go to SC 2.2 NO X SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species?	Cat. I
YES = Category I NOnot a Heritage Wetland	
SC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.	
1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes - go to Q. 3 X No - go to Q. 2	
2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?	
Yes - go to Q. 3 X No - Is not a bog for purpose of rating	
3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?	
Yes – Is a bog for purpose of rating No - go to Q. 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" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.	
1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?	
2. YES = Category I No Is not a bog for purpose of rating	Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the 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/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.		
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.		
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	Cat. I	
YES = Category I NO \underline{X} not a forested wetland with special characteristics		
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)		
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 surface 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 \underline{X} not a wetland in a coastal lagoon		
 SC 5.1 Does the wetland meets 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 invasive plant species (see list of invasive species on p. 74). — 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.	Cat. I	
— The wetland is larger than 1/10 acre (4350 square feet)		
YES = Category I NO = Category II	Cat. II	

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO \underline{X} not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
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 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go \text{ to } SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics Choose the "highest" rating if wetland falls into several categories, and record on p. 1. If you answered NO for all types enter "Not Applicable" on p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):	/etland 3	Date	of site visit: 05	/06/11
Rated by Emmett Pritchard	Trained by	Ecology? Yes <u>X</u> No	Date of train	ning Oct. 2007
SEC: <u>05</u> TWNSHP: <u>23N</u> RNGE:	4E Is S/T/R in A	Appendix D? Yes	No_X_	
Map of wetland u	nit: Figure <u>6 & 7</u>	Estimated size	1.5 ac.	
Si	UMMARY O	F RATING		
Category based on FUNCTIO	ONS provided b	y wetland		
I II III <u>X</u> IV	V			
Category I = Score >=70		for Water Quality Funders		
Category II = Score 51-69 Category III = Score 30-50	500	Score for Habitat Fu	10	
Category IV = Score < 30	Т	OTAL score for Fu	nctions 32	
Category based on SPECIAL I II Does not A		RISTICS of wetlan	nd 	
Final Category	(choose the "high	est" category from a	bove)	
Summary of basic information about the wetland unit				
Wetland Unit has Sp	ecial	Wetland HGM C		
Characteristics		used for Rating	g	

Х
le

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)		NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		х
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		Х
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		Х
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		Х

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

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

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? YES – the wetland class is Tidal Fringe NO - go to 2

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)

If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).

- 2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. coundwater and surface water runoff are NOT sources of water to the unit.
 - NO go to 3**YES** – The wetland class is **Flats**

If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

- 3. Does the entire wetland unit **meet both** of the following criteria?
 - The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;
 - Least 30% of the open water area is deeper than 6.6 ft (2 m)?
 - NO go to 4

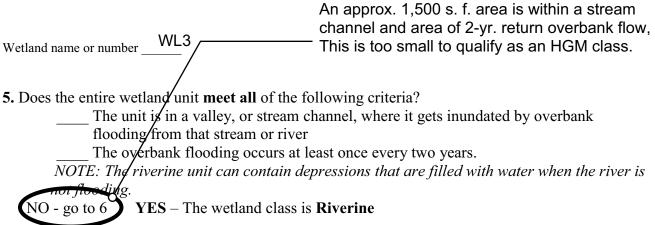
YES – The wetland class is **Lake-fringe** (**Lacustrine Fringe**)

- **4.** Does the entire wetland unit **meet all** of the following criteria?
 - X The wetland is on a slope (slope can be very gradual),
 - X 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.
 - X The water leaves the wetland without being impounded?

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

< 3ft diameter and less than 1 food

NO - go to 5 **YES** – The wetland class is **Slope**



6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. This means that any outlet, if present, is higher than the interior of the wetland.

NO – go to 7 YES – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious

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 clases. 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 your wetland. 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 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 being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still 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.

S	Slope Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)		
S	S 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.64)		
S	S 1.1 Characteristics of average slope of unit: Slope is 1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance) Slope is 1% - 2% Slope is 2% - 5% Slope is greater than 5% points = 1 points = 0	1		
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES = 3 points X NO = 0 points	0		
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 X Dense, woody, vegetation > 1/2 of area points = 1 Dense, uncut, herbaceous vegetation > 1/4 of area points = 1 Does not meet any of the criteria above for vegetation points = 0 Aerial photo or map with vegetation polygons			
S	Total for S 1 Add the points in the boxes above	3		
S	S 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft X Untreated stormwater discharges to wetland			
	 Tilled fields, logging, or orchards within 150 feet of wetland Residential, urban areas, or golf courses are within 150 ft upslope of wetland Other YES multiplier is 2 NO multiplier is 1 			
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2 Add score to table on p. 1	6		

S	Slope Wetlands	Points			
	HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to	(only 1 score per box)			
	reduce flooding and stream erosion S 3. Does the wetland unit have the potential to reduce flooding and stream	(see p.68)			
	erosion?	(see p.00)			
S	S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms. Choose the points appropriate for the description that best fit conditions in the wetland. (stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows) Dense, uncut, rigid vegetation covers > 90% of the area of the wetland. points = 6 X Dense, uncut, rigid vegetation > 1/2 area of wetland points = 3 Dense, uncut, rigid vegetation > 1/4 area points = 1 More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0	3			
S	S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows: The slope wetland has small surface depressions that can retain water over at least 10% of its area. X YES points = 2 NO points = 0				
S	Add the points in the boxes above	5			
S	S 4. Does the wetland have the <u>opportunity</u> to reduce flooding and erosion? Is the wetland in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows? <i>Note which of the following conditions apply.</i> X Wetland has surface runoff that drains to a river or stream that has flooding problems	(see p. 70)			
	— Other	multiplier			
	(Answer NO if the major source of water is controlled by a reservoir (e.g. wetland is a seep that is on the downstream side of a dam) YES multiplier is 2 NO multiplier is 1				
S	TOTAL - Hydrologic Functions Multiply the score from S 3 by S 4 <i>Add score to table on p. 1</i>	10			

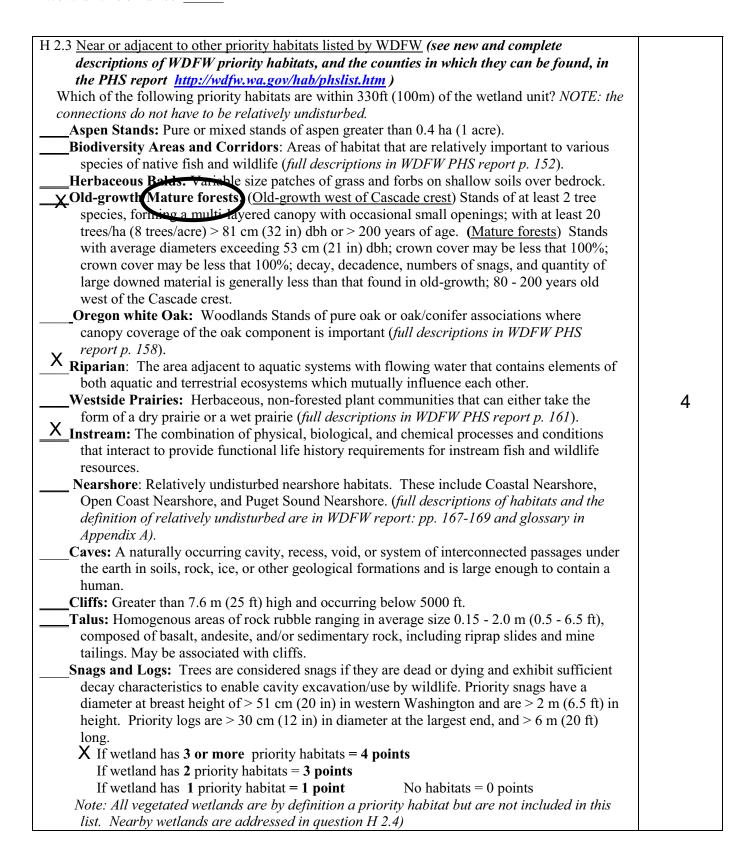
These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat			
H 1. Does the wetland unit have the potential to p	rovide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72) Check the types of vegetation classes present (as define class is ¼ acre or more than 10% of the area if unit — Aquatic bed Emergent plants Scrub/shrub (areas where shrubs have >30% X Forested (areas where trees have >30% cover	is smaller than 2.5 acres.	hold for each	Figure
X Forested (areas where trees have >30% cover) If the unit has a forested class check if: X The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon Add the number of vegetation structures that qualify. If you have:			
Map of Cowardin vegetation classes	4 structures or more 3 structures 2 structures 1 structure	<pre>points = 4 points = 2 points = 1 points = 0</pre>	
H 1.2. Hydroperiods (see p. 73)		•	Figure
Check the types of water regimes (hydroperiods) pregime has to cover more than 10% of the wetland of descriptions of hydroperiods) Permanently flooded or inundated Seasonally flooded or inundated Occasionally flooded or inundated X Saturated only Permanently flowing stream or river in, or adj Seasonally flowing stream in, or adjacent to, to Lake-fringe wetland = 2 points Freshwater tidal wetland = 2 points	4 or more types present 3 types present 2 types present X1 type present acent to, the wetland	points = 3 points = 2 point = 1 points = 0	0
H 1.3. Richness of Plant Species (see p. 75) Count the number of plant species in the wetland the of the same species can be combined to meet the size You do not have to name the species. Do not include Eurasian Milfoil, reed canarygr If you counted: List species below if you want to:	te threshold)	-	2

Total for page __3__

H 1.4. Interspersion of habitats (see p. 76) Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	
	0
X None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points [riparian braided channels]	
NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the	
number of points you put into the next column.	
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). X Standing snags (diameter at the bottom > 4 inches) in the wetland	
Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m)	3
Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that	
have not yet turned grey/brown) At least ¼ acre of thin-stemmed persistent vegetation 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 each stratum of plants	
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	6

H 2. Does the wetland unit have the opportunity to provide hab	itat for many species?		
H 2.1 Buffers (see p. 80)		Figure	
Choose the description that best represents condition of buffer of wetland	d unit. The highest scoring		
criterion that applies to the wetland is to be used in the rating. See text for definition of			
"undisturbed."	,		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky are	eas, or open water >95%		
of circumference. No structures are within the undisturbed part			
undisturbed also means no-grazing, no landscaping, no daily hun			
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky ar		1 1	
50% circumference.	Points = 4		
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky are			
circumference.	Points = 4		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky are			
circumference, .	Points = 3		
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky are			
50% circumference.	Points = 3		
If buffer does not meet any of the criteria ab			
— No paved areas (except paved trails) or buildings within 25 m (80			
circumference. Light to moderate grazing, or lawns are OK.	Points $= 2$		
No paved areas or buildings within 50m of wetland for >50% cir			
Light to moderate grazing, or lawns are OK.	Points = 2		
Heavy grazing in buffer.	Points = 1		
 Vegetated buffers are <2m wide (6.6ft) for more than 95% of the 			
	Points = 0 .		
Ruffer does not meet any of the criteria above	Points = 1		
 X fields, paving, basalt bedrock extend to edge of wetland Buffer does not meet any of the criteria above. Aerial photo showing 			
H 2.2 Corridors and Connections (see p. 81)	, 505.5		
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroker	vegetated corridor		
(either riparian or upland) that is at least 150 ft wide, has at least 30	•		
or native undisturbed prairie, that connects to estuaries, other wetla			
uplands that are at least 250 acres in size? (dams in riparian corrid			
roads, paved roads, are considered breaks in the corridor).	, , ,		
	to H 2.2.2		
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroker	n vegetated corridor		
(either riparian or upland) that is at least 50ft wide, has at least 30%			
forest, and connects to estuaries, other wetlands or undisturbed upla	ands that are at least 25		
acres in size? OR a Lake-fringe wetland, if it does not have an un	disturbed corridor as in		
the question above?		2	
XYES = 2 points (go to H 2.3) NO = H	2.2.3		
H 2.2.3 Is the wetland:			
within 5 mi (8km) of a brackish or salt water estuary OR			
within 3 mi of a large field or pasture (>40 acres) OR			
within 1 mi of a lake greater than 20 acres?			
YES = 1 point NO = 0	points		

Total for page 3



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2 There are no wetlands within ½ mile.	3
H 2 . TOTAL Score - opportunity for providing habitat <i>Add the scores from H2.1,H2.2, H2.3, H2.4</i>	10
TOTAL for H 1 from page 14	6
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	16

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met.	
SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit 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 X	
SC 1.1 Is the wetland unit 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?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— 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 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D or accessed from WNHP/DNR web site YES contact WNHP/DNR (see p. 79) and go to SC 2.2 NOX	Cat. I
SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NOnot a Heritage Wetland	
SC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.	
1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes - go to Q. 3	
2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?	
Yes - go to Q. 3 X No - Is not a bog for purpose of rating	
3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?	
Yes – Is a bog for purpose of rating No - go to Q. 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" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.	
1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?	
2. YES = Category I No Is not a bog for purpose of rating	Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the 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/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO X not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
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 surface 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 \underline{X} not a wetland in a coastal lagoon	
 SC 5.1 Does the wetland meets 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 invasive plant species (see list of invasive species on p. 74). — 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.	Cat. I
— The wetland is larger than 1/10 acre (4350 square feet)	
YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO \underline{X} not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
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 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):	Wetland 4	Date of s	site visit: <u>05/06</u> /11
Rated by Emmett Pritchard	Trained	by Ecology? Yes <u>X</u> No	Date of training Oct. 2007
SEC: <u>05</u> TWNSHP: <u>23N</u> RNC	GE: <u>4E</u> Is S/T/R in	n Appendix D? Yes No	o_X_
Map of wetlan	d unit: Figure <u>6 &</u>	Estimated size 0.	25 ac.
	SUMMARY (OF RATING	
Category based on FUNC	TIONS provided	by wetland	
I II III <u>X</u> _	IV		
Category I = Score >=70 Category II = Score 51-69 Category III = Score 30-50 Category IV = Score < 30		re for Water Quality Functions Score for Hydrologic Function Score for Habitat Function TOTAL score for Function	ons 10 ons 16
Category based on SPECI I II Does n		ERISTICS of wetland	
Final Catego	ry (choose the "hig	ghest" category from abov	e) III
Summary	of basic informatio	on about the wetland unit	
Wetland Unit has		Wetland HGM Class	
Characteristics		used for Rating	
Estuarine Natural Heritage	Wetland	Depressional Riverine	

	Wetland HGM Class	
	used for Rating	
	Depressional	
	Riverine	
	Lake-fringe	
	Slope	Х
	Flats	
	Freshwater Tidal	
	Check if unit has multiple	
Х	HGM classes present	
	X	used for Rating Depressional Riverine Lake-fringe Slope Flats Freshwater Tidal Check if unit has multiple

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)		NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		Х
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		Х
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		Х
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		Х

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

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

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? NO - go to 2YES – the wetland class is Tidal Fringe

It yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)

If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it.

coundwater and surface water runoff are NOT sources of water to the unit. NO - go to 3**YES** – The wetland class is **Flats**

If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland unit **meet both** of the following criteria?

The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

Least 30% of the open water area is deeper than 6.6 ft (2 m)?

NO - go to 4

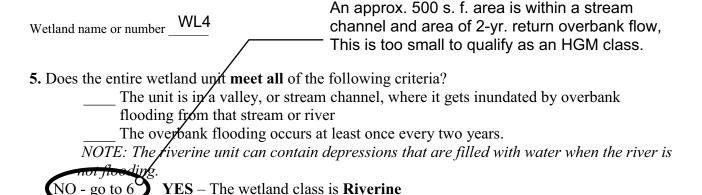
YES – The wetland class is **Lake-fringe** (**Lacustrine Fringe**)

- **4.** Does the entire wetland unit **meet all** of the following criteria?
 - X The wetland is on a slope (slope can be very gradual),
 - X 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 X¹ distinct banks.
 - The water leaves the wetland without being impounded?

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

< 3ft diameter and less than 1 food

NO - go to 5 **YES** – The wetland class is **Slope**



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 or of the wetland.

YES – The wetland class is Depressional NO - go to 7

NO - go to 6

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious

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 clases. 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 OUESTIONS 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 your wetland. 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 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 being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still 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.

S	Slope Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)	
S	S 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.64)	
S	S 1.1 Characteristics of average slope of unit: Slope is 1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance) Slope is 1% - 2% Slope is 2% - 5% Slope is greater than 5% X Slope is greater than 5%	0	
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic <i>(use NRCS definitions)</i> YES = 3 points X NO = 0 points	0	
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants:	Figure	
	Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 X Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 Dense, woody, vegetation > 1/2 of area points = 2 Dense, uncut, herbaceous vegetation > 1/4 of area points = 1 Does not meet any of the criteria above for vegetation points = 0 Aerial photo or map with vegetation polygons	3	
S	Total for S 1 Add the points in the boxes above	3	
S	S 2. Does the wetland unit have the <u>opportunity</u> to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft X Untreated stormwater discharges to wetland — Tilled fields, logging, or orchards within 150 feet of wetland		
	— Residential, urban areas, or golf courses are within 150 ft upslope of wetland — Other YES multiplier is 2 NO multiplier is 1		
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2 Add score to table on p. 1	6	

S	Slope Wetlands	Points	
	HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to	(only 1 score per box)	
	reduce flooding and stream erosion	(see p.68)	
	S 3. Does the wetland unit have the <u>potential</u> to reduce flooding and stream		
	erosion?		
S	S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms.		
	Choose the points appropriate for the description that best fit conditions in the wetland.		
	(stems of plants should be thick enough (usually $> 1/8$ in), or dense enough, to remain		
	erect during surface flows)		
	Dense, uncut, rigid vegetation covers $> 90\%$ of the area of the wetland. points = 6	2	
	X Dense, uncut, rigid vegetation > 1/2 area of wetland points = 3	3	
	Dense, uncut, rigid vegetation $> 1/4$ area points = 1 More than $1/4$ of area is grazed, mowed, tilled or vegetation is		
	not rigid points = 0		
C	S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows:		
S	The slope wetland has small surface depressions that can retain water over at least		
	10% of its area. XYES points = 2	2	
	NO points = 0		
S	Add the points in the boxes above	5	
S	S 4. Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?	(see p. 70)	
	Is the wetland in a landscape position where the reduction in water velocity it provides		
	helps protect downstream property and aquatic resources from flooding or excessive		
	and/or erosive flows? <i>Note which of the following conditions apply.</i>		
	X Wetland has surface runoff that drains to a river or stream that has flooding		
	problems	14313	
	— Other	multiplier	
	(Answer NO if the major source of water is controlled by a reservoir (e.g. wetland is a seep	2	
	that is on the downstream side of a dam)		
	YES multiplier is 2 NO multiplier is 1		
S	TOTAL - Hydrologic Functions Multiply the score from S 3 by S 4	10	
	Add score to table on p. 1	10	

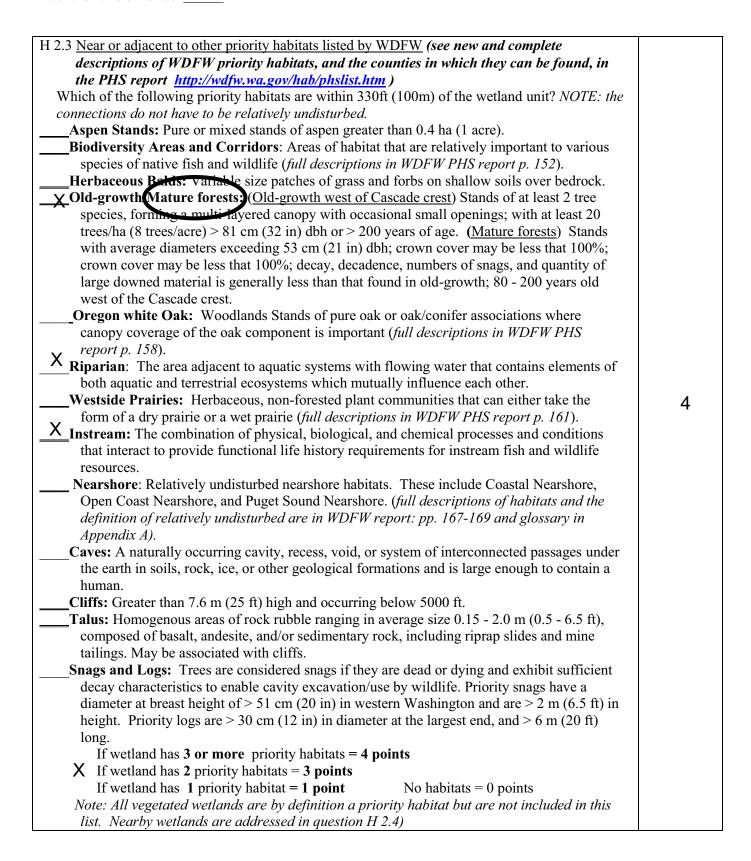
These questions apply to wetlands of all He HABITAT FUNCTIONS - Indicators that unit fund		t habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to	provide habitat for man	y species?	
H 1.1 <u>Vegetation structure</u> (see p. 72) Check the types of vegetation classes present (as defined class is ¼ acre or more than 10% of the area if units of the area.		shold for each	Figure
Aquatic bed Emergent plants Scrub/shrub (areas where shrubs have >30 X Forested (areas where trees have >30% co	,		
If the unit has a forested class check if: X The forested class has 3 out of 5 strata (camoss/ground-cover) that each cover 20	nopy, sub-canopy, shrubs, h		1
Add the number of vegetation structures that qualify.	If you have:		
Map of Cowardin vegetation classes	4 structures or more 3 structures X 2 structures	points = 4 points = 2 points = 1	
H 1.2. Hydroperiods (see p. 73)	1 structure	points = 0	Figure
Check the types of water regimes (hydroperiods) regime has to cover more than 10% of the wetland descriptions of hydroperiods) Permanently flooded or inundated Seasonally flooded or inundated Occasionally flooded or inundated X Saturated only Permanently flowing stream or river in, or a Seasonally flowing stream in, or adjacent to	4 or more types presen 3 types present 2 types present X1 type present djacent to, the wetland	t for nt points = 3 t points = 2 point = 1	0
Lake-fringe wetland = 2 points Freshwater tidal wetland = 2 points	Map of hyd	droperiods	
H 1.3. Richness of Plant Species (see p. 75) Count the number of plant species in the wetland of the same species can be combined to meet the You do not have to name the species. Do not include Eurasian Milfoil, reed canary. If you counted: List species below if you want to:	size threshold)		1

Total for page ___2__

H 1.4. <u>Interspersion of habitats</u> (see p. 76) Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	Figure
V Nove Obsists - Lorent Point - Made 2 viets	0
X None = 0 points Low = 1 point Moderate = 2 points [riparian braided channels]	J
NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). X Standing snags (diameter at the bottom > 4 inches) in the wetland	
 Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) 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 turned grey/brown) At least ½ acre of thin-stemmed persistent vegetation 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 each stratum of plants 	3
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	5

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 Buffers (see p. 80)	Figure
Choose the description that best represents condition of buffer of wetland unit. The highest scoring	g
criterion that applies to the wetland is to be used in the rating. See text for definition of	
"undisturbed."	
 — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No structures are within the undisturbed part of buffer. (relatively 	
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5	
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >	2
50% circumference. Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
circumference. Points = 4	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%	
circumference, . Points = 3	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >	
50% circumference. Points = 3	
If buffer does not meet any of the criteria above	
 No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% 	
circumference. Light to moderate grazing, or lawns are OK. Points = 2	
X No paved areas or buildings within 50m of wetland for >50% circumference.	
Light to moderate grazing, or lawns are OK. Points = 2	
Heavy grazing in buffer.Points = 1	
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled	1
fields, paving, basalt bedrock extend to edge of wetland $Points = 0$.	
Buffer does not meet any of the criteria above.Points = 1	
Aerial photo showing buffers	
H 2.2 <u>Corridors and Connections</u> (see p. 81) H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest	
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel	
roads, paved roads, are considered breaks in the corridor).	
YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$	
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or	
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25	
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in	2
the question above?	
X YES = 2 points (go to H 2.3) NO = H 2.2.3	
H 2.2.3 Is the wetland:	
within 5 mi (8km) of a brackish or salt water estuary OR	
within 3 mi of a large field or pasture (>40 acres) OR	
within 1 mi of a lake greater than 20 acres? YES = 1 point $NO = 0$ points	
1 ES - 1 point NO - v points	

Total for page 4



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2 There are no wetlands within ½ mile.	3
H 2 . TOTAL Score - opportunity for providing habitat <i>Add the scores from H2.1,H2.2, H2.3, H2.4</i>	11
TOTAL for H 1 from page 14	5
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	16

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
— The dominant water regime is tidal,— Vegetated, and	
— Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO X	
SC 1.1 Is the wetland unit 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?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in	Dual rating I/II
determining the size threshold of 1 acre.	
— 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 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D or accessed from WNHP/DNR web site YES contact WNHP/DNR (see p. 79) and go to SC 2.2 NO SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NO not a Heritage Wetland	Cat. I
SC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.	
1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes - go to Q. 3 X No - go to Q. 2	
2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?	
Yes - go to Q. 3 X No - Is not a bog for purpose of rating	
3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?	
Yes – Is a bog for purpose of rating No - go to Q. 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" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.	
1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?	
2. YES = Category I No Is not a bog for purpose of rating	Cat. I

SC 4.0 Forested Wetlands (see p. 90)

Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the 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/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.

NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.

— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.

YES = Category I

NO X not a forested wetland with special characteristics

Cat. I

SC 5.0 Wetlands in Coastal Lagoons (see p. 91)

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 surface 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 X not a wetland in a coastal lagoon

SC 5.1 Does the wetland meets 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 invasive plant species (see list of invasive species on p. 74).
- 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 acre (4350 square feet)

YES = Category I NO = Category II

Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO \underline{X} not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
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 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known):	Wetland 5	Date of s	site visit: <u>05/06</u> /11
Rated by Emmett Pritchard	Trained	by Ecology? Yes <u>X</u> No	Date of training Oct. 2007
SEC: 32 TWNSHP: 24N RNG	E: <u>4E</u> Is S/T/R in	Appendix D? Yes N	0 X
Map of wetlan	d unit: Figure <u>6 &</u>	7 Estimated size 0.	<u>1ac.</u>
	SUMMARY (OF RATING	
Category based on FUNC	ΓΙΟΝS provided	by wetland	
I II III	IV <u>X</u>		
Category I = Score >=70 Category II = Score 51-69 Category III = Score 30-50 Category IV = Score < 30		re for Water Quality Functi core for Hydrologic Functi Score for Habitat Functi TOTAL score for Functi	ions 4 19
Category based on SPECI I II Does not represent the second	ot Apply_X_	ERISTICS of wetland shest" category from abov	ve) IV
Summary	of basic informatio	n about the wetland unit	
Wetland Unit has Characteristics	S Special	Wetland HGM Class used for Rating	3

Summary of basic information about the wetland unit		
	Wetland HGM Class	
	used for Rating	
	Depressional	
	Riverine	Х
	Lake-fringe	
	Slope	
	Flats	
	Freshwater Tidal	
.,	Check if unit has multiple	
Х	HGM classes present	
	X	Wetland HGM Class used for Rating Depressional Riverine Lake-fringe Slope Flats Freshwater Tidal Check if unit has multiple

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		Х
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		X
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

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

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? YES – the wetland class is Tidal Fringe NO - go to 2It yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine) If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.). 2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. roundwater and surface water runoff are NOT sources of water to the unit. NO - go to 3**YES** – The wetland class is **Flats** If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands. 3. Does the entire wetland unit **meet both** of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; Least 30% of the open water area is deeper than 6.6 ft (2 m)? 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 seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks. The water leaves the wetland without being impounded? 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 \leq ft diameter and less than 1 foot deep).

YES – The wetland class is **Slope**

NO - go to 5

- 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
 - X The overbank flooding occurs at least once every two years.

NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.

- NO go to 6 YES The wetland class is **Riverine**
- 6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. This means that any outlet, if present, is higher than the interior of the wetland.
 - NO go to 7 YES The wetland class is **Depressional**
- 7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural entited.

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 clases. 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 your wetland. 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 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 being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still 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.

R	Riverine and Freshwater Tidal Fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	Points (only 1 score per box)
R	R 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.52)
R	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event:	Figure
	Depressions cover >3/4 area of wetland points = 8 Depressions cover > 1/2 area of wetland points = 4 If depressions > ½ of area of unit draw polygons on aerial photo or map Depressions present but cover < 1/2 area of wetland points = 2 X No depressions present points = 0	0
R	R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): Trees or shrubs > 2/3 the area of the unit Trees or shrubs > 1/3 area of the unit Ungrazed, herbaceous plants > 2/3 area of unit Ungrazed herbaceous plants > 1/3 area of unit Trees, shrubs, and ungrazed herbaceous < 1/3 area of unit points = 3 X Trees, shrubs, and ungrazed herbaceous < 1/3 area of unit points = 0	Figure
R	Aerial photo or map showing polygons of different vegetation types Add the points in the boxes above	! 0
R		
R	TOTAL - Water Quality Functions Multiply the score from R 1 by R 2 Add score to table on p. 1	0

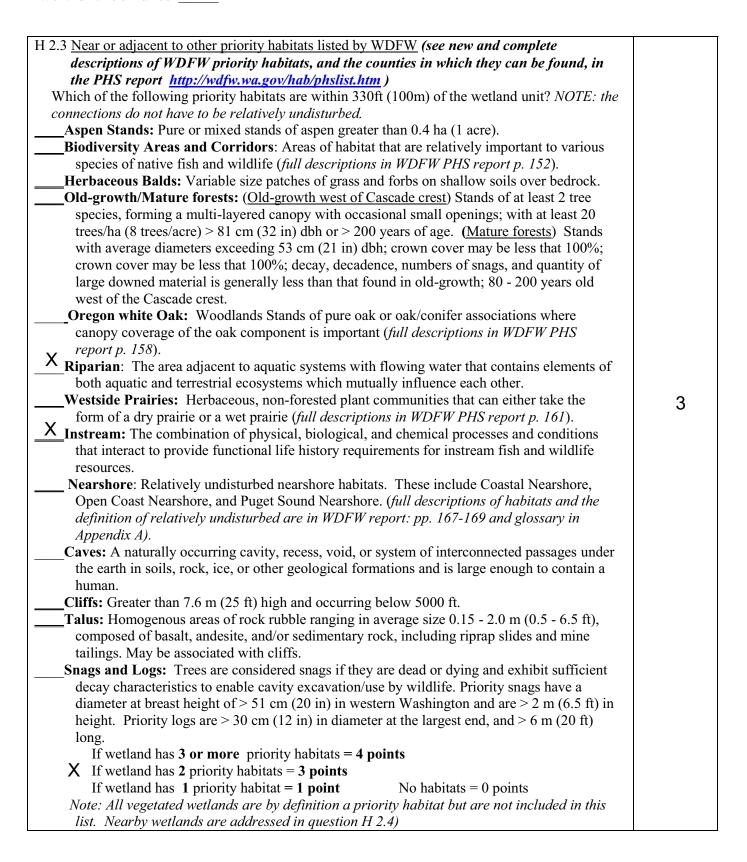
R	Riverine and Freshwater Tidal Fringe Wetlands HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion	Points (only 1 score per box)
	R 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.54)
R	R 3.1 Characteristics of the overbank storage the unit provides: Estimate the average width of the wetland unit perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit)/(average width of stream between banks).	Figure
	If the ratio is more than 20 points = 9 If the ratio is between $10-20$ points = 6 If the ratio is $5-<10$ points = 4 X If the ratio is $1-<5$ points = 2 If the ratio is <1 Aerial photo or map showing average widths	2
R	R 3.2 Characteristics of vegetation that slow down water velocities during floods: <i>Treat large woody debris as "forest or shrub"</i> . Choose the points appropriate for the best description. (polygons need to have >90% cover at person height NOT Cowardin classes): Forest or shrub for >1/3 area OR herbaceous plants > 2/3 area points = 7 Forest or shrub for > 1/10 area OR herbaceous plants > 1/3 area points = 4 X Vegetation does not meet above criteria points = 0 Aerial photo or map showing polygons of different vegetation types	Figure
R	Add the points in the boxes above	2
R	R 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. <i>Note which of the following conditions apply.</i> X There are human structures and activities downstream (roads, buildings, bridges, farms) that can be damaged by flooding. — There are natural resources downstream (e.g. salmon redds) that can be damaged	
	by flooding — Other (Answer NO if the major source of water to the wetland is controlled by a reservoir or the wetland is tidal fringe along the sides of a dike) YES multiplier is 2 NO multiplier is 1	multiplier 2
R	TOTAL - Hydrologic Functions Multiply the score from R 3 by R 4 Add score to table on p. 1	4

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat		Points (only 1 score per box)	
H 1. Does the wetland unit have the potential to p	orovide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72) Check the types of vegetation classes present (as define class is ¼ acre or more than 10% of the area if unit Aquatic bed X Emergent plants X Scrub/shrub (areas where shrubs have >30% Forested (areas where trees have >30% covered.)	is smaller than 2.5 acres.	old for each	Figure
If the unit has a forested class check if: The forested class has 3 out of 5 strata (can moss/ground-cover) that each cover 20% Add the number of vegetation structures that qualify.	opy, sub-canopy, shrubs, here within the forested polygor fyou have:	ı	1
Map of Cowardin vegetation classes	4 structures or more 3 structures X 2 structures 1 structure	points = 4 points = 2 points = 1 points = 0	
H 1.2. Hydroperiods (see p. 73)			Figure
Check the types of water regimes (hydroperiods) pregime has to cover more than 10% of the wetland of descriptions of hydroperiods) Permanently flooded or inundatedSeasonally flooded or inundatedSaturated onlyX Permanently flowing stream or river in, or additionally flowing stream in, or adjacent to,Seasonally flowing stream in, or adjacent to,	4 or more types present 3 types present X 2 types present 1 type present ljacent to, the wetland	points = 3 points = 2 point = 1 points = 0	1
H 1.3. Richness of Plant Species (see p. 75) Count the number of plant species in the wetland to of the same species can be combined to meet the six You do not have to name the species. Do not include Eurasian Milfoil, reed canaryge If you counted: List species below if you want to:	hat cover at least 10 ft ² . (diffice threshold) rass, purple loosestrife, Can > 19 species X 5 - 19 species	ferent patches	1

H 1.4. <u>Interspersion of habitats</u> <i>(see p. 76)</i> Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	Figure
	4
None = 0 points X Low = 1 point Moderate = 2 points	1
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	
H 1.5. Special Habitat Features: (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). Standing snags (diameter at the bottom > 4 inches) in the wetland Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) 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 turned grey/brown) At least ½ acre of thin-stemmed persistent vegetation 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 each stratum of plants	1
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	5

TTO D. 11. 11. 11. 11. 11. 11. 11. 11. 11.	• 0	
H 2. Does the wetland unit have the opportunity to provide habitat for n	nany species?	
H 2.1 <u>Buffers</u> (see p. 80)	1 . 1	Figure
Choose the description that best represents condition of buffer of wetland unit. The		
criterion that applies to the wetland is to be used in the rating. See text for definitio "undisturbed."	n oj	
	m vyotom >050/	
 — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or ope of circumference. No structures are within the undisturbed part of buffer. 		
	Points $= 5$	
x undisturbed also means no-grazing, no landscaping, no daily human use) 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or ope		4
50% circumference.	Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open		
circumference.	Points = 4	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or ope		
circumference, .	Points $= 3$	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open		
50% circumference.	Points = 3	
If buffer does not meet any of the criteria above		
— No paved areas (except paved trails) or buildings within 25 m (80ft) of wet	land > 95%	
circumference. Light to moderate grazing, or lawns are OK.	Points = 2	
 No paved areas or buildings within 50m of wetland for >50% circumference 	e.	
Light to moderate grazing, or lawns are OK.	Points = 2	
 Heavy grazing in buffer. 	Points = 1	
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumfer	ence (e.g. tilled	
fields, paving, basalt bedrock extend to edge of wetland	Points $= 0$.	
 Buffer does not meet any of the criteria above. 	Points = 1	
Aerial photo showing buffers		
H 2.2 Corridors and Connections (see p. 81)	l aamidan	
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of		
or native undisturbed prairie, that connects to estuaries, other wetlands or und		
uplands that are at least 250 acres in size? (dams in riparian corridors, heavi		
roads, paved roads, are considered breaks in the corridor).	iy useu gravei	
YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$		
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated		
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of		
forest, and connects to estuaries, other wetlands or undisturbed uplands that a		
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed of	corridor as in	2
the question above?		
X YES = 2 points (go to H 2.3) NO = H 2.2.3		
H 2.2.3 Is the wetland:		
within 5 mi (8km) of a brackish or salt water estuary OR		
within 3 mi of a large field or pasture (>40 acres) OR		
within 1 mi of a lake greater than 20 acres? $NO = 0$ points		
YES = 1 point NO = 0 points		

Total for page 6



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2 There are no wetlands within ½ mile.	5
H 2 . TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	14
TOTAL for H 1 from page 14	5
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	19

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit 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 X 	
SC 1.1 Is the wetland unit 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?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— 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 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D or accessed from WNHP/DNR web site	Cat. I
YES – contact WNHP/DNR (see p. 79) and go to SC 2.2 NO X SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NO not a Heritage Wetland	
SC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.	
1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes - go to Q. 3 X No - go to Q. 2	
 Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 X No - Is not a bog for purpose of rating 	
3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?	
Yes – Is a bog for purpose of rating No - go to Q. 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" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.	
1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?	
2. YES = Category I No Is not a bog for purpose of rating	Cat. I

SC 4.0 Forested Wetlands (see p. 90)

Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the 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/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.

NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.

— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.

YES = Category I

NO X not a forested wetland with special characteristics

Cat. I

SC 5.0 Wetlands in Coastal Lagoons (see p. 91)

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 surface 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 X not a wetland in a coastal lagoon

SC 5.1 Does the wetland meets 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 invasive plant species (see list of invasive species on p. 74).
- 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 acre (4350 square feet)

YES = Category I NO = Category II

Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO \underline{X} not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
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 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	

Wetland name or number	WL Off-s	site 1

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): WL Off-site 1 Date of site visit: 05/09/11
tated by Emmett Pritchard Trained by Ecology? Yes X No Date of training Oct. 2007
EC: 31 TWNSHP: 24N RNGE: 4E Is S/T/R in Appendix D? Yes No X
Map of wetland unit: Figure _7 _ Estimated size0.25 ac.
SUMMARY OF RATING
Category based on FUNCTIONS provided by wetland
I II_X_ III IV
Category I = Score >=70 Score for Water Quality Functions 22
Category II = Score 51-69 Score for Hydrologic Functions 10
Category III = Score 30-50 Category IV = Score < 30 Score for Habitat Functions To The Property of the Prope
TOTAL score for Functions 51
Category based on SPECIAL CHARACTERISTICS of wetland
I II Does not Apply
Final Category (choose the "highest" category from above)

Summary of basic information about the wetland unit

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		Depressional	X
Natural Heritage Wetland		Riverine	
Bog		Lake-fringe	
Mature Forest		Slope	
Old Growth Forest		Flats	
Coastal Lagoon		Freshwater Tidal	
Interdunal			
None of the above	X	Check if unit has multiple HGM classes present	X

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		Х
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		Х
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		Х
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

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

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? YES – the wetland class is Tidal Fringe NO - go to 2If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine) If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.). 2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. NO - go to 3**YES** – The wetland class is **Flats** If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands. 3. Does the entire wetland unit **meet both** of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; Least 30% of the open water area is deeper than 6.6 ft (2 m)? NO - go to 4YES – The wetland class is Lake-fringe (Lacustrine Fringe) 4. Does the entire wetland unit meet all of the following criteria? X The wetland is on a slope (slope can be very gradual), X 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? 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

The wetland is feed by seeps on a slope but also includes three large depressions that encompass approx. 5,000 s. f. One is impounded by topography, the other two are caused by flow control structures. The area of the depressions is greater than 10% of the total wetland area and, therefore qualifies as a depressional HGM class.

 \leq 3ft diameter and less than 1 foot deep).

YES – The wetland class is **Slope**

NO - go to 5

5. Does the entire wetland unit meet a	all of the following criteria?
The unit is in a valley, of	or stream channel, where it gets inundated by overbank
flooding from that strea	m or river

The overbank flooding occurs at least once every two years.

NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.

NO - go to 6 YES – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. This means that any outlet, if present, is higher than the interior of the wetland.

NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet

NO – go to 8 YES – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 your wetland. 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 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 being rated	HGM Class to Use in Rating
	Slope + Riverine	Riverine
(Slope + Depressional	Depressional)
	Slope + Lake-fringe	Lake-fringe
	Depressional + Riverine along stream within boundary	Depressional
Ī	Depressional + Lake-fringe	Depressional
Ī	Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
	wetland	wetlands with special
		characteristics

If you are unable still 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.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)			
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)			
	D 1.1 Characteristics of surface water flows out of the wetland:				
D	Unit is a depression with no surface water leaving it (no outlet) X Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing				
	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic <i>(use NRCS</i>				
D	definitions) YES NO younts = 4 X points = 0				
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure			
_	\mathbf{X} Wetland has persistent, ungrazed, vegetation $\mathbf{y} = 95\%$ of area points = 5				
D	Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$	_			
	Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$	5			
	Wetland has persistent, ungrazed vegetation $<1/10$ of area points = 0 Map of Cowardin vegetation classes				
	D1.4 Characteristics of seasonal ponding or inundation.	Figure			
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. X Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is > ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland Area for the wetland points = 0 Map of Hydroperiods	4			
D	Total for D 1 Add the points in the boxes above	11			
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen				
	— Other	2			
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	22			

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)		
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?			
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Very Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	2		
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 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 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 X Marks of ponding less than 0.5 ft points = 0	0		
D	D 3.3 Contribution of wetland unit 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 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 Entire unit is in the FLATS class points = 5	3		
D	Total for D 3 Add the points in the boxes above	5		
D	Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise			
	flow into a river or stream that has flooding problems — Other			
	X YES multiplier is 2 NO multiplier is 1	2		
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 Add score to table on p. 1	10		

These questions apply to wetlands of all HC HABITAT FUNCTIONS - Indicators that unit functions		t habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to p	orovide habitat for man	y species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defin		hold for each	
class is ¼ acre or more than 10% of the area if unit Aquatic bed	is smaller than 2.3 acres.		
Emergent plants			
Scrub/shrub (areas where shrubs have >30%	*		
$\frac{X}{K_1}$ Forested (areas where trees have >30% cov	er)		
<pre>If the unit has a forested class check if:</pre>	ony sub-canony shrubs h	erhaceous	1
moss/ground-cover) that each cover 20%			•
Add the number of vegetation structures that qualify.			
	4 structures or more	points = 4	
Map of Cowardin vegetation classes	3 structures	points $= 2$	
	X2 structures 1 structure	points = 1 $points = 0$	
H 1.2. Hydroperiods (see p. 73)	1 Structure	points – o	Figure
Check the types of water regimes (hydroperiods) p	resent within the wetland.	The water	
regime has to cover more than 10% of the wetland o			
descriptions of hydroperiods)			
X Permanently flooded or inundated	4 or more types present	•	
Seasonally flooded or inundated Occasionally flooded or inundated	3 types present X 2 types present	_	
X Saturated only	1 type present	points = 0	1
Permanently flowing stream or river in, or ac	• 1 1	1	
Seasonally flowing stream in, or adjacent to,	the wetland		
Lake-fringe wetland = 2 points	NA		
Freshwater tidal wetland = 2 points	Map of hyd	roperioas	
H 1.3. Richness of Plant Species (see p. 75)	1. at a a sum at 1 a a at 1 0 th 2 (1)	266	
Count the number of plant species in the wetland to of the same species can be combined to meet the same.		fferent patches	
You do not have to name the species.	ze inresnoia)		
Do not include Eurasian Milfoil, reed canaryg	rass, purple loosestrife, Ca	madian Thistle	
If you counted:	> 19 species	points = 2	
List species below if you want to:	X 5 - 19 species	points = 1	1
	< 5 species	points $= 0$	

Total for page 3

H 1.4. Interspersion of habitats (see p. 76) Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	Figure
X None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	0
H 1.5. <u>Special Habitat Features:</u> (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the	
number of points you put into the next column.	
Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). X Standing snags (diameter at the bottom > 4 inches) in the wetland	
Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) 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 turned grey/brown) At least ¼ acre of thin-stemmed persistent vegetation 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 each stratum of plants	3
NOTE: The 20% stated in early printings of the manual on page 78 is an error.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	6

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
	Figure
H 2.1 Buffers (see p. 80) Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use) — 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. — Points = 4 — 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >25% x circumference,. — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >25% x circumference,. — Points = 3 — 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. — Points = 3 — If buffer does not meet any of the criteria above — No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. — Points = 2 — No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. Points = 1 — Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland Points = 1 — Buffer does not meet any of the criteria above.	Figure
H 2.2 Corridors and Connections (see p. 81) H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to H 2.3) NO = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in the question above? X YES = 2 points (go to H 2.3) NO = H 2.2.3 H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres? YES = 1 point NO = 0 points	2

Total for page 5

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? <i>NOTE: the</i>	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
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 p. 152).	
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 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	
crown cover may be less that 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: Woodlands 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).	
X 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).	
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: pp. 167-169 and glossary in	
Appendix A).	
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 7.6 m (25 ft) high and occurring below 5000 ft.	3
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	3
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 > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
long.	
If wetland has 3 or more priority habitats = 4 points	
XIf wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) X There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2 There are no wetlands within ½ mile.	5
H 2 . TOTAL Score - opportunity for providing habitat <i>Add the scores from H2.1,H2.2, H2.3, H2.4</i>	13
TOTAL for H 1 from page 14	6
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	19

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met.	
SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit 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 X	
SC 1.1 Is the wetland unit 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?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native <i>Spartina</i> spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in	Cat. I Cat. II Dual rating I/II
 determining the size threshold of 1 acre. — 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 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. 	

SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D or accessed from WNHP/DNR web site YES contact WNHP/DNR (see p. 79) and go to SC 2.2 NO _X SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NO not a Heritage Wetland	Cat. I
SC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.	
1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes - go to Q. 3 X No - go to Q. 2	
2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?	
Yes - go to Q. 3 X No - Is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND	
other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?	
Yes – Is a bog for purpose of rating No - go to Q. 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" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.	
1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?	
2. YES = Category I No Is not a bog for purpose of rating	Cat. I

SC 4.0 Forested Wetlands (see p. 90)

Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the 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/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.

NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.

— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.

YES = Category I

NO X not a forested wetland with special characteristics

Cat. I

SC 5.0 Wetlands in Coastal Lagoons (see p. 91)

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 surface 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 X not a wetland in a coastal lagoon

SC 5.1 Does the wetland meets 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 invasive plant species (see list of invasive species on p. 74).
- 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 acre (4350 square feet)

YES = Category I NO = Category II

Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO \underline{X} not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
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 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Wetland Off-site 2 Date of site visit: 04/29/11
Rated by Emmett Pritchard Trained by Ecology? Yes X No Date of training Oct. 200
SEC: 32 TWNSHP: 24N RNGE: 4E Is S/T/R in Appendix D? Yes_ No X_
Map of wetland unit: Figure 7 Estimated size 0.25 ac.
SUMMARY OF RATING
Category based on FUNCTIONS provided by wetland I II IV
Category I = Score >=70 Category II = Score 51-69 Category III = Score 30-50 Category IV = Score < 30 Score for Water Quality Functions 16 Score for Hydrologic Functions 10 TOTAL score for Functions 40
Category based on SPECIAL CHARACTERISTICS of wetland I II Does not Apply_X_ Final Category (choose the "highest" category from above)
Summary of basic information about the wetland unit

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		Depressional	Χ
Natural Heritage Wetland		Riverine	
Bog		Lake-fringe	
Mature Forest		Slope	
Old Growth Forest		Flats	
Coastal Lagoon		Freshwater Tidal	
Interdunal			
None of the above	X	Check if unit has multiple HGM classes present	

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

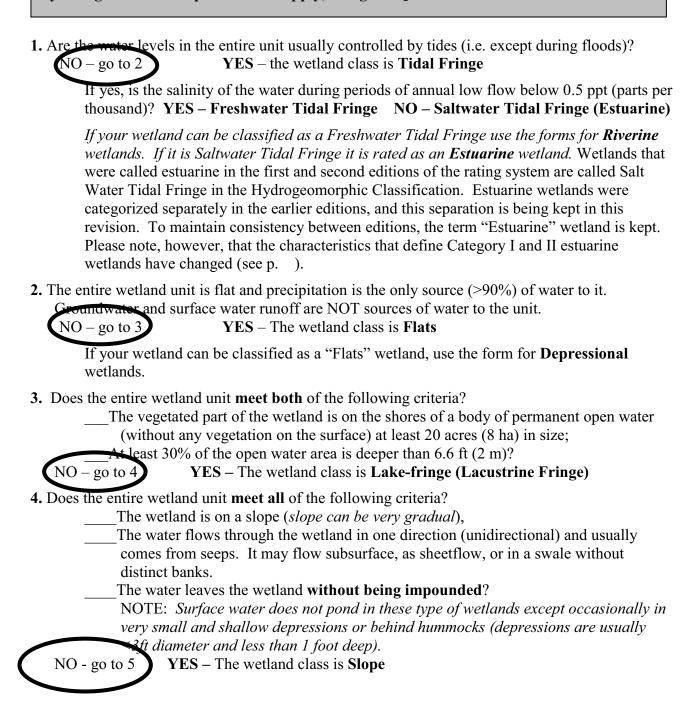
Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		х
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		Х
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		Х
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		Х

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

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



5. Does th	e 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 two years.
\overline{N}	\overline{OTE} : The riverine unit can contain depressions that are filled with water when the river i
710	t flooding.
NO - 9	t flooding. The vetland class is Riverine

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. This means that any outlet, if present, is higher than the interior of the wetland.

NO - go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet

NO – go to 8 YES – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 your wetland. 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 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 being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still 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.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score per box)			
D	improve water quality D 1. Does the wetland unit have the potential to improve water quality?	(see p.38)			
שו					
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) X Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing")				
	Provide photo or drawing S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic <i>(use NRCS</i>				
D	definitions) YES NO points = 4 X points = 0	0			
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation > = 95% of area Wetland has persistent, ungrazed, vegetation > = 1/2 of area points = 3	Figure			
	X Wetland has persistent, ungrazed vegetation > = 1/10 of area points = 1 Wetland has persistent, ungrazed vegetation < 1/10 of area points = 0 Map of Cowardin vegetation classes	1			
	D1.4 Characteristics of seasonal ponding or inundation.	Figure			
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. X Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is < ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland Area seasonally ponded is < ½ total area of wetland Area seasonally ponded is < ½ total area of wetland Area seasonally ponded is < ½ total area of wetland Area seasonally ponded is < ½ total area of wetland Area seasonally ponded is < ½ total area of wetland Area seasonally ponded is < ½ total area of wetland Area seasonally ponded is < ½ total area of wetland				
D	Total for D 1 Add the points in the boxes above	7			
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging X Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other XYES multiplier is 2 NO multiplier is 1				
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2	14			
	Add score to table on p. 1	' '			

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score	
	reduce flooding and stream degradation	per box)	
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?		
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Very Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	2	
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 X Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	3	
D	D 3.3 Contribution of wetland unit 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 unit points = 5 XThe 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 unit is in the FLATS class points = 5	3	
D	Total for D 3 Add the points in the boxes above	8	
D	Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems — Other X YES multiplier is 2 NO multiplier is 1	multiplier	
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4		
	Add score to table on p. 1	16	

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat			Points (only 1 score per box)	
H 1. Does the wetland unit have the potential to p	rovide habitat for many	species?	_	
H 1.1 Vegetation structure (see p. 72)			Figure	
Check the types of vegetation classes present (as defined by Cowardin)- Size threshold for each				
class is $\frac{1}{4}$ acre or more than 10% of the area if unit is smaller than 2.5 acres.				
Aquatic bed				
X Emergent plants				
Scrub/shrub (areas where shrubs have >30% Forested (areas where trees have >30% cove				
If the unit has a forested class check if:	1)		1	
The forested class has 3 out of 5 strata (cano	ony, sub-canony, shrubs, he	rbaceous.	'	
moss/ground-cover) that each cover 20%				
Add the number of vegetation structures that qualify. If				
	4 structures or more	points = 4		
Map of Cowardin vegetation classes	3 structures	points = 2		
	X 2 structures	points = 1		
	1 structure	points = 0		
H 1.2. <u>Hydroperiods</u> (see p. 73)			Figure	
Check the types of water regimes (hydroperiods) pr				
regime has to cover more than 10% of the wetland o descriptions of hydroperiods)	r ¼ acre to count. (see text	jor		
X Permanently flooded or inundated	4 or more types presen	points $= 3$		
X Seasonally flooded or inundated	3 types present	points = 2		
Occasionally flooded or inundated	X2 types present	point = 1	1	
Saturated only	1 type 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	Map of hyd	operiods		
H 1.3. Richness of Plant Species (see p. 75)	•			
Count the number of plant species in the wetland the		ferent patches		
of the same species can be combined to meet the siz	ze threshold)			
You do not have to name the species.	1.1	1. 7711		
Do not include Eurasian Milfoil, reed canarygr	1 1			
If you counted: <i>List species below if you want to:</i>	> 19 species X 5 - 19 species	points = 2 points = 1	1	
List species below if you want to.	< 5 species	points = 1 $points = 0$		
	3 species	points		

H 1.4. <u>Interspersion of habitats</u> <i>(see p. 76)</i> Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	Figure
None = 0 points X Low = 1 point Moderate = 2 points	1
None – 0 points Low – 1 points Moderate – 2 points	
H 1.5. Special Habitat Features: (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). Standing snags (diameter at the bottom > 4 inches) in the wetland Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) 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 turned grey/brown) At least ½ acre of thin-stemmed persistent vegetation 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 each stratum of plants NOTE: The 20% stated in early printings of the manual on page 78 is an error.	1
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	5

Comments

H 2.1 Buffers (see p. 80) Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5 — 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. Points = 4 — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference. Points = 3 Points = 3		ty to provide habitat for many species?	
Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5 — 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. Points = 4 — 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. Points = 4 — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference,. Points = 3	2.1 Buffers <i>(see p. 80)</i>		Figure
 criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. Points = 4 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, Points = 3 	noose the description that best represents condition	of buffer of wetland unit. The highest scoring	
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 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference. Points = 4 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . Points = 3 	undisturbed also means no-grazing, no landsc	aping, no daily human use) Points = 5	1
 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . Points = 3	— 100 m (330 ft) of relatively undisturbed veget	ated areas, rocky areas, or open water >	1
circumference. Points = 4 — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . Points = 3	50% circumference.	Points = 4	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . Points = 3	•	ted areas, rocky areas, or open water >95%	
circumference, . Points = 3	circumference.	Points = 4	
	— 100 m (330ft) of relatively undisturbed vegeta	ated areas, rocky areas, or open water > 25%	
#0 (4#00) 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >		ted areas, rocky areas, or open water for >	
50% circumference. Points = 3			
If buffer does not meet any of the criteria above	•	•	
 No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% 	• • • • • • • • • • • • • • • • • • • •	• ,	
circumference. Light to moderate grazing, or lawns are OK. Points = 2			
 No paved areas or buildings within 50m of wetland for >50% circumference. 	 No paved areas or buildings within 50m of we 		
Light to moderate grazing, or lawns are OK. Points = 2		Points = 2	
— Heavy grazing in buffer. Points = 1			
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled			
χ fields, paving, basalt bedrock extend to edge of wetland Points = 0 .			
Buffer does not meet any of the criteria above. Points = 1	· · · · · · · · · · · · · · · · · · ·		
Aerial photo showing buffers		Aerial photo showing buffers	
H 2.2 Corridors and Connections (see p. 81)			
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	*	· ·	
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest			
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed			
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel			
roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to H 2.3) NO = go to H 2.2.2	• •	· · · · · · · · · · · · · · · · · · ·	
YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$ H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		<u> </u>	
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or			
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25	• • •		
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in			
the question above?		does not have an undisturbed corridor as in	1
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$	*	NO = H 2.2.3	
H 2.2.3 Is the wetland:		1.0 11 2.2.0	
within 5 mi (8km) of a brackish or salt water estuary OR		vater estuary OR	
within 3 mi of a large field or pasture (>40 acres) OR			
within 1 mi of a lake greater than 20 acres?			
X YES = 1 point NO = 0 points			

Total for page 2

II 2.2 Near an adjacent to other mignity helpitate listed by WDEW (see your and complete	
H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm) Which of the following priority habitats are within 330ft (100m) of the wetland unit? NOTE: the	
connections do not have to be relatively undisturbed. Aspen Standay Pure or mixed stands of aspen greater than 0.4 ha (1 page)	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
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 p. 152</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 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	
crown cover may be less that 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: Woodlands 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).	
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	0
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	0
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: pp. 167-169 and glossary in	
Appendix A).	
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 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
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 > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
long.	
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile X There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2 There are no wetlands within ½ mile.	3
H 2 . TOTAL Score - opportunity for providing habitat <i>Add the scores from H2.1,H2.2, H2.3, H2.4</i>	5
TOTAL for H 1 from page 14	5
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	10

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit 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 X 	
SC 1.1 Is the wetland unit 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?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— 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 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D or accessed from WNHP/DNR web site YES contact WNHP/DNR (see p. 79) and go to SC 2.2 NOX SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NO not a Heritage Wetland	Cat. I
SC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.	
 Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes -go to Q. 3 X No - go to Q. 2 	
2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?	
Yes - go to Q. 3 X No - Is not a bog for purpose of rating	
3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?	
Yes – Is a bog for purpose of rating No - go to Q. 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" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.	
1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?	
2. YES = Category I No Is not a bog for purpose of rating	Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the 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/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	Cat. I
YES = Category I NO \underline{X} not a forested wetland with special characteristics	Cat. 1
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
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 surface 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 X not a wetland in a coastal lagoon	
SC 5.1 Does the wetland meets 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 invasive plant species (see list of invasive species on p. 74).	

— At least ¾ of the landward edge of the wetland has a 100 ft buffer of

NO = Category II

shrub, forest, or un-grazed or un-mowed grassland.

— The wetland is larger than 1/10 acre (4350 square feet)

YES = Category I

Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO X not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
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 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Wetland Off-site 3 Date of site visit: <u>04/29</u> /11
Rated by Emmett Pritchard Trained by Ecology? Yes X No Date of training Oct. 2007
SEC: 32 TWNSHP: 24N RNGE: 4E Is S/T/R in Appendix D? Yes_ No_X
Map of wetland unit: Figure _7 Estimated size0.5 ac.
SUMMARY OF RATING
Category based on FUNCTIONS provided by wetland I II_X_ III IV
Category I = Score >=70 Category II = Score 51-69 Category III = Score 30-50 Category IV = Score < 30 Score for Water Quality Functions Score for Hydrologic Functions 16 Score for Habitat Functions 13 TOTAL score for Functions 51
Category based on SPECIAL CHARACTERISTICS of wetland I II Does not Apply_X_ Final Category (choose the "highest" category from above)
Final Category (choose the "highest" category from above) Summary of basic information about the wetland unit

Summary of basic information	tion	about the wetland unit
nd Unit has Special		Wetland HGM Class

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		Depressional	Χ
Natural Heritage Wetland		Riverine	
Bog		Lake-fringe	
Mature Forest		Slope	
Old Growth Forest		Flats	
Coastal Lagoon		Freshwater Tidal	
Interdunal			
None of the above	X	Check if unit has multiple HGM classes present	

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

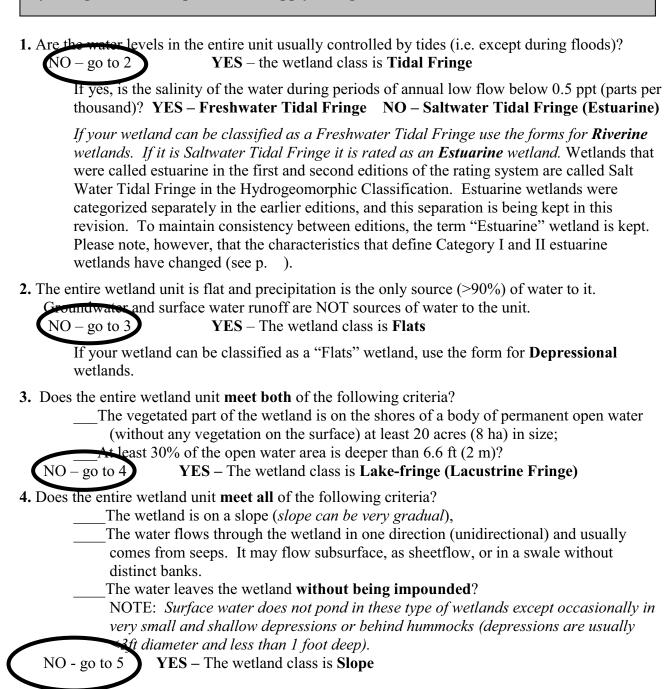
Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the		X
appropriate state or federal database. SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		X
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

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



5. Does the entire w	retland unit meet all of the following criteria?
The u	nit is in a valley, or stream channel, where it gets inundated by overbank
flood	ing from that stream or river
The c	verbank flooding occurs at least once every two years.
NOTE: The	riverine unit can contain depressions that are filled with water when the river is
not flooding	VFS _ The wetland class is Riverine
NO = go to 6	VFS _ The wetland class is Divarine

- 6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. This means that any outlet, if present, is higher than the interior of the wetland.
 - NO go to 7 **YES** The wetland class is **Depressional**
- 7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet

NO – go to 8 YES – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. 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 your wetland. 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 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 being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still 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.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)
	D 1.1 Characteristics of surface water flows out of the wetland:	Figure
D	Unit is a depression with no surface water leaving it (no outlet) X Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing	2
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES NO young pricts of drawing pricts of drawing pricts of definitions and pricts of drawing pricts of draw	0
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure
D	X Wetland has persistent, ungrazed, vegetation > = 95% of area points = 5 Wetland has persistent, ungrazed, vegetation > = 1/2 of area points = 3 Wetland has persistent, ungrazed vegetation > = 1/10 of area points = 1 Wetland has persistent, ungrazed vegetation <1/10 of area points = 0 Map of Cowardin vegetation classes	5
	D1.4 Characteristics of seasonal ponding or inundation.	Figure
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. X Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is > ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland Area for the wetland Area for the wetland area of wetland area of wetland Area for the wetland area of	4
D	Total for D 1 Add the points in the boxes above	11
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging X Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other	(see p. 44) multiplier
	XYES multiplier is 2 NO multiplier is 1	
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	22

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Very Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	2
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 X Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	3
D	D 3.3 Contribution of wetland unit 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 unit points = 5 XThe 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 Entire unit is in the FLATS class points = 5	3
D	Total for D 3 Add the points in the boxes above	8
D	Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems — Other	(see p. 49)
	— OtherX YES multiplier is 2 NO multiplier is 1	2
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 Add score to table on p. 1	16

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat		Points (only 1 score per box)	
H 1. Does the wetland unit have the potential to p	rovide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72) Check the types of vegetation classes present (as define class is ¼ acre or more than 10% of the area if unit Aquatic bed X Emergent plants X Scrub/shrub (areas where shrubs have >30% Forested (areas where trees have >30% covered.)	is smaller than 2.5 acres.	hold for each	Figure
If the unit has a forested class check if:		.1	1
The forested class has 3 out of 5 strata (can moss/ground-cover) that each cover 20% Add the number of vegetation structures that qualify. I	within the forested polygo		
, , , , , , , , , , , , , , , , , , , ,	4 structures or more	points $= 4$	
Map of Cowardin vegetation classes	3 structures X 2 structures	$ points = 2 \\ points = 1 $	
H 1.2. Hydroperiods (see p. 73)	1 structure	points = 0	Figure
Check the types of water regimes (hydroperiods) pregime has to cover more than 10% of the wetland of descriptions of hydroperiods) Permanently flooded or inundated X Seasonally flooded or inundated X Occasionally flooded or inundated X Saturated only Permanently flowing stream or river in, or ad Seasonally flowing stream in, or adjacent to, Lake-fringe wetland = 2 points Freshwater tidal wetland = 2 points	4 or more types present X3 types present 2 types present 1 type present jacent to, the wetland	for t points = 3 points = 2 point = 1 points = 0	2
H 1.3. Richness of Plant Species (see p. 75) Count the number of plant species in the wetland the of the same species can be combined to meet the six You do not have to name the species. Do not include Eurasian Milfoil, reed canarygy If you counted: List species below if you want to:	ze threshold)	•	1

H 1.4. <u>Interspersion of habitats</u> <i>(see p. 76)</i> Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	Figure
None = 0 points Low = 1 point X Moderate = 2 points	2
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water	
the rating is always "high". Use map of Cowardin vegetation classes H 1.5. Special Habitat Features: (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	
Standing snags (diameter at the bottom > 4 inches) in the wetland Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) Stable steep banks of fine material that might be used by beaver or muskrat for denning	2
 (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) At least ¼ acre of thin-stemmed persistent vegetation 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 each stratum of plants NOTE: The 20% stated in early printings of the manual on page 78 is an error. 	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	8

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 <u>Buffers</u> (see p. 80)	Figure
Choose the description that best represents condition of buffer of wetland unit. The highest scoring	
criterion that applies to the wetland is to be used in the rating. See text for definition of	
"undisturbed."	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
of circumference. No structures are within the undisturbed part of buffer. (relatively	
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5	_
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >	1
50% circumference. Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
circumference. Points = 4	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%	
circumference, . Points = 3	
·	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >	
50% circumference. Points = 3	
If buffer does not meet any of the criteria above	
— No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95%	
circumference. Light to moderate grazing, or lawns are OK. Points = 2	
 No paved areas or buildings within 50m of wetland for >50% circumference. 	
Light to moderate grazing, or lawns are OK . Points = 2	
Heavy grazing in buffer.Points = 1	
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled	
χ fields, paving, basalt bedrock extend to edge of wetland Points = 0 .	
Buffer does not meet any of the criteria above. Points = 1	
Aerial photo showing buffers	
H 2.2 Corridors and Connections (see p. 81)	
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest	
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel	
roads, paved roads, are considered breaks in the corridor).	
YES = 4 points $(go \ to \ H \ 2.3)$ NO = go to H 2.2.2	
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or	
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25	
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in	1 1
the question above?	1
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$	
H 2.2.3 Is the wetland:	
within 5 mi (8km) of a brackish or salt water estuary OR	
within 3 mi of a large field or pasture (>40 acres) OR	
within 1 mi of a lake greater than 20 acres?	
X YES = 1 point $NO = 0 points$	

Total for page 2

TYOON II A A A A A A A A A A A A A A A A A A	
H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? <i>NOTE: the</i>	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
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 p. 152).	
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 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	
crown cover may be less that 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: Woodlands 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>).	
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	0
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	0
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: pp. 167-169 and glossary in	
Appendix A).	
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 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
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 > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
long.	
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met.	
SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit 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 X	
SC 1.1 Is the wetland unit 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?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover	
more than 10% of the wetland, then the wetland should be given a dual	Dual
rating (I/II). The area of Spartina would be rated a Category II while the	rating
relatively undisturbed upper marsh with native species would be a	I/II
Category I. Do not, however, exclude the area of Spartina in	-
determining the size threshold of 1 acre.	
— 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 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D or accessed from WNHP/DNR web site	Cat. I
YES – contact WNHP/DNR (see p. 79) and go to SC 2.2 NO X	
SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NOnot a Heritage Wetland	
SC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.	
1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes - go to Q. 3 X No - go to Q. 2	
2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?	
Yes - go to Q. 3 X No - Is not a bog for purpose of rating	
3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?	
Yes – Is a bog for purpose of rating No - go to Q. 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" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.	
1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?	
2. YES = Category I No Is not a bog for purpose of rating	Cat. I

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the 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/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NO X not a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
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 surface 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 X not a wetland in a coastal lagoon	
 SC 5.1 Does the wetland meets 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 invasive plant species (see list of invasive species on p. 74). At least ¾ of the landward edge of the wetland has a 100 ft buffer of 	

NO = Category II

shrub, forest, or un-grazed or un-mowed grassland.

— The wetland is larger than 1/10 acre (4350 square feet)

YES = Category I

Cat. I

Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO \underline{X} not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
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 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
YES = Category II $NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	Cat. II
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	
p. 1.	
If you answered NO for all types enter "Not Applicable" on p.1	