APPENDIX A: METHODS

WETLAND DEFINITION AND DELINEATION

Wetlands are formally defined by the U.S. Army Corps of Engineers (Corps) (Federal Register 1982), the Environmental Protection Agency (EPA) (Federal Register 1988), the Washington Shoreline Management Act (SMA) of 1971, and the Washington State Growth Management Act (GMA) as follows:

> *… those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas* (Federal Register, 1982, 1986).

In addition, the SMA and the GMA definitions add:

> *Wetlands do not include those artificial wetlands intentionally created from non-wetland site, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990 that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificially created wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands.*

Methods defined in the Western Mountains, Valleys, and Coast Regional Supplement (Corps, 2010) to the U.S. Army Corps of Engineers 1987 Wetlands Delineation Manual (Manual) were used to determine the presence and extent of wetlands in the study area. These methods are also consistent with state requirements in WAC 173-22-035.

The methodology outlined in the manuals is based on three essential characteristics of wetlands: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Field indicators of these three characteristics must all be present in order to determine that an area is a wetland (unless problem areas or atypical situations are encountered). These characteristics are described below.

The "routine on-site determination method" was used to determine wetland boundaries that had not been previously delineated. Formal data plots were established where information regarding each of the three wetland parameters (vegetation, soils, and hydrology) was recorded. This information was used to distinguish wetlands from non-wetlands. If wetlands were determined to be present within the study area, wetland boundaries were delineated with sequentially numbered colored pin flags or flagging. Data plot locations were also marked with colored flagging. Data sheets for each of the formal data plots evaluated for this Project are provided in Appendix B.

Vegetation

Plants must be specially adapted for life under saturated or anaerobic conditions to grow in wetlands. The U.S. Fish and Wildlife Service (USFWS) has determined the estimated probability of each plant species' occurrence in wetlands and has accordingly assigned a "wetland indicator status" (WIS) to each species. Plants are categorized as obligate (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), and upland (UPL). Definitions for each indicator status are listed below. Species with an indicator status of OBL, FACW, or FAC are considered adapted for life in saturated or anaerobic soil conditions. Such species are referred to as "hydrophytic" vegetation.

Key to Wetland Indicator Status codes:

- OBL Obligate: species that always occur in standing water or in saturated soils.
- FACW Facultative wetland: species that nearly always occur in areas of prolonged flooding or require standing water or saturated soils but may, on rare occasions, occur in non-wetlands.
- FAC Facultative: species that occur in a variety of habitats, including wetland and mesic to xeric non-wetland habitats but commonly occur in standing water or saturated soils.
- FACU Facultative upland: species that typically occur in xeric or mesic non-wetland habitats but may frequently occur in standing water or saturated soils.
- UPL Upland: species that rarely occur in water or saturated soils.

Areas of relatively homogeneous vegetative composition can be characterized by "dominant" species. The indicator status of the dominant species within each vegetative stratum is used to determine if the plant community may be characterized as hydrophytic. The vegetation of an area is considered to be hydrophytic if more than 50 percent of the dominant species have an indicator status of OBL, FACW, or FAC. The Regional Supplement provides additional tests for evaluating the presence of hydrophytic vegetation communities including the prevalence index, morphological adaptations, and wetland non-vascular plants. The Supplement also addresses difficult situations where hydrophytic vegetation indicators are not present but hydric soils and wetland hydrology are observed.

Soils

Hydric soils are indicative of wetlands. Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile (Federal Register, 1994). The Natural Resources Conservation Service (NRCS), in cooperation with the National Technical Committee for Hydric Soils, has compiled lists of hydric soils (NRCS, 1995). These lists identify soil series mapped by the NRCS that meet hydric soil criteria. It is common, however, for a map unit of non-wetland (non-hydric) soil to have inclusions of hydric soil, and vice versa. Therefore, field examination of soil conditions is important to determine if hydric soil conditions exist.

The NRCS has developed a guide for identifying field indicators of hydric soils (NRCS, 2010). This list of hydric soil indicators is considered to be dynamic; revisions are anticipated to occur on a regular basis as a result of ongoing studies of hydric soils. In general, anaerobic conditions create certain characteristics in hydric soils, collectively known as "redoximorphic features," that can be observed in the field (Vepraskas, 1999). Redoximorphic features include high organic content, accumulation of sulfidic material (rotten egg odor), greenish- or bluish-gray color (gley formation), spots or blotches of different color interspersed with the dominant or matrix color (mottling), and dark soil colors (low soil chroma)

(NRCS, 2010; Vepraskas, 1999). Soil colors are described both by common color name (for example, "dark brown") and by a numerical description of their hue, value, and chroma (for example, 10YR 2/2) as identified on a Munsell soil color chart (Munsell Color, 2000). Soil color is determined from a moist soil sample.

The Regional Supplement provides methods for difficult situations where hydric soil indicators are not observed, but indicators of hydrophytic vegetation and wetland hydrology are present.

Hydrology

Water must be present for wetlands to exist; however, it need not be present throughout the entire year. Wetland hydrology is considered to be present when there is permanent or periodic inundation or soil saturation at or near the soil surface for more than 12.5 percent of the growing season (typically 2 weeks in lowland Pacific Northwest areas). Areas that are inundated or saturated for between 5 percent and 12.5 percent of the growing season in most years may or may not be wetlands. Areas inundated or saturated for less than 5 percent of the growing season are non-wetlands (Ecology, 1997).

Indicators of wetland hydrology include observation of ponding or soil saturation, water marks, drift lines, drainage patterns, sediment deposits, oxidized rhizospheres, water-stained leaves, and local soil survey data. Where positive indicators of wetland hydrology are observed, it is assumed that wetland hydrology occurs for a sufficient period of the growing season to meet the wetland criteria, as described by Ecology (1997). The Regional Supplement provides methods for evaluating situations in wetlands that periodically lack indicators of wetland hydrology but where hydric soils and hydrophytic vegetation are present.

CLASSIFYING WETLANDS

Two classification systems are commonly used to describe wetlands. The hydrogeomorphic (HGM) system describes wetlands in terms of their position in the landscape and the movement of water in the wetland (Brinson, 1993). The USFWS classification system (Cowardin et al., 1979) describes wetlands in terms of their vegetation communities; these include, for example, emergent, scrub-shrub, and forested community types.

ASSESSING WETLAND FUNCTIONS

The City of Seattle specifies the use of Ecology's *Washington State Wetland Rating System for Western Washington—Revised* (Hruby, 2014) for rating wetlands. This rating system was developed by Ecology to differentiate wetlands based on their sensitivity to disturbance, their significance, their rarity, our ability to replace them, and the beneficial functions they provide to society. Although this system is designed to rate wetlands, it is based on whether a particular wetland performs a particular function and the relative level to which the function is performed. An assessment of wetland functions is inherent in the rating system. Appendix C provides additional information about the rating system wetland categories and completed rating forms for the Project.

The rating system was designed to differentiate between wetlands based on their sensitivity to disturbance, their significance, their rarity, our ability to replace them, and the functions they provide. In addition to rating a particular wetland, the rating system also provides a qualitative assessment of several wetland functions, including water quality improvement, flood flow alteration, and wildlife habitat. Wetlands are given points based on a series of questions regarding water quality, hydrologic, and habitat functions, and then scored into four categories: Category I (highest score) through Category

IV (lowest score). Because detailed scientific knowledge of wetland functions is limited, evaluations of the functions of individual wetlands are somewhat qualitative and dependent upon professional judgment.

IDENTIFYING STREAMS

ESA marked the locations of the ordinary high water mark (OHWM) of the watercourse in the study area with blue flagging. For purposes of determining its lateral jurisdiction under the Clean Water Act (33 CFR 328.3(e)), the Corps defines the OHWM as: "*that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas*" (Corps, 2005). Other physical characteristics that are used to determine the OHWM include wracking; vegetation matted down, bent, or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; bed and banks; water staining; and a change in plant community (Corps, 2005).

REFERENCES

Brinson, M. 1993. *A Hydrogeomorphic Classification for Wetlands.* U.S. Army Corps of Engineers, Wetlands Research Program. August.

Corps (U.S. Army Corps of Engineers). 2005. Regulatory Guidance Letter No. 05-05: Ordinary High Water Mark Identification. December 7, 2005.

Corps. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region.* Version 2. Wetlands Regulatory Assistance Program. May 2010. ERDC/EL TR-10-3. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046494.pdf.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979*. Classification of Wetlands and Deepwater Habitats of the United States*. FWS/OBS-79/31. U.S. Fish and Wildlife Service.

Ecology (Washington State Department of Ecology). 1997. *Washington State Wetlands Identification and Delineation Manual*. Publication No. 96-94. Olympia, WA.

Federal Register. 1982. *Title 33: Navigation and Navigable Waters; Chapter II, Regulatory Programs of the Corps of Engineers.* Vol. 47, No. 138, p. 31810. U.S. Government Printing Office, Washington, DC.

Federal Register. 1986. *33 CFR Parts 320 through 330: Regulatory Programs of the Corps of Engineers; Final Rule.* Vol. 51, No. 219, pp. 41206-41260. U.S. Government Printing Office, Washington, DC.

Federal Register. 1988. *40 CFR Part 230. Guidelines for Specification of Disposal Sites for Dredged or Fill Material.* Vol. 45, No. 249, Pages 85336-85357. U.S. Government Printing Office, Washington, DC.

Federal Register. 1994. *Changes in Hydric Soils of the United States.* July 13. Washington, DC.

Hruby, T. 2014. *Washington State Wetland Rating System for Western Washington – Revised.* August 2014. Ecology publication number 04-06-029. Olympia, WA.

Munsell Color. 2000. *Munsell Soil Color Charts*. GretagMacbeth, New Windsor, New York.

NRCS (Natural Resources Conservation Service). 1995. *Hydric Soils List for Washington.* Revised December 15, 1995.

NRCS. 2010. *Field Indicators of Hydric Soils in the United States - A Guide for Identifying and Delineating Hydric Soils.* Version 7.0, 2010. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_050723.pdf.

Vepraskas, M.J. 1999. *Redoximorphic Features for Identifying Aquic Conditions*. Technical Bulletin 301. North Carolina Agricultural Research Service, North Carolina State University, Raleigh, North Carolina.

APPENDIX B: WETLAND DETERMINATION DATA SHEETS

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 31, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W1 DP1

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): at base of slope Local relief (concave, convex, none): flat Slope (%): 0

Subregion (LRR): LRR A Lat: 47.561068 Long: -122.300669 Datum: NAD1983

Soil Map Unit Name: na NWI classification: none

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 ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks: likely disturbed in the past

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus balsamifera	60	y	FAC
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 10)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Juncus effusus	10	y	FACW
2. Polystichum munitum	5	y	FACU
3. Hedera helix	10	y	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	25 = Total Cover		
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	20	y	FAC
2.			
	20 = Total Cover		

% Bare Ground in Herb Stratum 60

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

SOIL

Sampling Point: W1 DP1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	7.5YR 2.5/1	100					sandy loam	
9-20	7.5YR 2.5/1 & 2.5Y 5/1	40&40	7.5YR 4/6	20		M	sandy loam with clay	mixed matrix

[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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks: ground hard, compacted

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: one of the rainiest October on record, very rainy night before and until ~9:30am.

Site visit April 5, 2017 - saturated to the surface, and ponding approximately 3 inches in area that had surface soil cracks in October.

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 31, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W1 DP2

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): at base of slope Local relief (concave, convex, none): flat Slope (%): 0

Subregion (LRR): LRR A Lat: 47.561071 Long: -122.300474 Datum: NAD1983

Soil Map Unit Name: na NWI classification: none

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 ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks: likely disturbed in the past

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus balsamifera	85	y	FAC
2.			
3.			
4.			
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5)			
1. grass sp.	5		
2. Hedera helix	30	y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
		= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	10	y	FAC
2.			
	10	= Total Cover	

% Bare Ground in Herb Stratum 60

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: primarily bare ground

SOIL

Sampling Point: W1 DP2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	7.5YR 2.5/2	100					sandy loam	
9-16	2.5Y 5/1	80	7.5YR 4/4	20			loamy sand with cobbles	
16-18	2.5Y 5/2	100					sandy clay 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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: one of the rainiest Octobers on record, very rainy night before and until ~9:30am. Meets criteria for B8, but seems unusual it is not wet at all given rainfall.

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 31, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W2 DP1

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

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

Subregion (LRR): LRR A Lat: 47.561600 Long: -122.299231 Datum: NAD1983

Soil Map Unit Name: na NWI classification: none

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 ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer macrophyllum	trace		FACU
2. Populus balsamifera	10	y	FAC
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10)			
1. Corylus cornuta	5	y	FACU
2. Alnus rubra	trace		FAC
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Equisetum telmateia	90	y	FACW
2. Tolmiea menziesii	10		FAC
3. Lysichiton americanus	5		OBL
4. Athyrium filix-femina	30		FAC
5. Urtica dioica	5		FAC
6. Hedera helix	20		FACU
7.			
8.			
9.			
10.			
11.			
	160 = Total Cover		
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	5	y	FAC
2.			
	5 = Total Cover		

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

SOIL

Sampling Point: W2 DP1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1	100					sandy loam	
8-16	10YR 4/2	90	10YR4/6	10			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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☒ No ☐ Depth (inches): 9

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 31, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W2 DP2

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

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

Subregion (LRR): LRR A Lat: 47°33'49.57"N Long: 122°18'1.56"W Datum: NAD1983

Soil Map Unit Name: na NWI classification: none

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 ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer macrophyllum	60	y	FACU
2.			
3.			
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. Oemleria cerasiformis	5	y	FACU
2. Corylus cornuta	20	y	FACU
3.			
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Polystichum munitum	80	y	FACU
2. Urtica dioica	trace		FAC
3. Vaccinium parvifolium	5		FACU
4. Hedera helix	15		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	85	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	trace		FAC
2.			
	trace	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL

Sampling Point: W2 DP2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/2	100					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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:_____

Depth (inches):_____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: soil moist but not saturated

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 19, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W3 DP3

Investigator(s): Claire Hoffman, Michael Muscari Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): concave Slope (%): 20

Subregion (LRR): LRR A Lat: 47.562733 Long: -122.298868 Datum: NAD1983

Soil Map Unit Name: na NWI classification: PFOB, PEM1B

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 ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.)			
2.			
3.			
4.			
	5 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10)			
1. Corylus cornuta	10		FACU
2. .Hedera helix	70	y	FACU
3.			
4.			
5.			
	80 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Equisetum telmateia	60	y	FACW
2. Polystichum munitum	20		FACU
3. Urtica dioica	20		FAC
4. Athyrium filix-femina	50	y	FAC
5			
6.			
7.			
8.			
9.			
10.			
11.			
	150 = Total Cover		
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	trace	y	FAC
2.			
	trace = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Acer macrophyllum (rooted outside the wetland), included RUAR as dominant because is the only vine

SOIL

Sampling Point: W3 Dp3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/1	98	7.5YR 3/4	2	C	matrix	sandy loam	
9-20	5Y 5/2 & 5Y 4/1	85&10	10YR 4/6	5	C	matrix	loamy sandy	2 matrix colors

[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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 7

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 19, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W3-DP4

Investigator(s): Claire Hoffman, Michael Muscari Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): concave Slope (%): 20

Subregion (LRR): LRR A Lat: 47.562771 Long: -122.298799 Datum: NAD1983

Soil Map Unit Name: na NWI classification:

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 ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer macrophylum	70	y	FACU
2. Prunus laurocerasus	5		FACU
3.			
4.			
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. Corylus cornuta	5		FACU
2. Oemleria cerasiformis	30	y	FACU
3. Mahonia aquifolium	trace		FACU
4. Hedera helix	50	y	FACU
5.			
	65	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Equisetum telmateia	trace		FACW
2. Polystichum munitum	50	y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	trace	y	FAC
2.			
	trace	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: included RUAR as dominant b/c it's the only vine.

SOIL

Sampling Point: W3 DP4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/2	100						sandy loam
9-20	10YR 3/3	100						gravelly 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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle/King County Sampling Date: Oct 19, 2016

Applicant/Owner: City of Seattle State: WA Sampling Point: W4- DP1

Investigator(s): Claire Hoffman, Michael Muscari Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): slope, flat Local relief (concave, convex, none): concave Slope (%): 40

Subregion (LRR): LRR A Lat: 47.563111 Long: -122.299658 Datum: NAD 1983

Soil Map Unit Name: no data available NWI classification: PFOB

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 ☒ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks: buffer and southern edge of wetland had been disturbed by human activity. The area has been restored and replanted. Plot is on the edge of the wetland boundary, vegetation doesn't meet because upland plants are included in the plot.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Sorbus aucuparia	5	y	UPL
2. Prunus laurocerasus	5	y	FACU
3.			
4.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. Rubus spectabilis	50	y	FAC
2. Corylus cornuta	trace	n	FACU
3. Oemleria cerasiformis	trace	n	FACU
4. Hedera helix	80	y	FACU
5.			
	130	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Equisetum telmateia	15	y	FACW
2. Polystichum munitum	5	y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	trace	n	FAC
2.			
	trace	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species 15	x 2 = 30
FAC species 50	x 3 = 150
FACU species 90	x 4 = 360
UPL species	x 5 =
Column Totals: 155 (A)	540 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: Acer macrophylum is upslope of the plot, rooted outside of the plot, thus excluded. Hedera helix is invasive (cover 80-100% of the ground in buffer which stretches into the fringe of the wetland), it is not found in the wetter areas of the wetland. The area has been restored and replanted. Plot is on the edge of the wetland boundary, on a steep slope and thus vegetation from upland is included in the plot.

SOIL

Sampling Point: W4-DP1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 2/1	100		0			silty sandy loam	
7-24	10YR 2/1 & 2.5Y 3/1 45&45		7.5YR 4/3	10	RD	M	silty 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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☒ No ☐ Depth (inches): 12, seep at 4”

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 19, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W4 DP2

Investigator(s): Claire Hoffman, Michael Muscari Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 40

Subregion (LRR): LRR A Lat: 47.563192 Long: -122.299588 Datum: NAD 1983

Soil Map Unit Name: none NWI classification: PFOB

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 ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Prunus laurocerasus	20	y	FACU
2.			
3.			
4.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. Corylus cornuta	70	y	FACU
2. Rubus spectabilis	5		FAC
3. Ilex aquifolium	15		FACU
4. Hedera helix	80	y	FACU
5.			
	170	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Polystichum munitum	65	y	FACU
2. Equisetum telmateia	trace		FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	65	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: plot on relatively steep slope

SOIL

Sampling Point: W4 DP2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 2/2	100					sandy loam	
14-21	2.5Y 4/2	70	7.5YR 4/6	30	RM	M	loamy sand	

[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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 14

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: .

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle/King County Sampling Date: April 5, 2017

Applicant/Owner: City of Seattle State: WA Sampling Point: W4- DP3

Investigator(s): Claire Hoffman, Michael Muscari Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): slope, flat Local relief (concave, convex, none): concave Slope (%): 40

Subregion (LRR): LRR A Lat: 47.563111 Long: -122.299658 Datum: NAD 1983

Soil Map Unit Name: no data available NWI classification: PFOB

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 ☒ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks: buffer and southern edge of wetland had been disturbed by human activity. The area has been restored and replanted.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	5	Y	FAC
2.			
3.			
4.			
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. Rubus spectabilis	80	y	FAC
2. Oemleria cerasiformis	trace	N	FACU
3.			
4.			
5.			
	80	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Lysichiton americanus	trace	n	OBL
2. Equisetum telmateia	80	y	FACW
3. Athyrium filix-femina	15	n	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	10	n	FAC
2. Hedera helix	60	Y	FACU
	70	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

SOIL

Sampling Point: W4-DP3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2 &10YR 4/1	80 & 15	10 YR 5/6	5%			sandy loam	
6-18	10YR 2/1	95	5YR 4/6	5		M	silt 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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☒ No ☐ Depth (inches): 11

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 20, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W5 DP1

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 20

Subregion (LRR): LRR A Lat: 47.564616 Long: -122.299131 Datum: NAD1983

Soil Map Unit Name: na NWI classification: PFOB in NWI near W5 &W6

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 ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 10)			
1. Corylus cornuta	10	y	FACU
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Athyrium filix-femina	40	y	FAC
2. Tolmiea menziesii	30	y	FAC
3. Carex obnupta	trace		OBL
4. Urtica dioica	trace		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	60	y	FAC
2.			
	60 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

SOIL

Sampling Point: W5 DP1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/1	100					sandy loam	
9-18	10YR 2/1	95	7.5YR 4/6	5			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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 0-1

Water Table Present? Yes ☐ No ☒ Depth (inches):

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: very rainy night before and morning of fieldwork.

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 20, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W5 DP2

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): concave Slope (%): 20

Subregion (LRR): LRR A Lat: 47.564615 Long: -122.299161 Datum: NAD 1983

Soil Map Unit Name: n/a NWI classification: none

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 ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer macrophyllum	30	y	FACU
2.			
3.			
4.			
	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. Alnus rubra	5	y	FAC
2. Ilex aquifolium	10	y	FACU
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Polystichum munitum	30	y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	30	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	70	y	FAC
2.			
	70	= Total Cover	

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks:

SOIL

Sampling Point: W5 DP2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/1	100					sandy loam	
9-18	10YR 4/3 & 10YR 2/1	35&65					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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: depleted matrix is only 35% in second layer, not sufficient to meet criteria for A11.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☒ No ☐ Depth (inches): 4

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 2

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 31, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W6 DP1

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

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

Subregion (LRR): LRR A Lat: 47.565097 Long: -122.298835 Datum: NAD1983

Soil Map Unit Name: na NWI classification: PFOB

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 ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix sitchensis	10	y	FACW
2.			
3.			
4.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. Alnus rubra	35	y	FAC
2. Rubus spectabilis	trace		FAC
3.			
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Athyrium filix-femina	15	y	FAC
2. Tolmiea menziesii	15	y	FAC
3. Polystichum munitum	15	y	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	45	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	100	y	FAC
2.			
	100	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

SOIL

Sampling Point: W6 DP1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/1	100					loam	saturated
5-18	10YR 4/2	93	10YR 3/6	7			loam	not saturated

[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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 5

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: Water coming in from side of pit, at 5 inches, but not saturated below. Possibly perched water table.

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 31, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W6 DP2

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): concave Slope (%): 20

Subregion (LRR): LRR A Lat: 47.565093 Long: -122.298829 Datum: NAD1983

Soil Map Unit Name: none NWI classification: none

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 ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer macrophyllum	30	y	FACU
2.			
3.			
4.			
	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. Alnus rubra	20	y	FAC
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Polystichum munitum	10	y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	10	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	100	y	FAC
2.			
	100	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks:

SOIL

Sampling Point: W6 DP2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/3	100					loam	
5-18	10YR 3/3	97	10YR 3/6	3			clay loam, charcoal in layer	

[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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 14

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: April 5, 2017

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W8 DP1

Investigator(s): Claire Hoffman, Michael Muscari Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): at base of slope Local relief (concave, convex, none): flat Slope (%): 0

Subregion (LRR): LRR A Lat: 47.561068 Long: -122.300669 Datum: NAD1983

Soil Map Unit Name: na NWI classification: none

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 ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	10	y	FAC
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10)			
1. Rubus bifrons (R. armeniacus)	20	y	FAC
2.			
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 5)			
1.Equisetum hyemale	2	n	FACW
2. Ranunculus repens	50	y	FAC
3.Agrostis sp.	30	y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	82 = Total Cover		
Woody Vine Stratum (Plot size: 5)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

SOIL

Sampling Point: W8 DP1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 3/1	95	10 YR 6/8	5			sandy loam	
8-16	10YR 5/1	45%	7.5YR 4/6	50%			silt loam	compacted soil layer
	5Y 5/1	5%						

[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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: compacted silt

Depth (inches): 8- 16+ inches

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 2 inches ponding

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

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: April 5, 2017

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W8 DP2

Investigator(s): Claire Hoffman, Michael Muscari Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): at base of slope Local relief (concave, convex, none): flat Slope (%): 0

Subregion (LRR): LRR A Lat: 47.561068 Long: -122.300669 Datum: NAD1983

Soil Map Unit Name: na NWI classification: none

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 ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus balsamifera	40	y	FAC
2. Alnus rubra	20	y	FAC
3.			
4.			
	60 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10)			
1. Rubus bifrons (R. armeniacus)	20	y	FAC
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Polystichum munitum	25	y	FACU
2. Ranunculus repens	10	y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	35 = Total Cover		
Woody Vine Stratum (Plot size: 5)			
1. Hedera helix	10	y	FACU
	10 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: POBA – 18+ inches DBH likely 30 years old

SOIL

Sampling Point: W8 DP2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	90	10 YR 4/4	10%			silt loam	
4-16	10YR 5/1	60	7.5YR 4/6	40%	C	M	silt 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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): moist top 4" but not below

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 31, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W9 DP1

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

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

Subregion (LRR): LRR A Lat: 47.566832 Long: -122.298354 Datum: NAD1983

Soil Map Unit Name: na NWI classification: PFOB

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 ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	30	y	FAC
2.			
3.			
4.			
	30 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Athyrium filix-femina	20	y	FAC
2. Equisetum telmateia	15	y	FACW
3. Urtica dioica	trace		FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	35 = Total Cover		
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	80	y	FAC
2.			
	80 = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Willows in buffer at bottom (east) end of wetland.

SOIL

Sampling Point: WL9 DP1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/2	100					sandy loam,	roots
5-18	5Y 4/1	85	7.5YR4/4 & 7/5YR5/6	10&5	C		gravelly 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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☒ No ☐ Depth (inches): 4

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: water flowing subsurface, heavy rain overnight, until about mid-morning. Overland flow ~25feet up from wetland, flowing in to wetland.

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 20, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: WL9 DP2

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): slope Slope (%): 20

Subregion (LRR): LRR A Lat: 47.566806 Long: -122.298311 Datum: NAD1983

Soil Map Unit Name: na NWI classification: PFOB

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 ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	20	y	FAC
2. Acer macrophyllum	20	y	FACU
3.			
4.			
	40 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Equisetum telmateia	7	y	FACW
2. Polystichum munitum	5	y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	12 = Total Cover		
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	85	y	FAC
2.			
	85 = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

SOIL

Sampling Point: W9 DP2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 2/2	100					sandy loam	
11-16	10YR2/2 & 10YR3/3	65&35	10YR 4/6	trace	C		Sandy loam	
16-18	10YR4/2 & 10YR2/2	77&20	7.5YR 4/6	3	C		loamy sand	

[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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☒ No ☐ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 5

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: heavy rain overnight, until about mid-morning.

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 20, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W11 DP1

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

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

Subregion (LRR): LRR A Lat: 47.563888 Long: -122.300541 Datum: NAD 1983

Soil Map Unit Name: na NWI classification: none

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 ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks: Downslope/east of the delineated portion has been disturbed by human activities. It appears that a large area was excavated and the wetland may have previously extended to the east. To the east and south east of the delineated portion restoration and replanting primarily with upland plants has occurred. Water flows from the delineated area, both as sheet flow and a small newly forming channel. Soil does not display wetland characteristics east of the delineated portion but hydric herbs are present and some of the upland vegetation planted is not healthy. A stream channel or wetland may form over time. There was no disturbance in the delineated portion of the wetland (normal circumstances in delineated portion). Eastern extent of wetland/stream area ~ TestPlot B

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 10)			
1. Rubus spectabilis	90	y	FAC
2. Oemleria cerasiformis	trace		FACU
3.			
4.			
5.			
	90 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Athyrium filix-femina	5	y	FAC
2. Polystichum munitum	5	y	FACU
3. Lysichiton americanus	trace		OBL
4. Hedera helix	trace		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	15	y	FAC
2.			
	15 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

SOIL

Sampling Point: W11 DP1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/1	100					sandy loam	
9-16	2.5Y 3/1	97	7.5Y 3/4	3			loamy sand	

[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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☒ No ☐ Depth (inches): 5

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 20, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W11 DP2

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

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

Subregion (LRR): LRR A Lat: 47.563803 Long: -122.300527 Datum: NAD1983

Soil Map Unit Name: na NWI classification: none

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 ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ilex aquifolium	60	y	FACU
2. Alnus rubra	45	y	FAC
3.			
4.			
	105	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. Oemleria cerasiformis	5		FACU
2. Rubus spectabilis	10	y	FAC
3. Hedera helix	5		FACU
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Polystichum munitum	30	y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	30	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. Rubus ursinus	trace		FACU
2.			
	trace	= Total Cover	

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species 55	x 3 = 165
FACU species 90	x 4 = 360
UPL species	x 5 =
Column Totals: 145 (A)	525 (B)

Prevalence Index = B/A = 3.62

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL

Sampling Point: W11 DP1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	100					loam	
12-18	10YR4/3 & 10YR3/2	80&20	10YR 3/6	trace			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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: very rainy night before and morning.

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: April 5, 2017

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W12 DP1

Investigator(s): Claire Hoffman, Michael Muscari Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): at base of slope Local relief (concave, convex, none): flat Slope (%): 0

Subregion (LRR): LRR A Lat: 47.561068 Long: -122.300669 Datum: NAD1983

Soil Map Unit Name: na NWI classification: none

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 ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks: likely disturbed in the past

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus balsamifera	trace	n	FAC
2. Thuja plicata	trace	n	FAC
3. Alnus rubra	5	y	FAC
4.			
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. Spiraea douglasi	50	y	FACW
2. Rubus spectabilis	10	n	FAC
3.			
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Juncus effusus	20	y	FACW
2. Polystichum munitum	5	y	FACU
3.Juncus ensifolius	5	y	FACW
4. Ranuanculus repens	trace	n	FAC
5. Agrostis sp.	5	n	
6. Taraxacum officinale	trace	n	FACU
7.			
8.			
9.			
10.			
11.			
	35	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	trace	y	FAC
2.			
	trace	= Total Cover	

% Bare Ground in Herb Stratum 30

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: restoration (tree planting) nearby and part of the wetland was trampled as path goes right along the edge of the wetland.

SOIL

Sampling Point: W12 DP1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	2.5Y 2.5/1	95	7.5YR 4/6	5	C		sandy loam	
9-16	2.5Y 2.5/1	60	10YR 3/6	40	C	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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☒ No ☐ Depth (inches): 2 inches

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

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: October site visit: one of the rainiest October on record, very rainy night before and until ~9:30am, ground not saturated even at 20 inches. Site visit April 5, 2017 - saturated to the surface.

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: April 5, 2017

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: W12 DP2

Investigator(s): Claire Hoffman, Michael Muscari Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): at base of slope Local relief (concave, convex, none): flat Slope (%): 0

Subregion (LRR): LRR A Lat: 47.561068 Long: -122.300669 Datum: NAD1983

Soil Map Unit Name: na NWI classification: none

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 ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: likely disturbed in the past

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus balsamifera	30	y	FAC
2. Thuja plicata (Planted)	5	n	FAC
3. Alnus rubra	20	y	FAC
4. Tsuga heterophylla (planted)	trace	n	FACU
	55	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. Ribes sanguineum	15	y	FACU
2. Oemleria cerasiformis	5	y	FACU
3. Ribes lacustre (planted)	trace		
4. Mahonia nervosa	5	y	FACU
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Polystichum munitum	5	y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	trace	y	FAC
2.			
	trace	= Total Cover	

% Bare Ground in Herb Stratum 20

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: restoration (tree planting) nearby and part of the wetland was trampled as path goes right along the edge of the wetland.

SOIL

Sampling Point: W12 DP2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/2	100					sandy loam	
12-18	10YR 3/2	50	10YR 4/6 &10YR 5/4	50		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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☒ No ☐ Depth (inches): 15 inches

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 12 inches

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: October site visit: one of the rainiest October on record, very rainy night before and until ~9:30am, ground not saturated even at 20 inches. Site visit April 5, 2017 - saturated to the surface.

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 31, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: testplot A

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): flat Slope (%): 0

Subregion (LRR): LRR A Lat: 47.7525 Long: -122.3002 Datum: NAD1983

Soil Map Unit Name: na NWI classification: none

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 ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: restoration on north side of Spirea patch, blackberries cleared and replanting has occurred, large patch of Spiraea.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus balsamifera	25	y	FAC
2.			
3.			
4.			
	25 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10)			
1. Spiraea douglasii	90	y	FACW
2. Ilex aquifolium	trace		FACU
3.			
4.			
5.			
	90 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Polystichum munitum	5	y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	10	y	FAC
2. Hedera helix	trace		FACU
	10 = Total Cover		

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

SOIL

Sampling Point: test plot A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 2/2	100					sandy loam	
11-16	10YR 2/2	85	10YR 3/6	15			loamy sand	
16-19	10YR 4/4	100					sand	

[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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: area of surface sheet flow near plot, 0-1 inches of water on surface, and some ponding

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 20, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: test plot B

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

Landform (hillslope, terrace, etc.):flat Local relief (concave, convex, none): flat Slope (%): 0

Subregion (LRR): LRR A Lat: 47.7548 Long: --122.2997 Datum: NAD1983

Soil Map Unit Name: na NWI classification: none

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 ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Test plot B is just east of the eastern/lower edge of an area that had been excavated/disturbed and restored. Wetland 11 may have previously extended to the east. To the east and south east of the delineated portion of Wetland 11 restoration and replanting, primarily with upland plants, has occurred.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 10)			
1. Hedera helix	10	y	FACU
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Ranucus repens	40	y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	40 = Total Cover		
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	60	y	FAC
2.			
	60 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

SOIL

Sampling Point: test plot B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/2	100					gravelly loamy sand	
12-18	2.5Y 4/3 & 10YR 2/2	80&20	10YR 3/6	trace			gravelly loamy sand, some cobbles	

[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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): <1 inch

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 2

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: Water flowing on surface, seeping a few inches below surface but no water table present. Excessively raining night before and morning of fieldwork. Sheet flow on surface in a number of areas of the park.

This is just south-east of the area disturbed and restored, and just south-east of the area that may potentially form into wetland 11.

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

Project/Site: Cheasty Trail Pilot Project City/County: Seattle, King Sampling Date: Oct 31, 2016

Applicant/Owner: City of Seattle Parks State: WA Sampling Point: PW7 DP1

Investigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4

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

Subregion (LRR): LRR A Lat: 47.566058 Long: -122.298413 Datum: NAD1983

Soil Map Unit Name: na NWI classification:

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 ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer macrophyllum	85	y	FACU
2.			
3.			
4.			
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. Corylus cornuta	20	y	FACU
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5)			
1. Polystichum munitum	25	y	FACU
2. Equisetum telmateia	20	y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	45	= Total Cover	
Woody Vine Stratum (Plot size: 5)			
1. Rubus armeniacus	60	y	FAC
2.			
	60	= Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species 20	x 2 = 40
FAC species 60	x 3 = 180
FACU species 130	x 4 = 520
UPL species	x 5 =
Column Totals: 210 (A)	740 (B)

Prevalence Index = B/A = 3.52

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL

Sampling Point: PW7 DP1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/1	100					loam	
9-14	10YR 3/1	98	7.5 YR 4/4	2			loam	
14-21	10YR 3/1& 2.5Y 4/6	35&60	7.5YR 4/6	5			loam w/ cobble	mixed matrix

[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.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☐ No ☒

Remarks: lower layer doesn't start within 12 inches

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☒ No ☐ Depth (inches): 16

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 9

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: rainy October on record, heavy rain over night and until about 9:30am

APPENDIX C: ECOLOGY RATING FORMS

Washington State Wetland Rating System

The observed wetlands were rated using the 2014 Washington State Department of Ecology's *Wetland Rating System for Western Washington* (Hruby, 2014). This system was developed by Ecology to differentiate wetlands based on their sensitivity to disturbance, their significance, their rarity, our ability to replace them, and the beneficial functions they provide to society. Wetlands are categorized using the Ecology rating system according to the following criteria:

Category I wetlands represent a unique or rare wetland type; or are more sensitive to disturbance; or are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime.

Category II wetlands are difficult, though not impossible, to replace, and provide high levels of some functions.

Category III wetlands have a moderate level of function. They have been disturbed in some ways, and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.

Category IV wetlands have the lowest levels of functions and are often heavily disturbed.

Wetland name or number 1

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 1 Date of site visit: 4/5/2017

Rated by Claire Hoffman Trained by Ecology? ☑ Yes ☐ No Date of training Mar-17

HGM Class used for rating Depressional & Slope Wetland has multiple HGM classes? ☑ Yes ☐ No

NOTE: Form is not complete with out the figures requested (*figures can be combined*).
Source of base aerial photo/map Google Earth

OVERALL WETLAND CATEGORY III (based on functions ☑ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

_____ **Category I** - Total score = 23 - 27
_____ **Category II** - Total score = 20 - 22
X **Category III** - Total score = 16 - 19
_____ **Category IV** - Total score = 9 - 15

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

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number 1

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	1
Hydroperiods	D 1.4, H 1.2	1
Location of outlet (*can be added to map of hydroperiods*)	D 1.1, D 4.1	1
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	D 2.2, D 5.2	1
Map of the contributing basin	D 4.3, D 5.3	2
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	5
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	4

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

Wetland name or number 1

HGM Classification of Wetland in Western Washington

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

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

☑ NO - go to 2 ☐ **YES** - the wetland class is **Tidal Fringe** - go to 1.1

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

☐ **NO - Saltwater Tidal Fringe (Estuarine)** ☐ **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

☑ NO - go to 3 ☐ **YES** - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

☑ NO - go to 4 ☐ **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.**

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

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
- ☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ☐ The overbank flooding occurs at least once every 2 years.

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

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

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

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

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

☑ NO - go to 8 ☐ **YES** - The wetland class is **Depressional**

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

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

HGM classes within the wetland unit 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 of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

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

NOTES and FIELD OBSERVATIONS:
wetland is depressional / slope

Wetland name or number 1

DEPRESSIONAL AND FLATS WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 ☑ Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 ☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	1
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0	3
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	4
Total for D 1 Add the points in the boxes above	**8**

Rating of Site Potential If score is: ☐ **12 - 16 = H** ☑ **6 - 11 = M** ☐ **0 - 5 = L** *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3? Source Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	**1**

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

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the basin in which the unit is found*)? Yes = 2 No = 0	2
Total for D 3 Add the points in the boxes above	**3**

Rating of Value If score is: ☑ **2 - 4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number 1

DEPRESSIONAL AND FLATS WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	0
D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.* Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 ☑ Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 ☐ The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	3
D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* ☐ The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 ☐ Entire wetland is in the Flats class points = 5	3
Total for D 4 — Add the points in the boxes above	**6**

Rating of Site Potential If score is: ☐ **12 - 16 = H** ☑ **6 - 11 = M** ☐ **0 - 5 = L** *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support hydrologic function of the site?	
D 5.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	1
Total for D 5 — Add the points in the boxes above	**2**

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

D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. The unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.* The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): ● Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 ☑ ● Surface flooding problems are in a sub-basin farther down-gradient. points = 1 ☐ Flooding from groundwater is an issue in the sub-basin. points = 1 ☐ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0 ☐ There are no problems with flooding downstream of the wetland. points = 0	1
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for D 6 — Add the points in the boxes above	**1**

Rating of Value If score is: ☐ **2 - 4 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number 1

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

☐ Aquatic bed	4 structures or more: points = 4	1
☐ Emergent	3 structures: points = 2	
☐ Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points - 1	
☑ Forested (areas where trees have > 30% cover)	1 structure: points = 0	

If the unit has a Forested class, check if:

☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

☐ Permanently flooded or inundated	4 or more types present: points = 3	1
☑ Seasonally flooded or inundated	3 types present: points = 2	
☐ Occasionally flooded or inundated	2 types present: points = 1	
☑ Saturated only	1 types present: points = 0	
☐ Permanently flowing stream or river in, or adjacent to, the wetland		
☐ Seasonally flowing stream in, or adjacent to, the wetland		
☐ **Lake Fringe wetland**	**2 points**	
☐ **Freshwater tidal wetland**	**2 points**	

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

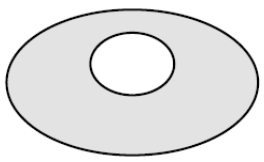
If you counted:	> 19 species	points = 2
	5 - 19 species	points = 1
	< 5 species	points = 0

1

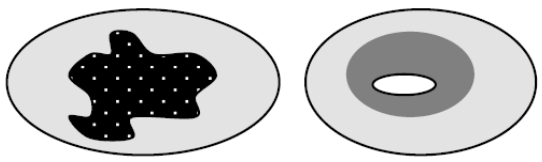
H 1.4. Interspersion of habitats

Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*

None = 0 points

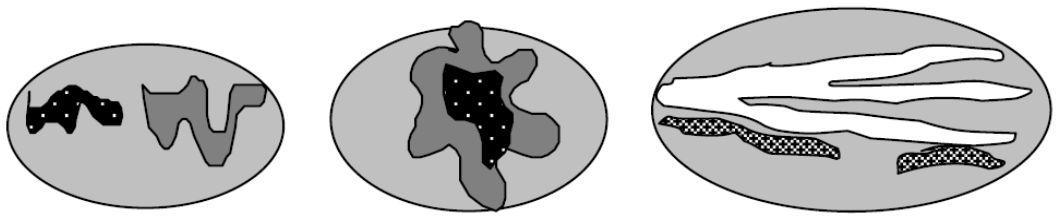


Low = 1 point



Moderate = 2 points

All three diagrams in this row are **HIGH** = 3 points



2

Wetland name or number 1

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☑ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☐ Standing snags (dbh > 4 in) within the wetland ☐ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (*cut shrubs or trees that have not yet weathered where wood is exposed*) ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by amphibians*) ☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	1
Total for H 1 Add the points in the boxes above	**6**

Rating of Site Potential If Score is: ☐ **15 - 18 = H** ☐ **7 - 14 = M** ☑ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 0 % undisturbed habitat + (10 % moderate & low intensity land uses / 2) = 5% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* 0 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 10% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	**-1**

Rating of Landscape Potential If Score is: ☐ **4 - 6 = H** ☐ **1 - 3 = M** ☑ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated* . Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	1

Rating of Value If Score is: ☐ **2 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.
http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here:
http://wdfw.wa.gov/conservation/phs/list/

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

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

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

Wetland name or number 1

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

SC 4.0. Forested Wetlands

Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.***

☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.

☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).

☐ Yes = **Category I** ☑ No = **Not a forested wetland for this section**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks

☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☑ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

☐ Long Beach Peninsula: Lands west of SR 103

☐ Grayland-Westport: Lands west of SR 105

☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☑ No = **Not an interdunal wetland for rating**

SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?

☐ Yes = **Category I** ☐ No - Go to **SC 6.2**

SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?

☐ Yes = **Category II** ☐ No - Go to **SC 6.3**

SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?

☐ Yes = **Category III** ☐ No = **Category IV**

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form

Google Earth Pro

File Edit View Tools Add Help

Sign in

▼ Search

Search

ex: 37 25.818' N, 122 05.36' W

Get Directions History

▼ Places

- mod to low w11
- w5 150ft
- w5 1km
- w5low to mod
- w5low to modeb
- w2 1km
- w2 mod to low
- w2modtolow
- w4 1km
- w4 1kmb
- w4modtolow
- w4 mod to lowb
- modtolowall
- w11ltom
- w9modlow
- w3modlow
- w3modtolow
- w6 1km
- w6lowtomod
- w6 low tomods
- w6lowmod
- SiteVisit_Points
- outlet
- Layers
- w1 150a
- w1150
- w1 150c
- outlet
- Wetland 1
- 150
- 150a
- 150aa
- 1km w1
- Polygon Measure
- Polygon Measure
- Polygon Measure
- Polygon Measure
- 1km W8
- Polygon Measure
- Polygon Measure
- Polygon Measure
- Line Measure
- Line Measure
- Line Measure
- Line Measure
- Temporary Places
- Polygon Measure

▼ Layers

- Primary Database
- The new Google Earth
- Borders and Labels
- Places

150 feet

150 feet

Wetland 12

Scrub shrub
Saturated only
dense, uncut woody plants

Wetland 1

Saturated only

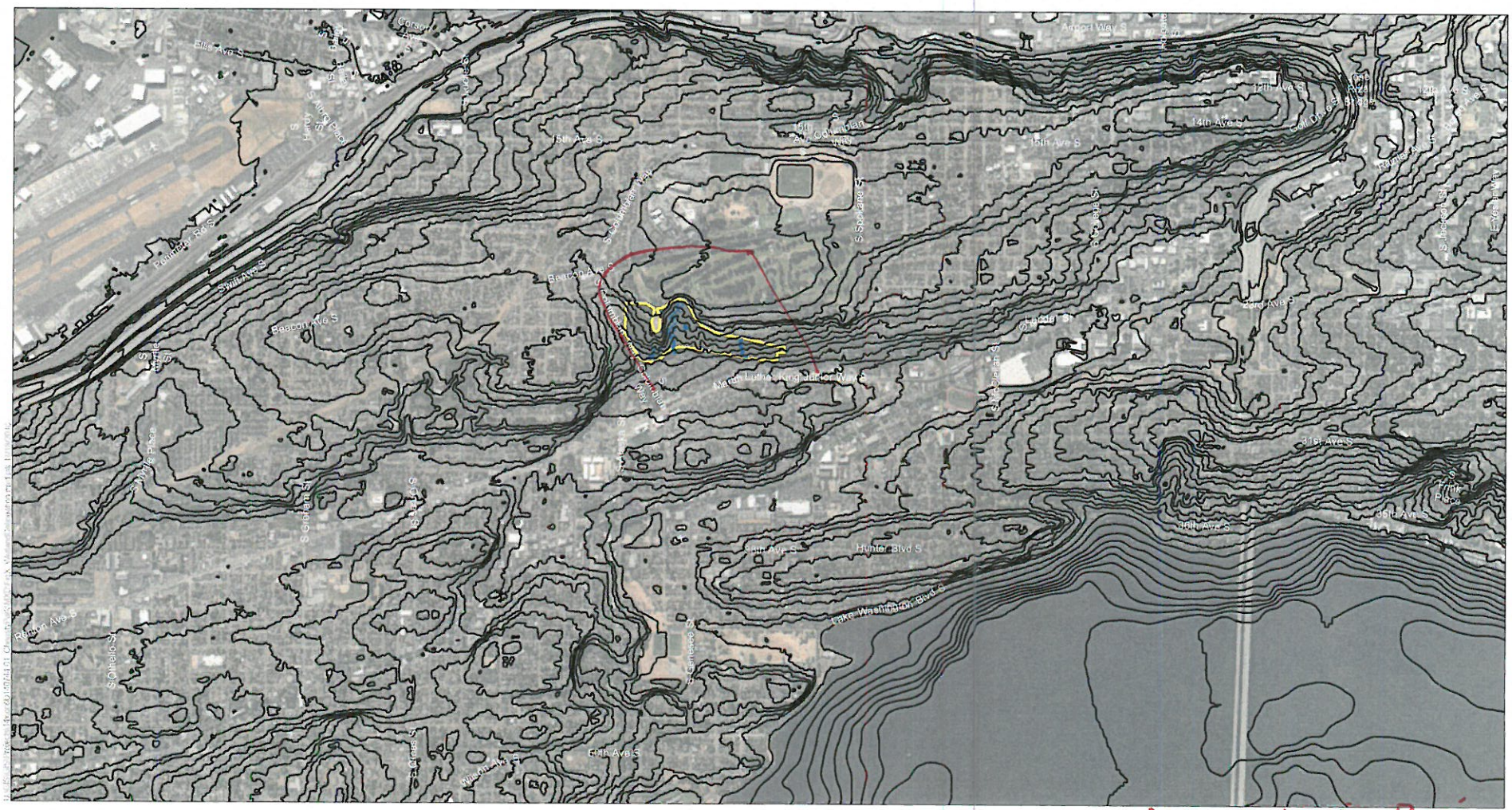
Seasonally flooded

outlet

Google earth

Tour Guide 1990

47°33'40.58" N 122°18'03.80" W elev 277 ft eye alt 1095 ft



SOURCE: ESA 2013 (aerial), ESA 2016, OSM 2014

Cheasty Trail Environmental Review. 140744.01

Figure 2

Wetland Delineation

HTTP 404 Error Message | Water Quality Assessmer | Water Quality Atlas Map

State of Washington [US] | https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?CustomMap=y&RT=0&Layers=23,29&Filters=n,n,n,n

DEPARTMENT OF ECOLOGY State of Washington

Washington State Water Quality Atlas

Home | Add Map Data | Clear Map Data

Legend | Filter Data | Zoom To | Tools

Add or remove map data

Assessed Waters/Sediment

Water

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

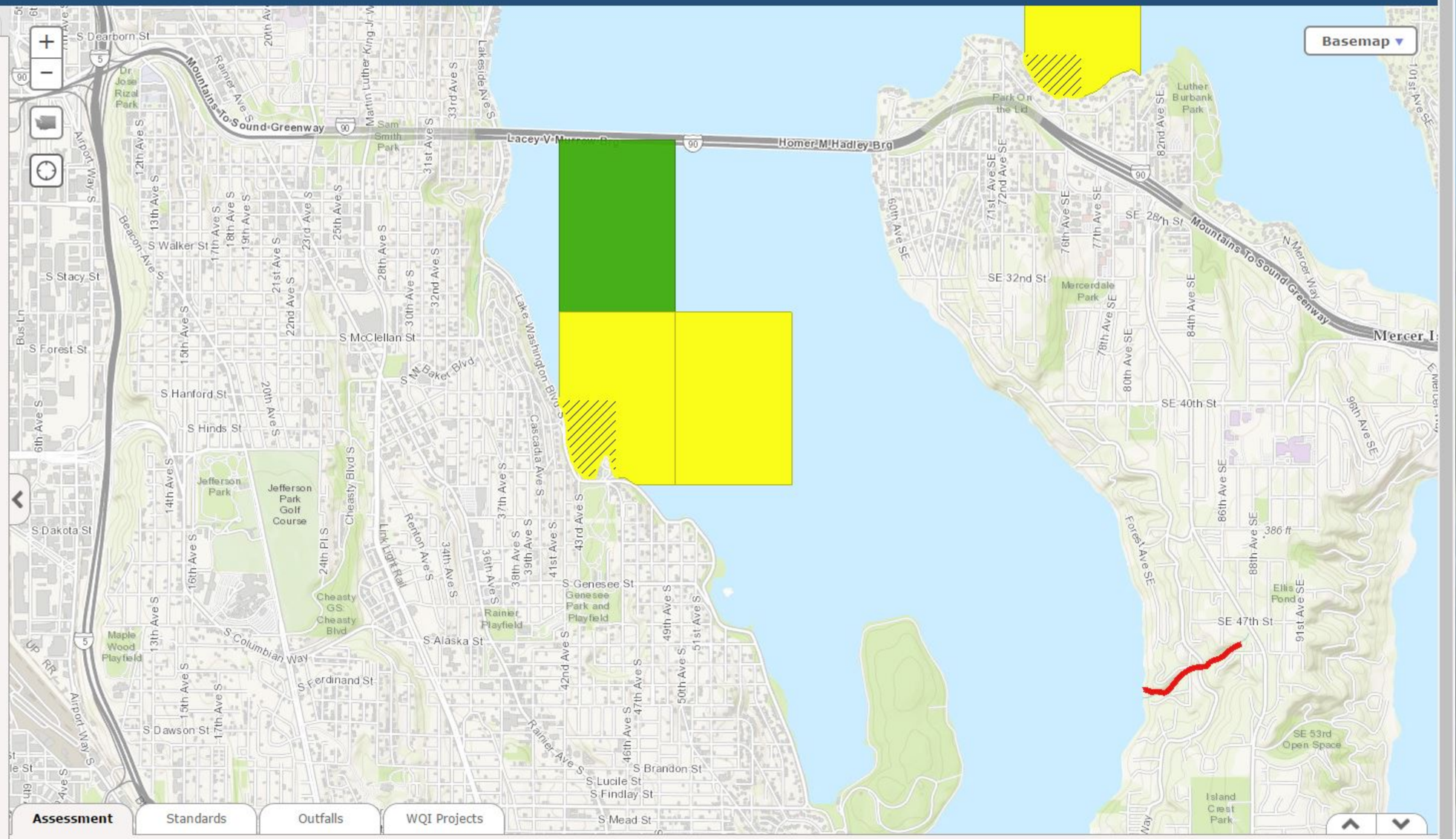
Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Change map data transparency

10%

0 0.2 0.4mi



Assessment | Standards | Outfalls | WQI Projects

Zoom to selection | Export to csv

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details

No filter applied, to view records filter data

Showing 0 to 0 of 0 entries

Previous Next

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
4672	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
4676	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
500005	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500006	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500007	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500038	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
12193	5	WASHINGTON LAKE	Bacteria	Water
12206	5	WASHINGTON LAKE	Bacteria	Water
43482	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
51591	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51592	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51593	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51706	5	WASHINGTON LAKE	4,4'-DDD	Tissue
51767	5	WASHINGTON LAKE	4,4'-DDE	Tissue
52642	5	WASHINGTON LAKE	Mercury	Tissue
52703	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52704	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52705	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52766	5	WASHINGTON LAKE	Total Chlordane	Tissue
52853	5	WASHINGTON LAKE	Total Phosphorus	Water
74460	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74461	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74775	5	WASHINGTON LAKE	Bacteria	Water
76477	5	WASHINGTON LAKE	Dieldrin	Tissue
76478	5	WASHINGTON LAKE	Dieldrin	Tissue
76479	5	WASHINGTON LAKE	Dieldrin	Tissue
77049	5	WASHINGTON LAKE	Chlordane	Tissue
77050	5	WASHINGTON LAKE	Chlordane	Tissue
77064	5	WASHINGTON LAKE	Chlordane	Tissue
500009	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
500010	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
8078	2	WASHINGTON LAKE	Lead	Water
11960	2	WASHINGTON LAKE	Ammonia-N	Water
11963	2	WASHINGTON LAKE	Ammonia-N	Water

Figure 4. TMDL List, Page 1

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
11964	2	WASHINGTON LAKE	Ammonia-N	Water
11970	2	WASHINGTON LAKE	Ammonia-N	Water
12207	2	WASHINGTON LAKE	Bacteria	Water
12264	2	WASHINGTON LAKE	Mercury	Water
12272	2	WASHINGTON LAKE	Mercury	Water
12311	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12312	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12313	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12314	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12315	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12316	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12317	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12318	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
51644	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51645	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51646	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
11972	1	WASHINGTON LAKE	Ammonia-N	Water
11973	1	WASHINGTON LAKE	Ammonia-N	Water
12183	1	WASHINGTON LAKE	Bacteria	Water
12186	1	WASHINGTON LAKE	Bacteria	Water
12189	1	WASHINGTON LAKE	Bacteria	Water
12190	1	WASHINGTON LAKE	Bacteria	Water
12194	1	WASHINGTON LAKE	Bacteria	Water
12195	1	WASHINGTON LAKE	Bacteria	Water
12196	1	WASHINGTON LAKE	Bacteria	Water
12197	1	WASHINGTON LAKE	Bacteria	Water
12200	1	WASHINGTON LAKE	Bacteria	Water
12201	1	WASHINGTON LAKE	Bacteria	Water
12202	1	WASHINGTON LAKE	Bacteria	Water
43481	1	WASHINGTON LAKE	Toxaphene	Tissue
43483	1	WASHINGTON LAKE	Mercury	Tissue
43484	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
43485	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
43486	1	WASHINGTON LAKE	Heptachlor	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
43487	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
43488	1	WASHINGTON LAKE	Endrin	Tissue
43492	1	WASHINGTON LAKE	Beta-BHC	Tissue
43493	1	WASHINGTON LAKE	Alpha-BHC	Tissue
43494	1	WASHINGTON LAKE	4,4'-DDT	Tissue
43495	1	WASHINGTON LAKE	4,4'-DDE	Tissue
43496	1	WASHINGTON LAKE	4,4'-DDD	Tissue
51827	1	WASHINGTON LAKE	4,4'-DDT	Tissue
51949	1	WASHINGTON LAKE	Alpha-BHC	Tissue
52010	1	WASHINGTON LAKE	Beta-BHC	Tissue
52403	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
52464	1	WASHINGTON LAKE	Heptachlor	Tissue
52585	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
52854	1	WASHINGTON LAKE	Total Phosphorus	Water
52855	1	WASHINGTON LAKE	Total Phosphorus	Water
52856	1	WASHINGTON LAKE	Total Phosphorus	Water
52857	1	WASHINGTON LAKE	Total Phosphorus	Water
52858	1	WASHINGTON LAKE	Total Phosphorus	Water
52859	1	WASHINGTON LAKE	Total Phosphorus	Water
52860	1	WASHINGTON LAKE	Total Phosphorus	Water
52861	1	WASHINGTON LAKE	Total Phosphorus	Water
52862	1	WASHINGTON LAKE	Total Phosphorus	Water
52863	1	WASHINGTON LAKE	Total Phosphorus	Water
52864	1	WASHINGTON LAKE	Total Phosphorus	Water
52865	1	WASHINGTON LAKE	Total Phosphorus	Water
74484	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74485	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74772	1	WASHINGTON LAKE	Bacteria	Water
74776	1	WASHINGTON LAKE	Bacteria	Water
75112	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75114	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75221	1	WASHINGTON LAKE	Beta-BHC	Tissue
75222	1	WASHINGTON LAKE	Beta-BHC	Tissue
75309	1	WASHINGTON LAKE	Endrin	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
75310	1	WASHINGTON LAKE	Endrin	Tissue
75311	1	WASHINGTON LAKE	Endrin	Tissue
75400	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75401	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75402	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75403	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75486	1	WASHINGTON LAKE	Heptachlor	Tissue
75487	1	WASHINGTON LAKE	Heptachlor	Tissue
75563	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75564	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75565	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75645	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75646	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75791	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75792	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75793	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75794	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
77219	1	WASHINGTON LAKE	Toxaphene	Tissue
77220	1	WASHINGTON LAKE	Toxaphene	Tissue
77236	1	WASHINGTON LAKE	Toxaphene	Tissue
77243	1	WASHINGTON LAKE	Endosulfan	Tissue
78987	1	WASHINGTON LAKE	Endosulfan	Tissue
78988	1	WASHINGTON LAKE	Endosulfan	Tissue
78989	1	WASHINGTON LAKE	Endosulfan	Tissue
79488	1	WASHINGTON LAKE	Mercury	Tissue
79502	1	WASHINGTON LAKE	Mercury	Tissue

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: Tokyo, Japan

Get Directions History

Places

- modtolowall
- w11ltom
- w9modlow
- w3modlow
- w3modtolow
- w6 1km
- w6lowtomod
- w6 low tomods
- w6lowmod
- SiteVisit_Points
- outlet
- Temporary Places
  - Layers
  - w1 150a
  - w1150
  - w1 150c
  - outlet
  - Wetland 1
  - 150
  - 150a
  - 150aa
  - 1km w1
  - Polygon Measure
  - Polygon Measure
  - Polygon Measure
  - Polygon Measure

Layers

- Primary Database
  - The new Google Earth
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean
  - Weather
  - Gallery
  - Global Awareness
  - More
  - Terrain

Sign in

1 KM Radius from Wetlands 1 and 12

No relatively undisturbed habitat

High Intensity

Moderate & Low Intensity

Moderate & Low Intensity

Wetland 1

Wetland 12

Moderate & Low Intensity

Moderate & Low Intensity

Moderate & Low Intensity

Tour Guide 1990

Imagery Date: 6/27/2016 47°34'04.58" N 122°18'21.52" W elev 349 ft eye alt 8143 ft

Google earth

Wetland name or number W2

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 2 Date of site visit: 31-Oct-16

Rated by Claire Hoffman Trained by Ecology? ☑ Yes ☐ No Date of training 2008

HGM Class used for rating Slope Wetland has multiple HGM classes? ☑ Yes ☐ No

NOTE: Form is not complete with out the figures requested (*figures can be combined*).
Source of base aerial photo/map Google Earth

OVERALL WETLAND CATEGORY IV (based on functions ☑ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

_____ **Category I** - Total score = 23 - 27
_____ **Category II** - Total score = 20 - 22
_____ **Category III** - Total score = 16 - 19
X **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		List appropriate rating (H, M, L)		
Site Potential	L	L	L	
Landscape Potential	L	L	L	
Value	H	M	M	**Total**
Score Based on Ratings	5	4	4	**13**

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number W2

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	1
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	1
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to another figure*)	S 4.1	1
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	4

Wetland name or number W2

HGM Classification of Wetland in Western Washington

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

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

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

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

☑ **NO - Saltwater Tidal Fringe (Estuarine)** ☐ **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

☑ NO - go to 3 ☐ **YES** - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

☑ NO - go to 4 ☐ **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.**

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

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
- ☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ☐ The overbank flooding occurs at least once every 2 years.

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

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

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

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

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

☐ NO - go to 8 ☐ **YES** - The wetland class is **Depressional**

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

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

HGM classes within the wetland unit 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 of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

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

Wetland name or number W2

SLOPE WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (*a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance*) Slope is 1% or less — points = 3 Slope is > 1% - 2% — points = 2 Slope is > 2% - 5% — points = 1 Slope is greater than 5% — points = 0	1
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. *Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.* Dense, uncut, herbaceous plants > 90% of the wetland area — points = 6 Dense, uncut, herbaceous plants > ½ of area — points = 3 Dense, woody, plants > ½ of area — points = 2 Dense, uncut, herbaceous plants > ¼ of area — points = 1 Does not meet any of the criteria above for plants — points = 0	3
Total for S 1 — Add the points in the boxes above	**4**

Rating of Site Potential If score is: ☐ **12 = H** ☐ **6 - 11 = M** ☑ **0 - 5 = L** *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Yes = 1 No = 0	0
Total for S 2 — Add the points in the boxes above	**0**

Rating of Landscape Potential If score is: ☐ **1 - 2 = M** ☑ **0 = L** *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *At least one aquatic resource in the basin is on the 303(d) list.* Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? A*nswer YES if there is a TMDL for the basin in which the unit is found*? Yes = 2 No = 0	2
Total for S 3 — Add the points in the boxes above	**3**

Rating of Value If score is: ☑ **2 - 4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W2

SLOPE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion

S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits 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** plants cover > 90% of the area of the wetland — points = 1 All other conditions — points = 0	0

Rating of Site Potential If score is: ☐ **1 = M** ☑ **0 = L** *Record the rating on the first page*

S 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	0

Rating of Landscape Potential If score is: ☐ **1 = M** ☑ **0 = L** *Record the rating on the first page*

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) — points = 2 Surface flooding problems are in a sub-basin farther down-gradient — points = 1 No flooding problems anywhere downstream — points = 0	1
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 Add the points in the boxes above	**1**

Rating of Value If score is: ☐ **2 - 4 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:

Wetland name or number W2

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

☐ Aquatic bed	4 structures or more: points = 4	1
☑ Emergent	3 structures: points = 2	
☐ Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points - 1	
☑ Forested (areas where trees have > 30% cover)	1 structure: points = 0	

If the unit has a Forested class, check if:

☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

☐ Permanently flooded or inundated	4 or more types present: points = 3	1
☐ Seasonally flooded or inundated	3 types present: points = 2	
☑ Occasionally flooded or inundated	2 types present: points = 1	
☑ Saturated only	1 types present: points = 0	
☐ Permanently flowing stream or river in, or adjacent to, the wetland		
☐ Seasonally flowing stream in, or adjacent to, the wetland		
☐ **Lake Fringe wetland**	**2 points**	
☐ **Freshwater tidal wetland**	**2 points**	

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

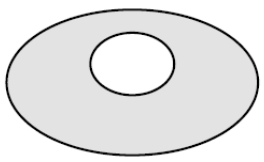
If you counted:	> 19 species	points = 2
	5 - 19 species	points = 1
	< 5 species	points = 0

1

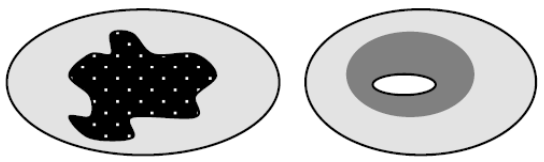
H 1.4. Interspersion of habitats

Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*

None = 0 points

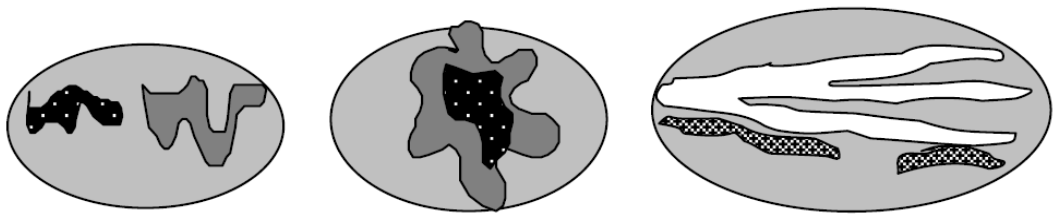


Low = 1 point



Moderate = 2 points

All three diagrams in this row are **HIGH** = 3 points



1

Wetland name or number W2

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☐ Standing snags (dbh > 4 in) within the wetland ☐ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (*cut shrubs or trees that have not yet weathered where wood is exposed*) ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by amphibians*) ☑ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	1
Total for H 1 Add the points in the boxes above	**5**

Rating of Site Potential If Score is: ☐ **15 - 18 = H** ☐ **7 - 14 = M** ☑ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 0 % undisturbed habitat + (7 % moderate & low intensity land uses / 2) = 3.5% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* 0 % undisturbed habitat + (22 % moderate & low intensity land uses / 2) = 11% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	**-1**

Rating of Landscape Potential If Score is: ☐ **4 - 6 = H** ☐ **1 - 3 = M** ☑ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated* . Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	1

Rating of Value If Score is: ☐ **2 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W2

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.
http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here:
http://wdfw.wa.gov/conservation/phs/list/

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

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

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

Wetland name or number W2

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

SC 4.0. Forested Wetlands

Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.***

☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.

☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).

☐ Yes = **Category I** ☑ No = **Not a forested wetland for this section**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks

☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☑ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

☐ Long Beach Peninsula: Lands west of SR 103

☐ Grayland-Westport: Lands west of SR 105

☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☑ No = **Not an interdunal wetland for rating**

SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?

☐ Yes = **Category I** ☐ No - Go to **SC 6.2**

SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?

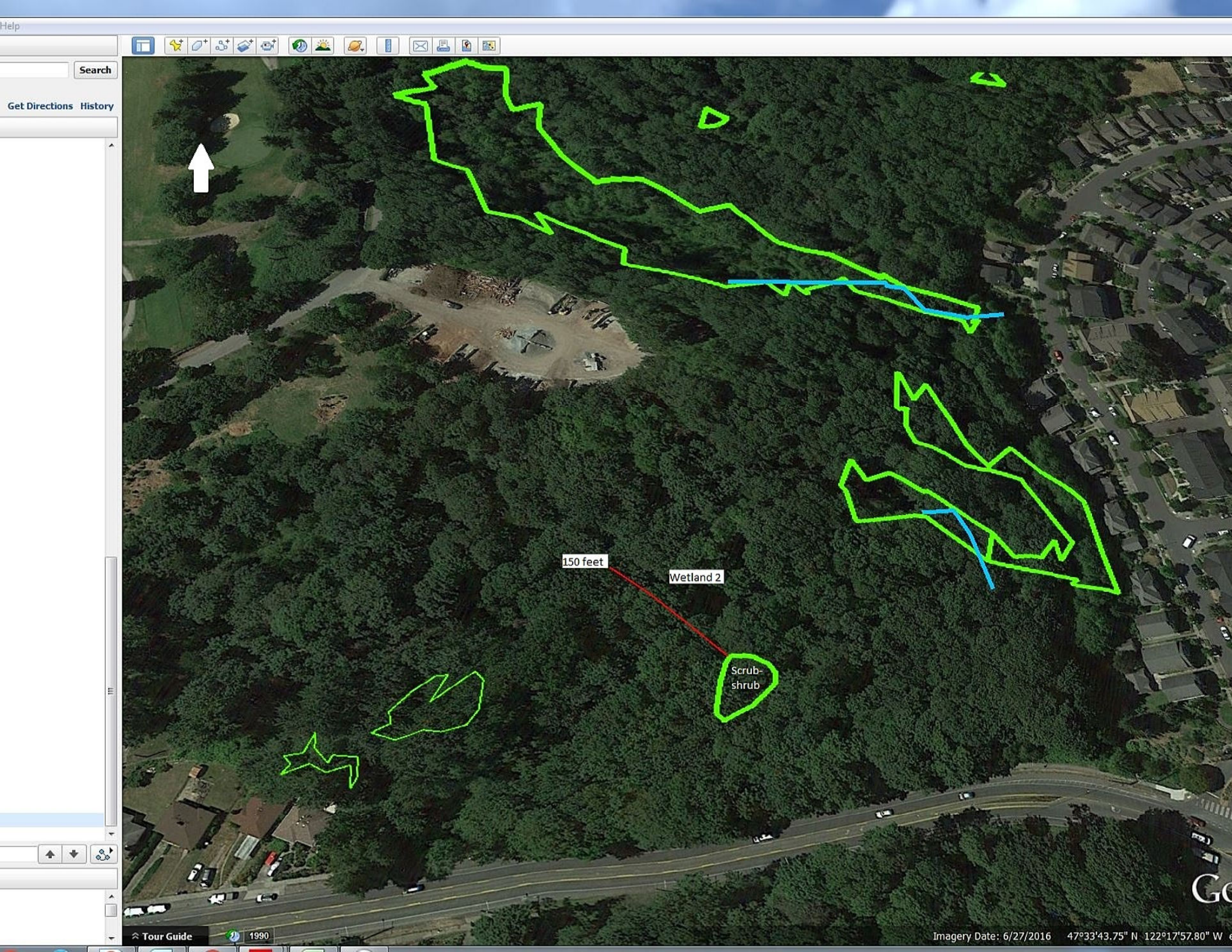
☐ Yes = **Category II** ☐ No - Go to **SC 6.3**

SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?

☐ Yes = **Category III** ☐ No = **Category IV**

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form


Help
Search
Get Directions
History
150 feet
Wetland 2
Scrub-
shrub
Tour Guide
1990
Imagery Date: 6/27/2016
47°33'43.75" N 122°17'57.80" W

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: 94043

Get Directions History

Places

- 150ft 3
- outlet
- 150ft4
- Earth Point Topo Map
  - USGS Quadrangles
- surveyed_wl_merge
  - surveyed_watercource_merge
  - surveyed_wl_merge
    - highpoint
- contributing basin
- surveyed_wl_merge
- forested
- 150ft
- 1km W3
- moderate & low intensity land use
- moderate to low
- moderate to low
- 1km w9
- moderate low w9
- 150ftw9
- W11 1km
- w11 mod to low
- w11mod to low
- mod to low w11
- w5 150ft
- w5 1km
- w5low to mod
- w5low to modeb
- w2 1km
- w2 mod to low
- w2modtolow
- w4 1km
- w4 1kmb
- w4modtolow
- w4 mod to lowb
- modtolowall
- w11ltom
- w9modlow
- w3modlow
- w3modtolow

Layers Earth Gallery »

- Primary Database
  - Voyager
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean

Sign in

1 KM Radius from Wetland 2

No relatively undisturbed habitat

Moderate & Low Intensity

Moderate & Low Intensity

High Intensity

High Intensity

Wetland 2

Moderate & Low Intensity

High Intensity

Moderate & Low Intensity

Moderate & Low Intensity

Tour Guide 1990

Google earth

Imagery Date: 6/27/2016 47°33'30.62" N 122°19'14.09" W elev 0 ft eye alt 10121 ft

HTTP 404 Error Message | Water Quality Assessmer | Water Quality Atlas Map

State of Washington [US] | https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?CustomMap=y&RT=0&Layers=23,29&Filters=n,n,n,n

DEPARTMENT OF ECOLOGY State of Washington

Washington State Water Quality Atlas

Home | Add Map Data | Clear Map Data

Legend | Filter Data | Zoom To | Tools

Add or remove map data

Assessed Waters/Sediment

Water

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

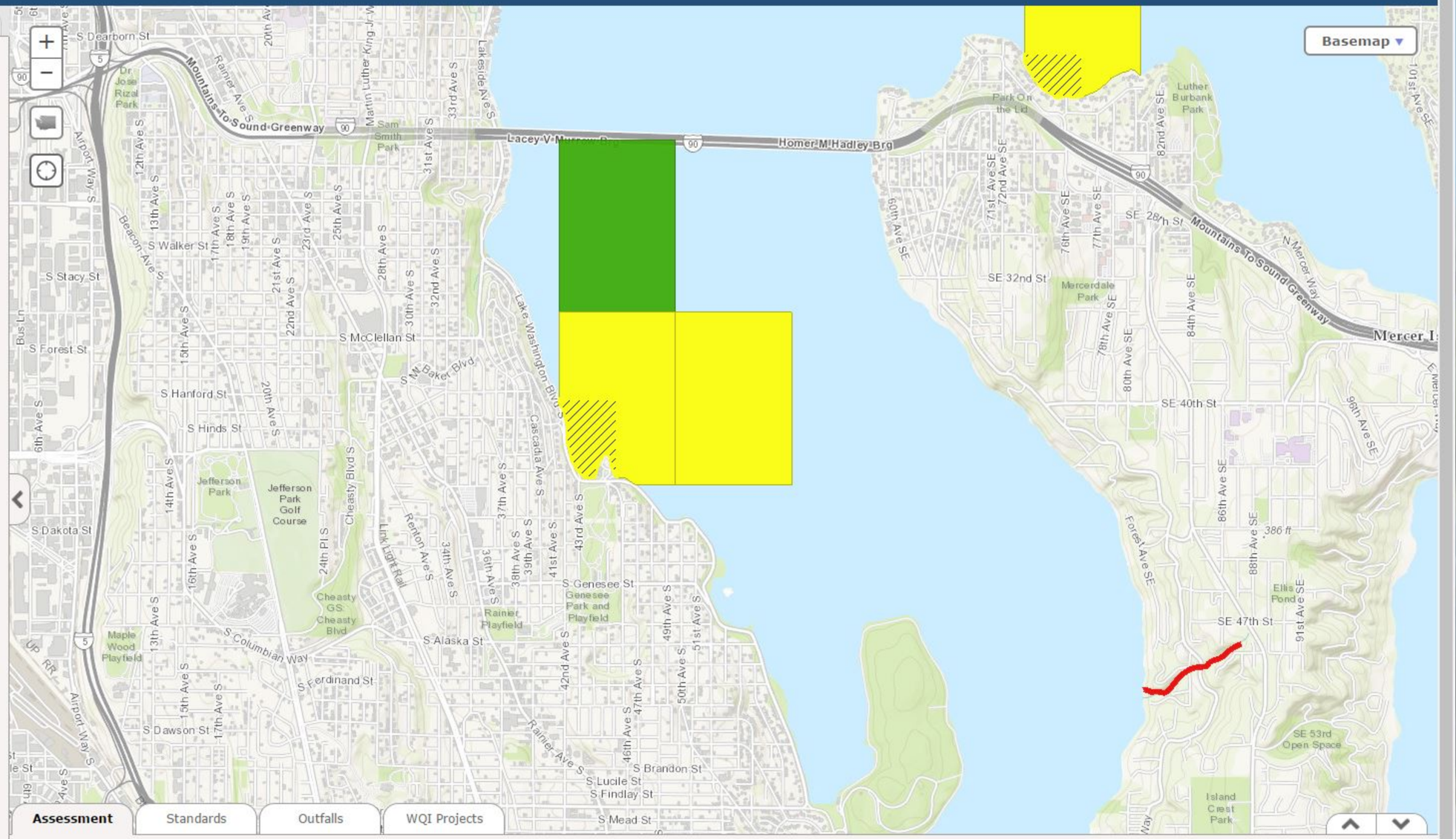
Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Change map data transparency

10%

0 0.2 0.4mi



Assessment | Standards | Outfalls | WQI Projects

Zoom to selection | Export to csv

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details

No filter applied, to view records filter data

Showing 0 to 0 of 0 entries

Previous Next

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
4672	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
4676	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
500005	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500006	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500007	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500038	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
12193	5	WASHINGTON LAKE	Bacteria	Water
12206	5	WASHINGTON LAKE	Bacteria	Water
43482	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
51591	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51592	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51593	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51706	5	WASHINGTON LAKE	4,4'-DDD	Tissue
51767	5	WASHINGTON LAKE	4,4'-DDE	Tissue
52642	5	WASHINGTON LAKE	Mercury	Tissue
52703	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52704	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52705	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52766	5	WASHINGTON LAKE	Total Chlordane	Tissue
52853	5	WASHINGTON LAKE	Total Phosphorus	Water
74460	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74461	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74775	5	WASHINGTON LAKE	Bacteria	Water
76477	5	WASHINGTON LAKE	Dieldrin	Tissue
76478	5	WASHINGTON LAKE	Dieldrin	Tissue
76479	5	WASHINGTON LAKE	Dieldrin	Tissue
77049	5	WASHINGTON LAKE	Chlordane	Tissue
77050	5	WASHINGTON LAKE	Chlordane	Tissue
77064	5	WASHINGTON LAKE	Chlordane	Tissue
500009	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
500010	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
8078	2	WASHINGTON LAKE	Lead	Water
11960	2	WASHINGTON LAKE	Ammonia-N	Water
11963	2	WASHINGTON LAKE	Ammonia-N	Water

Figure 4. TMDL List, Page 1

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
11964	2	WASHINGTON LAKE	Ammonia-N	Water
11970	2	WASHINGTON LAKE	Ammonia-N	Water
12207	2	WASHINGTON LAKE	Bacteria	Water
12264	2	WASHINGTON LAKE	Mercury	Water
12272	2	WASHINGTON LAKE	Mercury	Water
12311	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12312	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12313	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12314	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12315	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12316	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12317	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12318	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
51644	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51645	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51646	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
11972	1	WASHINGTON LAKE	Ammonia-N	Water
11973	1	WASHINGTON LAKE	Ammonia-N	Water
12183	1	WASHINGTON LAKE	Bacteria	Water
12186	1	WASHINGTON LAKE	Bacteria	Water
12189	1	WASHINGTON LAKE	Bacteria	Water
12190	1	WASHINGTON LAKE	Bacteria	Water
12194	1	WASHINGTON LAKE	Bacteria	Water
12195	1	WASHINGTON LAKE	Bacteria	Water
12196	1	WASHINGTON LAKE	Bacteria	Water
12197	1	WASHINGTON LAKE	Bacteria	Water
12200	1	WASHINGTON LAKE	Bacteria	Water
12201	1	WASHINGTON LAKE	Bacteria	Water
12202	1	WASHINGTON LAKE	Bacteria	Water
43481	1	WASHINGTON LAKE	Toxaphene	Tissue
43483	1	WASHINGTON LAKE	Mercury	Tissue
43484	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
43485	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
43486	1	WASHINGTON LAKE	Heptachlor	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
43487	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
43488	1	WASHINGTON LAKE	Endrin	Tissue
43492	1	WASHINGTON LAKE	Beta-BHC	Tissue
43493	1	WASHINGTON LAKE	Alpha-BHC	Tissue
43494	1	WASHINGTON LAKE	4,4'-DDT	Tissue
43495	1	WASHINGTON LAKE	4,4'-DDE	Tissue
43496	1	WASHINGTON LAKE	4,4'-DDD	Tissue
51827	1	WASHINGTON LAKE	4,4'-DDT	Tissue
51949	1	WASHINGTON LAKE	Alpha-BHC	Tissue
52010	1	WASHINGTON LAKE	Beta-BHC	Tissue
52403	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
52464	1	WASHINGTON LAKE	Heptachlor	Tissue
52585	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
52854	1	WASHINGTON LAKE	Total Phosphorus	Water
52855	1	WASHINGTON LAKE	Total Phosphorus	Water
52856	1	WASHINGTON LAKE	Total Phosphorus	Water
52857	1	WASHINGTON LAKE	Total Phosphorus	Water
52858	1	WASHINGTON LAKE	Total Phosphorus	Water
52859	1	WASHINGTON LAKE	Total Phosphorus	Water
52860	1	WASHINGTON LAKE	Total Phosphorus	Water
52861	1	WASHINGTON LAKE	Total Phosphorus	Water
52862	1	WASHINGTON LAKE	Total Phosphorus	Water
52863	1	WASHINGTON LAKE	Total Phosphorus	Water
52864	1	WASHINGTON LAKE	Total Phosphorus	Water
52865	1	WASHINGTON LAKE	Total Phosphorus	Water
74484	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74485	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74772	1	WASHINGTON LAKE	Bacteria	Water
74776	1	WASHINGTON LAKE	Bacteria	Water
75112	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75114	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75221	1	WASHINGTON LAKE	Beta-BHC	Tissue
75222	1	WASHINGTON LAKE	Beta-BHC	Tissue
75309	1	WASHINGTON LAKE	Endrin	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
75310	1	WASHINGTON LAKE	Endrin	Tissue
75311	1	WASHINGTON LAKE	Endrin	Tissue
75400	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75401	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75402	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75403	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75486	1	WASHINGTON LAKE	Heptachlor	Tissue
75487	1	WASHINGTON LAKE	Heptachlor	Tissue
75563	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75564	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75565	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75645	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75646	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75791	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75792	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75793	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75794	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
77219	1	WASHINGTON LAKE	Toxaphene	Tissue
77220	1	WASHINGTON LAKE	Toxaphene	Tissue
77236	1	WASHINGTON LAKE	Toxaphene	Tissue
77243	1	WASHINGTON LAKE	Endosulfan	Tissue
78987	1	WASHINGTON LAKE	Endosulfan	Tissue
78988	1	WASHINGTON LAKE	Endosulfan	Tissue
78989	1	WASHINGTON LAKE	Endosulfan	Tissue
79488	1	WASHINGTON LAKE	Mercury	Tissue
79502	1	WASHINGTON LAKE	Mercury	Tissue

Wetland name or number W3

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 3 Date of site visit: 20-Oct-16

Rated by Claire Hoffman Trained by Ecology? ☑ Yes ☐ No Date of training 2008

HGM Class used for rating Slope Wetland has multiple HGM classes? ☐ Yes ☑ No

NOTE: Form is not complete with out the figures requested (*figures can be combined*).
Source of base aerial photo/map Google earth

OVERALL WETLAND CATEGORY III (based on functions ☑ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

_____ **Category I** - Total score = 23 - 27
_____ **Category II** - Total score = 20 - 22
X **Category III** - Total score = 16 - 19
_____ **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		List appropriate rating (H, M, L)		
Site Potential	L	M	M	
Landscape Potential	L	L	L	
Value	H	H	M	**Total**
Score Based on Ratings	5	6	5	**16**

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number W3

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	1
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	1
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to another figure*)	S 4.1	1
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	4

HGM Classification of Wetland in Western Washington

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

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

☑ NO - go to 2 ☐ **YES** - the wetland class is **Tidal Fringe** - go to 1.1

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

☐ **NO - Saltwater Tidal Fringe (Estuarine)** ☐ **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

☑ NO - go to 3 ☐ **YES** - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

☑ NO - go to 4 ☐ **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.**

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

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
- ☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ☐ The overbank flooding occurs at least once every 2 years.

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

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

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

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

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

☐ NO - go to 8 ☐ **YES** - The wetland class is **Depressional**

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

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

HGM classes within the wetland unit 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 of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

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

SLOPE WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (*a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance*) Slope is 1% or less — points = 3 Slope is > 1% - 2% — points = 2 Slope is > 2% - 5% — points = 1 Slope is greater than 5% — points = 0	0
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. *Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.* Dense, uncut, herbaceous plants > 90% of the wetland area — points = 6 Dense, uncut, herbaceous plants > ½ of area — points = 3 Dense, woody, plants > ½ of area — points = 2 Dense, uncut, herbaceous plants > ¼ of area — points = 1 Does not meet any of the criteria above for plants — points = 0	2
Total for S 1 — Add the points in the boxes above	**2**

Rating of Site Potential If score is: ☐ **12 = H** ☐ **6 - 11 = M** ☑ **0 - 5 = L** *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Yes = 1 No = 0	0
Total for S 2 — Add the points in the boxes above	**0**

Rating of Landscape Potential If score is: ☐ **1 - 2 = M** ☑ **0 = L** *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *At least one aquatic resource in the basin is on the 303(d) list.* Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? A*nswer YES if there is a TMDL for the basin in which the unit is found*? Yes = 2 No = 0	2
Total for S 3 — Add the points in the boxes above	**3**

Rating of Value If score is: ☑ **2 - 4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W3

SLOPE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion

S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits 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** plants cover > 90% of the area of the wetland — points = 1 All other conditions — points = 0	1

Rating of Site Potential If score is: ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

S 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	0

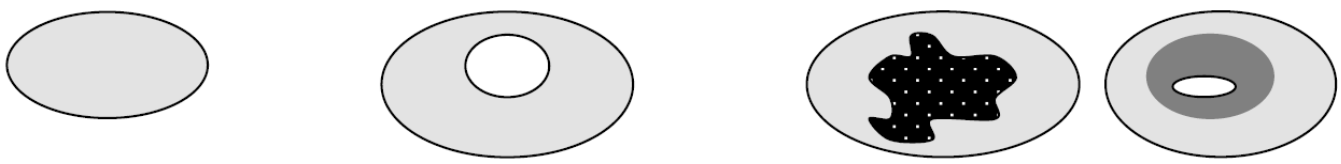
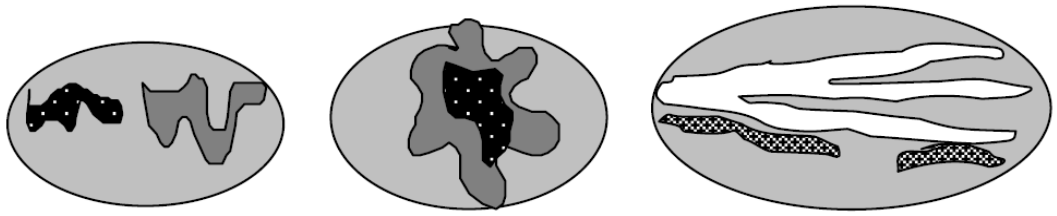
Rating of Landscape Potential If score is: ☐ **1 = M** ☑ **0 = L** *Record the rating on the first page*

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) — points = 2 Surface flooding problems are in a sub-basin farther down-gradient — points = 1 No flooding problems anywhere downstream — points = 0	2
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	
Total for S 6 — Add the points in the boxes above	**2**

Rating of Value If score is: ☑ **2 - 4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:
observed wetland continues into/around house immediately outside of park property. House may have water issus.

Wetland name or number W3

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

Wetland name or number W3

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☑ Standing snags (dbh > 4 in) within the wetland ☑ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (*cut shrubs or trees that have not yet weathered where wood is exposed*) ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by amphibians*) ☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	2
Total for H 1 Add the points in the boxes above	**7**

Rating of Site Potential If Score is: ☐ **15 - 18 = H** ☑ **7 - 14 = M** ☐ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 0 % undisturbed habitat + (10 % moderate & low intensity land uses / 2) = 5% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* 0 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 10% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	**-1**

Rating of Landscape Potential If Score is: ☐ **4 - 6 = H** ☐ **1 - 3 = M** ☑ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated* . Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	1

Rating of Value If Score is: ☐ **2 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.
http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here:
http://wdfw.wa.gov/conservation/phs/list/

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

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

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

Wetland name or number W3

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

SC 4.0. Forested Wetlands

Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.***

☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.

☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).

☐ Yes = **Category I** ☑ No = **Not a forested wetland for this section**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks

☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☑ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

☐ Long Beach Peninsula: Lands west of SR 103

☐ Grayland-Westport: Lands west of SR 105

☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☑ No = **Not an interdunal wetland for rating**

SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?

☐ Yes = **Category I** ☐ No - Go to **SC 6.2**

SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?

☐ Yes = **Category II** ☐ No - Go to **SC 6.3**

SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?

☐ Yes = **Category III** ☐ No = **Category IV**

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form

Google Earth Pro

File Edit View Tools Add Help

Sign in

▼ Search

Search

ex: 94043

Get Directions History

▼ Places

- accessable habitat1
- accessable habitat2
- ponding1
- Temporary Places
  - ponding1
  - ponding2
  - Scrub shrub
  - 150 feet
  - 150ft2
  - 150ft 3
  - outlet
  - 150ft4
  - Earth Point Topo Map
    - USGS Quadrangles
- surveyed_wl_merge
  - surveyed_watercource_merge
  - surveyed_wl_merge
    - highpoint
- contributing basin
- surveyed_wl_merge
- forested
- 150ft
- 150feet

▼ Layers

Earth Gallery »

- Primary Database
  - Voyager
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean
  - Weather
  - Gallery
  - Global Awareness
  - More
  - Terrain

Wetland 4

Scrub-shrub

150 feet

Wetland 3

Scrub-shrub

Forested

Scrub-shrub

150 feet

Google earth

Tour Guide 1990

47°33'42.71" N 122°17'53.94" W elev 0 ft eye alt 786 ft

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: 94043

Get Directions History

Places

- 150ft 3
- outlet
- 150ft4
- Earth Point Topo Map
  USGS Quadrangles
- surveyed_wl_merge
  - surveyed_watercourse_merge
  - surveyed_wl_merge
    - highpoint
- contributing basin
- surveyed_wl_merge
- forested
- 150ft
- 1km W3
- moderate & low intensity land use
- moderate to low
- moderate to low
- 1km w9
- moderate low w9
- 150ftw9
- W11 1km
- w11 mod to low
- w11mod to low
- mod to low w11
- w5 150ft
- w5 1km
- w5low to mod
- w5low to modeb
- w2 1km
- w2 mod to low
- w2modtolow
- w4 1km
- w4 1kmb
- w4modtolow
- w4 mod to lowb
- modtolowall
- w11ltom
- w9modlow
- w3modlow
- w3modtolow

Layers Earth Gallery »

- Primary Database
  - Voyager
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean

Sign in

1KM Radius from Wetland 3

No relatively undisturbed habitat

Moderate & Low Intensity

Moderate & Low Intensity

High Intensity

High Intensity

Wetland 3

Moderate & Low Intensity

Moderate & Low Intensity

High Intensity

Moderate & Low Intensity

Tour Guide 1990

Google earth

Imagery Date: 6/27/2016 47°33'35.28" N 122°18'30.56" W elev 0 ft eye alt 10121 ft

HTTP 404 Error Message | Water Quality Assessmer | Water Quality Atlas Map

State of Washington [US] | https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?CustomMap=y&RT=0&Layers=23,29&Filters=n,n,n,n

DEPARTMENT OF ECOLOGY State of Washington

Washington State Water Quality Atlas

Home | Add Map Data | Clear Map Data

Legend | Filter Data | Zoom To | Tools

Add or remove map data

Assessed Waters/Sediment

Water

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

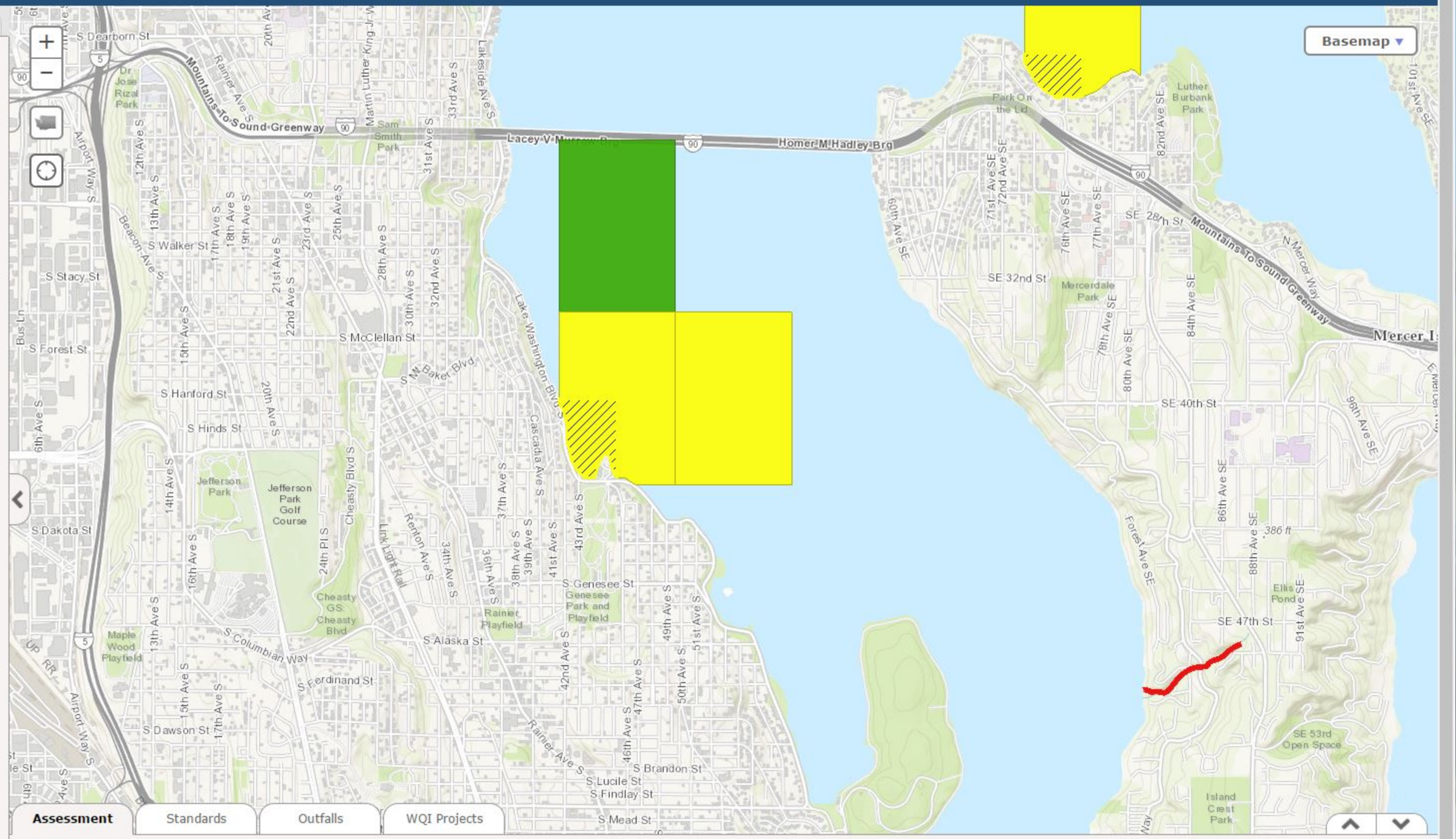
Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Change map data transparency

10%

0 0.2 0.4mi



Assessment | Standards | Outfalls | WQI Projects

Zoom to selection | Export to csv

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details

No filter applied, to view records filter data

Showing 0 to 0 of 0 entries

Previous Next

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
4672	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
4676	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
500005	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500006	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500007	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500038	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
12193	5	WASHINGTON LAKE	Bacteria	Water
12206	5	WASHINGTON LAKE	Bacteria	Water
43482	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
51591	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51592	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51593	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51706	5	WASHINGTON LAKE	4,4'-DDD	Tissue
51767	5	WASHINGTON LAKE	4,4'-DDE	Tissue
52642	5	WASHINGTON LAKE	Mercury	Tissue
52703	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52704	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52705	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52766	5	WASHINGTON LAKE	Total Chlordane	Tissue
52853	5	WASHINGTON LAKE	Total Phosphorus	Water
74460	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74461	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74775	5	WASHINGTON LAKE	Bacteria	Water
76477	5	WASHINGTON LAKE	Dieldrin	Tissue
76478	5	WASHINGTON LAKE	Dieldrin	Tissue
76479	5	WASHINGTON LAKE	Dieldrin	Tissue
77049	5	WASHINGTON LAKE	Chlordane	Tissue
77050	5	WASHINGTON LAKE	Chlordane	Tissue
77064	5	WASHINGTON LAKE	Chlordane	Tissue
500009	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
500010	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
8078	2	WASHINGTON LAKE	Lead	Water
11960	2	WASHINGTON LAKE	Ammonia-N	Water
11963	2	WASHINGTON LAKE	Ammonia-N	Water

Figure 4. TMDL List, Page 1

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
11964	2	WASHINGTON LAKE	Ammonia-N	Water
11970	2	WASHINGTON LAKE	Ammonia-N	Water
12207	2	WASHINGTON LAKE	Bacteria	Water
12264	2	WASHINGTON LAKE	Mercury	Water
12272	2	WASHINGTON LAKE	Mercury	Water
12311	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12312	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12313	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12314	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12315	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12316	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12317	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12318	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
51644	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51645	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51646	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
11972	1	WASHINGTON LAKE	Ammonia-N	Water
11973	1	WASHINGTON LAKE	Ammonia-N	Water
12183	1	WASHINGTON LAKE	Bacteria	Water
12186	1	WASHINGTON LAKE	Bacteria	Water
12189	1	WASHINGTON LAKE	Bacteria	Water
12190	1	WASHINGTON LAKE	Bacteria	Water
12194	1	WASHINGTON LAKE	Bacteria	Water
12195	1	WASHINGTON LAKE	Bacteria	Water
12196	1	WASHINGTON LAKE	Bacteria	Water
12197	1	WASHINGTON LAKE	Bacteria	Water
12200	1	WASHINGTON LAKE	Bacteria	Water
12201	1	WASHINGTON LAKE	Bacteria	Water
12202	1	WASHINGTON LAKE	Bacteria	Water
43481	1	WASHINGTON LAKE	Toxaphene	Tissue
43483	1	WASHINGTON LAKE	Mercury	Tissue
43484	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
43485	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
43486	1	WASHINGTON LAKE	Heptachlor	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
43487	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
43488	1	WASHINGTON LAKE	Endrin	Tissue
43492	1	WASHINGTON LAKE	Beta-BHC	Tissue
43493	1	WASHINGTON LAKE	Alpha-BHC	Tissue
43494	1	WASHINGTON LAKE	4,4'-DDT	Tissue
43495	1	WASHINGTON LAKE	4,4'-DDE	Tissue
43496	1	WASHINGTON LAKE	4,4'-DDD	Tissue
51827	1	WASHINGTON LAKE	4,4'-DDT	Tissue
51949	1	WASHINGTON LAKE	Alpha-BHC	Tissue
52010	1	WASHINGTON LAKE	Beta-BHC	Tissue
52403	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
52464	1	WASHINGTON LAKE	Heptachlor	Tissue
52585	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
52854	1	WASHINGTON LAKE	Total Phosphorus	Water
52855	1	WASHINGTON LAKE	Total Phosphorus	Water
52856	1	WASHINGTON LAKE	Total Phosphorus	Water
52857	1	WASHINGTON LAKE	Total Phosphorus	Water
52858	1	WASHINGTON LAKE	Total Phosphorus	Water
52859	1	WASHINGTON LAKE	Total Phosphorus	Water
52860	1	WASHINGTON LAKE	Total Phosphorus	Water
52861	1	WASHINGTON LAKE	Total Phosphorus	Water
52862	1	WASHINGTON LAKE	Total Phosphorus	Water
52863	1	WASHINGTON LAKE	Total Phosphorus	Water
52864	1	WASHINGTON LAKE	Total Phosphorus	Water
52865	1	WASHINGTON LAKE	Total Phosphorus	Water
74484	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74485	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74772	1	WASHINGTON LAKE	Bacteria	Water
74776	1	WASHINGTON LAKE	Bacteria	Water
75112	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75114	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75221	1	WASHINGTON LAKE	Beta-BHC	Tissue
75222	1	WASHINGTON LAKE	Beta-BHC	Tissue
75309	1	WASHINGTON LAKE	Endrin	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
75310	1	WASHINGTON LAKE	Endrin	Tissue
75311	1	WASHINGTON LAKE	Endrin	Tissue
75400	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75401	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75402	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75403	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75486	1	WASHINGTON LAKE	Heptachlor	Tissue
75487	1	WASHINGTON LAKE	Heptachlor	Tissue
75563	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75564	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75565	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75645	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75646	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75791	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75792	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75793	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75794	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
77219	1	WASHINGTON LAKE	Toxaphene	Tissue
77220	1	WASHINGTON LAKE	Toxaphene	Tissue
77236	1	WASHINGTON LAKE	Toxaphene	Tissue
77243	1	WASHINGTON LAKE	Endosulfan	Tissue
78987	1	WASHINGTON LAKE	Endosulfan	Tissue
78988	1	WASHINGTON LAKE	Endosulfan	Tissue
78989	1	WASHINGTON LAKE	Endosulfan	Tissue
79488	1	WASHINGTON LAKE	Mercury	Tissue
79502	1	WASHINGTON LAKE	Mercury	Tissue

Wetland name or number W4

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 4 Date of site visit: 20-Oct-16

Rated by Claire Hoffman Trained by Ecology? ☑ Yes ☐ No Date of training 2008

HGM Class used for rating Depressional & Slope Wetland has multiple HGM classes? ☑ Yes ☐ No

NOTE: Form is not complete with out the figures requested (*figures can be combined*).
Source of base aerial photo/map Google earth

OVERALL WETLAND CATEGORY III (based on functions ☑ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

_____ **Category I** - Total score = 23 - 27
_____ **Category II** - Total score = 20 - 22
X **Category III** - Total score = 16 - 19
_____ **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		List appropriate rating (H, M, L)		
Site Potential	M	M	M	
Landscape Potential	H	H	L	
Value	H	L	M	**Total**
Score Based on Ratings	8	6	5	**19**

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number W4

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	1
Hydroperiods	D 1.4, H 1.2	1
Location of outlet (*can be added to map of hydroperiods*)	D 1.1, D 4.1	1
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	D 2.2, D 5.2	1
Map of the contributing basin	D 4.3, D 5.3	2
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	5
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	4

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

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

Wetland name or number W4

HGM Classification of Wetland in Western Washington

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

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

☑ NO - go to 2 ☐ **YES** - the wetland class is **Tidal Fringe** - go to 1.1

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

☑ **NO - Saltwater Tidal Fringe (Estuarine)** ☐ **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

☑ NO - go to 3 ☐ **YES** - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

☑ NO - go to 4 ☐ **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.**

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

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
- ☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ☐ The overbank flooding occurs at least once every 2 years.

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

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

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

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

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

☑ NO - go to 8 ☐ **YES** - The wetland class is **Depressional**

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

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

HGM classes within the wetland unit 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 of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

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

NOTES and FIELD OBSERVATIONS:
Wetland is depressional and slope. Wetland is on a slope and water flows to the east into a culvert (outlet). There are also areas of ponding.

Wetland name or number W4

DEPRESSIONAL AND FLATS WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 ☑ Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 ☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	1
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	0
Total for D 1 Add the points in the boxes above	**6**

Rating of Site Potential If score is: ☐ **12 - 16 = H** ☑ **6 - 11 = M** ☐ **0 - 5 = L** *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3? Source golf course; adjacent human disturbance & restoration Yes = 1 No = 0	1
Total for D 2 Add the points in the boxes above	**3**

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

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the basin in which the unit is found*)? Yes = 2 No = 0	2
Total for D 3 Add the points in the boxes above	**3**

Rating of Value If score is: ☑ **2 - 4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W4

DEPRESSIONAL AND FLATS WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	0
D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.* Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 ☐ Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 ☑ The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	5
D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* ☑ The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 ☐ Entire wetland is in the Flats class points = 5	5
Total for D 4 — Add the points in the boxes above	**10**

Rating of Site Potential If score is: ☐ **12 - 16 = H** ☑ **6 - 11 = M** ☐ **0 - 5 = L** *Record the rating on the first page*

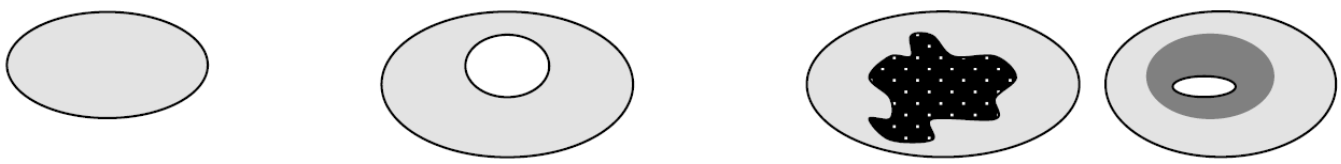
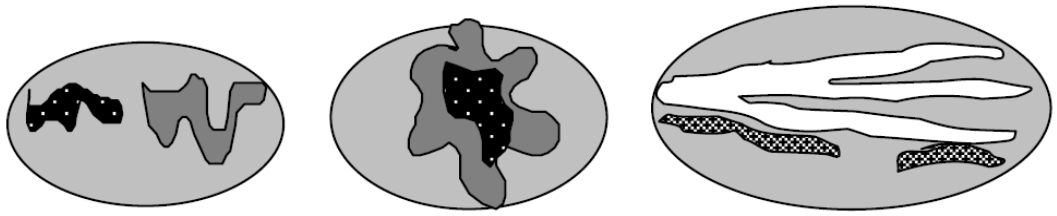
D 5.0. Does the landscape have the potential to support hydrologic function of the site?	
D 5.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	1
D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	1
Total for D 5 — Add the points in the boxes above	**3**

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

D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. The unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.* The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): ● Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2 ☑ ● Surface flooding problems are in a sub-basin farther down-gradient. points = 1 ☐ Flooding from groundwater is an issue in the sub-basin. points = 1 ☐ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why points = 0 ☑ There are no problems with flooding downstream of the wetland. points = 0	1
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for D 6 — Add the points in the boxes above	**1**

Rating of Value If score is: ☐ **2 - 4 = H** ☐ **1 = M** ☑ **0 = L** *Record the rating on the first page*

Wetland name or number W4

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

Wetland name or number W4

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☑ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☑ Standing snags (dbh > 4 in) within the wetland ☑ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (*cut shrubs or trees that have not yet weathered where wood is exposed*) ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by amphibians*) ☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	3
Total for H 1 Add the points in the boxes above	**11**

Rating of Site Potential If Score is: ☐ **15 - 18 = H** ☑ **7 - 14 = M** ☐ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 0 % undisturbed habitat + (10 % moderate & low intensity land uses / 2) = 5% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* 0 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 10% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	**-1**

Rating of Landscape Potential If Score is: ☐ **4 - 6 = H** ☐ **1 - 3 = M** ☑ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated* . Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	1

Rating of Value If Score is: ☐ **2 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W4

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.
http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here:
http://wdfw.wa.gov/conservation/phs/list/

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

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

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

Wetland name or number W4

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

SC 4.0. Forested Wetlands

Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.***

☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.

☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).

☐ Yes = **Category I** ☑ No = **Not a forested wetland for this section**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks

☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☑ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

☐ Long Beach Peninsula: Lands west of SR 103

☐ Grayland-Westport: Lands west of SR 105

☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☑ No = **Not an interdunal wetland for rating**

SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?

☐ Yes = **Category I** ☐ No - Go to **SC 6.2**

SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?

☐ Yes = **Category II** ☐ No - Go to **SC 6.3**

SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?

☐ Yes = **Category III** ☐ No = **Category IV**

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form

Google Earth Pro

File Edit View Tools Add Help

Sign in

▼ Search

Search

ex: 94043

Get Directions History

▼ Places

- Landuse Frontages
- Adjacent Parcel Study Area
- Phase2Parcels
- Layers
- Layers
- Wetlands
- wtrcrs
- P2_StudyArea2
- twc_ee_veg_impact_results_20160914
- surveyed_wl_merge
- surveyed_watercourse_merge
- 1km east
- 1km west
- accessable habitat1
- accessable habitat2
- ponding1
- Temporary Places
  - ponding1
  - ponding2
  - Scrub shrub
  - 150 feet
  - 150ft2
  - 150ft 3
  - outlet
  - 150ft4

▼ Layers Earth Gallery »

- Primary Database

150 feet

150 feet

Wetland 5

Wetland 11

Seasonally inundated

Wetland 4

Forested

Forested

Scrub-shrub

Seasonally inundated

Seasonally flowing stream

outlet

150 feet

Cheasty Blvd S

150 feet

Wetland 3

S Nevada St

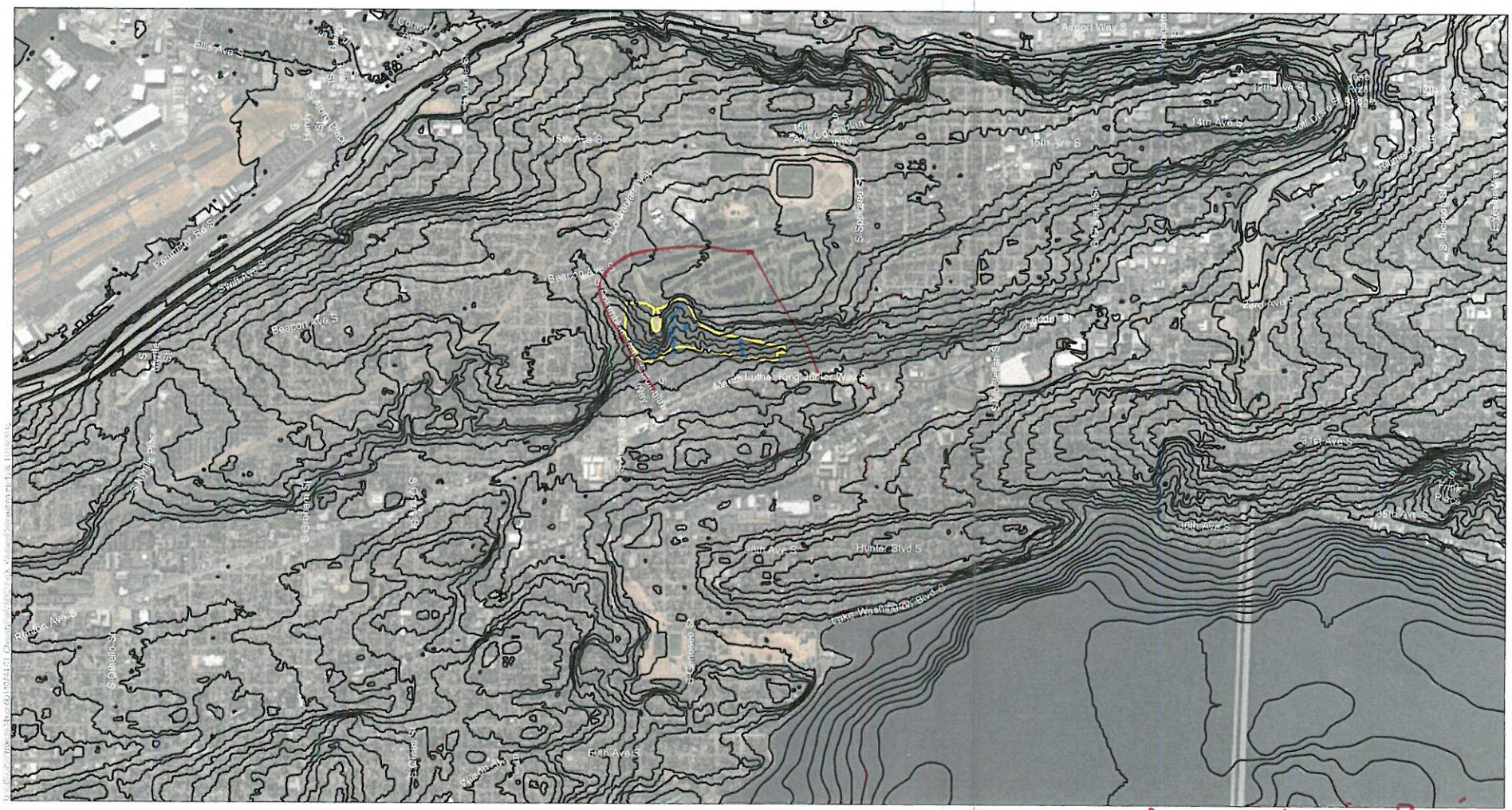
28th Ave S

© 2016 Google

Google earth

Tour Guide 1990

47°33'48.07" N 122°18'06.18" W elev 278 ft eye alt 1243 ft



SOURCE: ESA 2013 (aerial), ESA 2016, OSM 2014

Cheasty Trail Environmental Review. 140744.01

Figure 2

Wetland Delineation

HTTP 404 Error Message | Water Quality Assessmer | Water Quality Atlas Map

State of Washington [US] | https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?CustomMap=y&RT=0&Layers=23,29&Filters=n,n,n,n

DEPARTMENT OF ECOLOGY State of Washington

Washington State Water Quality Atlas

Home | Add Map Data | Clear Map Data

Legend | Filter Data | Zoom To | Tools

Add or remove map data

Assessed Waters/Sediment

Water

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

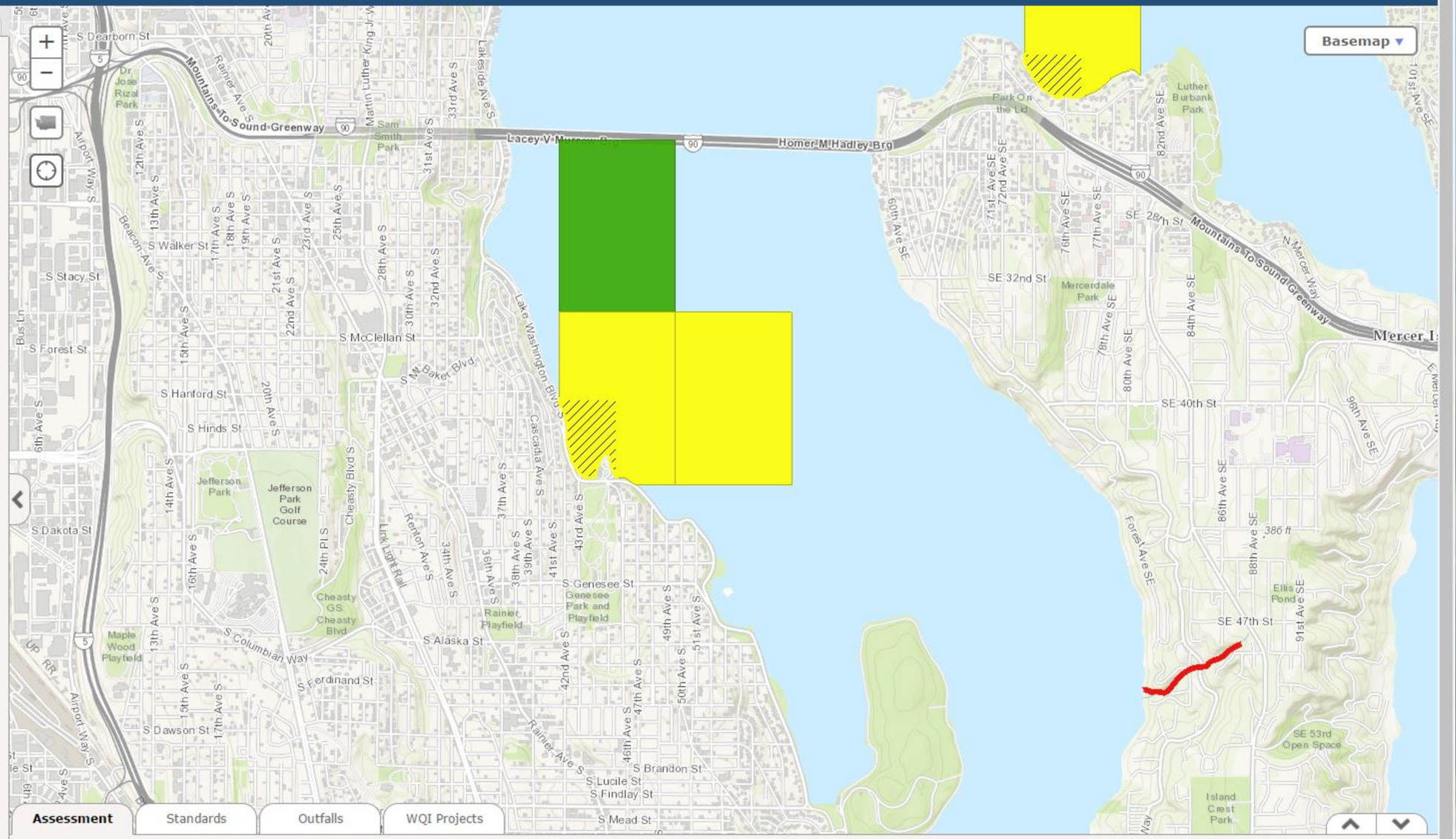
Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Change map data transparency

10%

0 0.2 0.4mi



Assessment | Standards | Outfalls | WQI Projects

Zoom to selection | Export to csv

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details

No filter applied, to view records filter data

Showing 0 to 0 of 0 entries

Previous Next

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
4672	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
4676	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
500005	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500006	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500007	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500038	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
12193	5	WASHINGTON LAKE	Bacteria	Water
12206	5	WASHINGTON LAKE	Bacteria	Water
43482	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
51591	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51592	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51593	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51706	5	WASHINGTON LAKE	4,4'-DDD	Tissue
51767	5	WASHINGTON LAKE	4,4'-DDE	Tissue
52642	5	WASHINGTON LAKE	Mercury	Tissue
52703	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52704	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52705	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52766	5	WASHINGTON LAKE	Total Chlordane	Tissue
52853	5	WASHINGTON LAKE	Total Phosphorus	Water
74460	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74461	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74775	5	WASHINGTON LAKE	Bacteria	Water
76477	5	WASHINGTON LAKE	Dieldrin	Tissue
76478	5	WASHINGTON LAKE	Dieldrin	Tissue
76479	5	WASHINGTON LAKE	Dieldrin	Tissue
77049	5	WASHINGTON LAKE	Chlordane	Tissue
77050	5	WASHINGTON LAKE	Chlordane	Tissue
77064	5	WASHINGTON LAKE	Chlordane	Tissue
500009	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
500010	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
8078	2	WASHINGTON LAKE	Lead	Water
11960	2	WASHINGTON LAKE	Ammonia-N	Water
11963	2	WASHINGTON LAKE	Ammonia-N	Water

Figure 4. TMDL List, Page 1

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
11964	2	WASHINGTON LAKE	Ammonia-N	Water
11970	2	WASHINGTON LAKE	Ammonia-N	Water
12207	2	WASHINGTON LAKE	Bacteria	Water
12264	2	WASHINGTON LAKE	Mercury	Water
12272	2	WASHINGTON LAKE	Mercury	Water
12311	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12312	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12313	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12314	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12315	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12316	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12317	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12318	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
51644	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51645	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51646	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
11972	1	WASHINGTON LAKE	Ammonia-N	Water
11973	1	WASHINGTON LAKE	Ammonia-N	Water
12183	1	WASHINGTON LAKE	Bacteria	Water
12186	1	WASHINGTON LAKE	Bacteria	Water
12189	1	WASHINGTON LAKE	Bacteria	Water
12190	1	WASHINGTON LAKE	Bacteria	Water
12194	1	WASHINGTON LAKE	Bacteria	Water
12195	1	WASHINGTON LAKE	Bacteria	Water
12196	1	WASHINGTON LAKE	Bacteria	Water
12197	1	WASHINGTON LAKE	Bacteria	Water
12200	1	WASHINGTON LAKE	Bacteria	Water
12201	1	WASHINGTON LAKE	Bacteria	Water
12202	1	WASHINGTON LAKE	Bacteria	Water
43481	1	WASHINGTON LAKE	Toxaphene	Tissue
43483	1	WASHINGTON LAKE	Mercury	Tissue
43484	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
43485	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
43486	1	WASHINGTON LAKE	Heptachlor	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
43487	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
43488	1	WASHINGTON LAKE	Endrin	Tissue
43492	1	WASHINGTON LAKE	Beta-BHC	Tissue
43493	1	WASHINGTON LAKE	Alpha-BHC	Tissue
43494	1	WASHINGTON LAKE	4,4'-DDT	Tissue
43495	1	WASHINGTON LAKE	4,4'-DDE	Tissue
43496	1	WASHINGTON LAKE	4,4'-DDD	Tissue
51827	1	WASHINGTON LAKE	4,4'-DDT	Tissue
51949	1	WASHINGTON LAKE	Alpha-BHC	Tissue
52010	1	WASHINGTON LAKE	Beta-BHC	Tissue
52403	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
52464	1	WASHINGTON LAKE	Heptachlor	Tissue
52585	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
52854	1	WASHINGTON LAKE	Total Phosphorus	Water
52855	1	WASHINGTON LAKE	Total Phosphorus	Water
52856	1	WASHINGTON LAKE	Total Phosphorus	Water
52857	1	WASHINGTON LAKE	Total Phosphorus	Water
52858	1	WASHINGTON LAKE	Total Phosphorus	Water
52859	1	WASHINGTON LAKE	Total Phosphorus	Water
52860	1	WASHINGTON LAKE	Total Phosphorus	Water
52861	1	WASHINGTON LAKE	Total Phosphorus	Water
52862	1	WASHINGTON LAKE	Total Phosphorus	Water
52863	1	WASHINGTON LAKE	Total Phosphorus	Water
52864	1	WASHINGTON LAKE	Total Phosphorus	Water
52865	1	WASHINGTON LAKE	Total Phosphorus	Water
74484	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74485	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74772	1	WASHINGTON LAKE	Bacteria	Water
74776	1	WASHINGTON LAKE	Bacteria	Water
75112	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75114	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75221	1	WASHINGTON LAKE	Beta-BHC	Tissue
75222	1	WASHINGTON LAKE	Beta-BHC	Tissue
75309	1	WASHINGTON LAKE	Endrin	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
75310	1	WASHINGTON LAKE	Endrin	Tissue
75311	1	WASHINGTON LAKE	Endrin	Tissue
75400	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75401	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75402	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75403	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75486	1	WASHINGTON LAKE	Heptachlor	Tissue
75487	1	WASHINGTON LAKE	Heptachlor	Tissue
75563	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75564	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75565	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75645	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75646	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75791	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75792	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75793	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75794	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
77219	1	WASHINGTON LAKE	Toxaphene	Tissue
77220	1	WASHINGTON LAKE	Toxaphene	Tissue
77236	1	WASHINGTON LAKE	Toxaphene	Tissue
77243	1	WASHINGTON LAKE	Endosulfan	Tissue
78987	1	WASHINGTON LAKE	Endosulfan	Tissue
78988	1	WASHINGTON LAKE	Endosulfan	Tissue
78989	1	WASHINGTON LAKE	Endosulfan	Tissue
79488	1	WASHINGTON LAKE	Mercury	Tissue
79502	1	WASHINGTON LAKE	Mercury	Tissue

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: 94043

Get Directions History

Places

- forested
- 150ft
- 1km W3
- moderate & low intensity land use
- moderate to low
- moderate to low
- 1km w9
- moderate low w9
- 150ftw9
- W11 1km
- w11 mod to low
- w11mod to low
- mod to low w11
- w5 150ft
- w5 1km
- w5low to mod
- w5low to modeb
- w2 1km
- w2 mod to low
- w2modtolow
- w4 1km
- w4 1kmb
- w4modtolow
- w4 mod to lowb
- modtolowall

Layers

Earth Gallery »

- Primary Database
  - Voyager
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean
  - Weather
  - Gallery
  - Global Awareness
  - More
- Terrain

Sign in

1KM Radius for Wetland 4

No relatively undisturbed habitat

Moderate & Low Intensity

High Intensity

Moderate & Low Intensity

High Intensity

Wetland 4

Moderate & Low Intensity

Moderate & Low Intensity

High Intensity

Google earth

Tour Guide 1990

Imagery Date: 6/27/2016 47°33'41.62" N 122°18'38.70" W elev 0 ft eye alt 10092 ft

Wetland name or number W5

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 5 Date of site visit: 20-Oct-16

Rated by Claire Hoffman Trained by Ecology? ☑ Yes ☐ No Date of training 2008

HGM Class used for rating Slope Wetland has multiple HGM classes? ☐ Yes ☑ No

NOTE: Form is not complete with out the figures requested (*figures can be combined*).
Source of base aerial photo/map Google Earth

OVERALL WETLAND CATEGORY IV (based on functions ☑ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

_____ **Category I** - Total score = 23 - 27
_____ **Category II** - Total score = 20 - 22
_____ **Category III** - Total score = 16 - 19
X **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		List appropriate rating (H, M, L)		
Site Potential	L	M	L	
Landscape Potential	L	L	L	
Value	H	M	M	**Total**
Score Based on Ratings	5	5	4	**14**

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number W5

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	1
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	1
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to another figure*)	S 4.1	1
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	4

Wetland name or number W5

HGM Classification of Wetland in Western Washington

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

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

☑ NO - go to 2 ☐ **YES** - the wetland class is **Tidal Fringe** - go to 1.1

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

☐ **NO - Saltwater Tidal Fringe (Estuarine)** ☐ **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

☑ NO - go to 3 ☐ **YES** - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

☑ NO - go to 4 ☐ **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.**

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

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
- ☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ☐ The overbank flooding occurs at least once every 2 years.

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

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

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

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

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

☐ NO - go to 8 ☐ **YES** - The wetland class is **Depressional**

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

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

HGM classes within the wetland unit 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 of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

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

Wetland name or number W5

SLOPE WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (*a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance*) Slope is 1% or less — points = 3 Slope is > 1% - 2% — points = 2 Slope is > 2% - 5% — points = 1 Slope is greater than 5% — points = 0	0
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. *Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.* Dense, uncut, herbaceous plants > 90% of the wetland area — points = 6 Dense, uncut, herbaceous plants > ½ of area — points = 3 Dense, woody, plants > ½ of area — points = 2 Dense, uncut, herbaceous plants > ¼ of area — points = 1 Does not meet any of the criteria above for plants — points = 0	2
Total for S 1 — Add the points in the boxes above	**2**

Rating of Site Potential If score is: ☐ **12 = H** ☐ **6 - 11 = M** ☑ **0 - 5 = L** *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Yes = 1 No = 0	0
Total for S 2 — Add the points in the boxes above	**0**

Rating of Landscape Potential If score is: ☐ **1 - 2 = M** ☑ **0 = L** *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *At least one aquatic resource in the basin is on the 303(d) list.* Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? A*nswer YES if there is a TMDL for the basin in which the unit is found*? Yes = 2 No = 0	2
Total for S 3 — Add the points in the boxes above	**3**

Rating of Value If score is: ☑ **2 - 4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W5

SLOPE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion

S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits 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** plants cover > 90% of the area of the wetland — points = 1 All other conditions — points = 0	1

Rating of Site Potential If score is: ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

S 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	0

Rating of Landscape Potential If score is: ☐ **1 = M** ☑ **0 = L** *Record the rating on the first page*

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) — points = 2 Surface flooding problems are in a sub-basin farther down-gradient — points = 1 No flooding problems anywhere downstream — points = 0	1
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 Add the points in the boxes above	**1**

Rating of Value If score is: ☐ **2 - 4 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:
Dense uncut rigid plants are blackberries, emergent plants are not dense

Wetland name or number W5

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

☐ Aquatic bed	4 structures or more: points = 4	0
☐ Emergent	3 structures: points = 2	
☑ Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points - 1	
☐ Forested (areas where trees have > 30% cover)	1 structure: points = 0	

If the unit has a Forested class, check if:

☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

☐ Permanently flooded or inundated	4 or more types present: points = 3	0
☐ Seasonally flooded or inundated	3 types present: points = 2	
☐ Occasionally flooded or inundated	2 types present: points = 1	
☑ Saturated only	1 types present: points = 0	
☐ Permanently flowing stream or river in, or adjacent to, the wetland		
☐ Seasonally flowing stream in, or adjacent to, the wetland		
☐ **Lake Fringe wetland**	**2 points**	
☐ **Freshwater tidal wetland**	**2 points**	

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

1

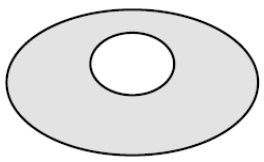
If you counted:	> 19 species	points = 2
	5 - 19 species	points = 1
	< 5 species	points = 0

H 1.4. Interspersion of habitats

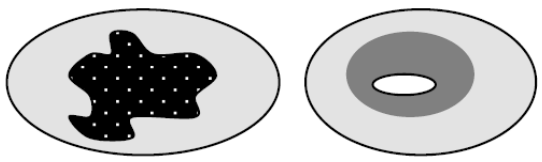
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*

0

None = 0 points

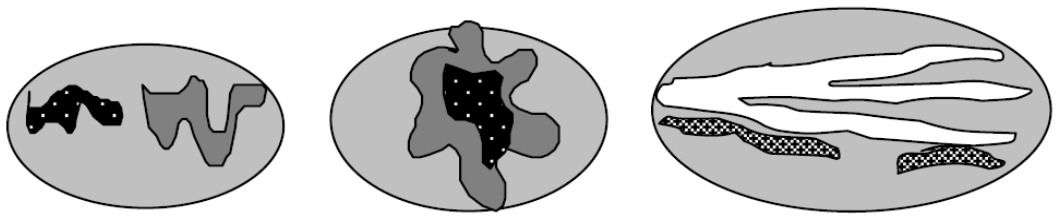


Low = 1 point



Moderate = 2 points

All three diagrams in this row are **HIGH** = 3 points



Wetland name or number W5

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☐ Standing snags (dbh > 4 in) within the wetland ☐ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (*cut shrubs or trees that have not yet weathered where wood is exposed*) ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by amphibians*) ☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	0
Total for H 1 Add the points in the boxes above	**1**

Rating of Site Potential If Score is: ☐ **15 - 18 = H** ☐ **7 - 14 = M** ☑ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 0 % undisturbed habitat + (10 % moderate & low intensity land uses / 2) = 5% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* 0 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 10% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	**-1**

Rating of Landscape Potential If Score is: ☐ **4 - 6 = H** ☐ **1 - 3 = M** ☑ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated* . Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	1

Rating of Value If Score is: ☐ **2 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W5

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.
http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here:
http://wdfw.wa.gov/conservation/phs/list/

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

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

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

Wetland name or number W5

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

SC 4.0. Forested Wetlands

Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.***

☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.

☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).

☐ Yes = **Category I** ☑ No = **Not a forested wetland for this section**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks

☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☐ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

☐ Long Beach Peninsula: Lands west of SR 103

☐ Grayland-Westport: Lands west of SR 105

☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☑ No = **Not an interdunal wetland for rating**

SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?

☐ Yes = **Category I** ☐ No - Go to **SC 6.2**

SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?

☐ Yes = **Category II** ☐ No - Go to **SC 6.3**

SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?

☐ Yes = **Category III** ☐ No = **Category IV**

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: 94043

Get Directions History

Places

- 150ft4
- Earth Point Topo Map
  USGS Quadrangles
- surveyed_wl_merge
  - surveyed_watercource_merge
  - surveyed_wl_merge
    - highpoint
- contributing basin
- surveyed_wl_merge
- forested
- 150ft
- 1km W3
- moderate & low intensity land use
- moderate to low
- moderate to low
- 1km w9
- moderate low w9
- 150ftw9
- W11 1km
- w11 mod to low
- w11mod to low
- mod to low w11
- w5 150ft

Layers Earth Gallery »

- Primary Database
  - Voyager
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean
  - Weather
  - Gallery
  - Global Awareness
  - More
  - Terrain

Sign in

Wetland 6

150 ft

Scrub-shrub
Saturated only

Dense uncut rigid plants (blackberries) over 90% of the wetland

Wetland 5

150 ft

Scrub-shrub
Saturated only

Dense uncut rigid plants (blackberries) over 90% of the wetland

Dense, uncut, woody plants

Wetland 11

150 ft

Seasonally flowing stream (approximate location)

Scrub-shrub
Saturated only

Wetland 11 likely continues to the east of the delineated wetland

Approximate wetland boundary

Google earth

Tour Guide 1990

47°33'51.41" N 122°17'57.79" W elev 0 ft eye alt 1286 ft

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: 94043

Get Directions History

Places

- ponding2
- Scrub shrub
- 150 feet
- 150ft2
- 150ft 3
- outlet
- 150ft4
- Earth Point Topo Map
  USGS Quadrangles
- surveyed_wl_merge
  - surveyed_watercource_merge
  - surveyed_wl_merge
  - highpoint
- contributing basin
- surveyed_wl_merge
- forested
- 150ft
- 1km W3
- moderate & low intensity land use
- moderate to low
- moderate to low
- 1km w9
- moderate low w9
- 150ftw9
- W11 1km
- w11 mod to low
- w11mod to low
- mod to low w11
- w5 150ft
- w5 1km
- w5low to mod
- w5low to modeb
- w2 1km
- w2 mod to low
- w2modtolow
- w4 1km
- w4 1kmb
- w4modtolow
- w4 mod to lowb
- modtolowall

Layers Earth Gallery »

- Primary Database
  - Voyager
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean

Sign in

1KM Radius from Wetland 5

No relatively undisturbed habitat

Moderate & Low Intensity

High Intensity

Moderate & Low Intensity

Wetland 5

High Intensity

Moderate & Low Intensity

Moderate & Low Intensity

Tour Guide 1990

Google earth

Imagery Date: 6/27/2016 47°33'44.64" N 122°18'50.33" W elev 0 ft eye alt 12837 ft

HTTP 404 Error Message | Water Quality Assessmer | Water Quality Atlas Map

State of Washington [US] | https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?CustomMap=y&RT=0&Layers=23,29&Filters=n,n,n,n

DEPARTMENT OF ECOLOGY State of Washington

Washington State Water Quality Atlas

Home | Add Map Data | Clear Map Data

Legend | Filter Data | Zoom To | Tools

Add or remove map data

Assessed Waters/Sediment

Water

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

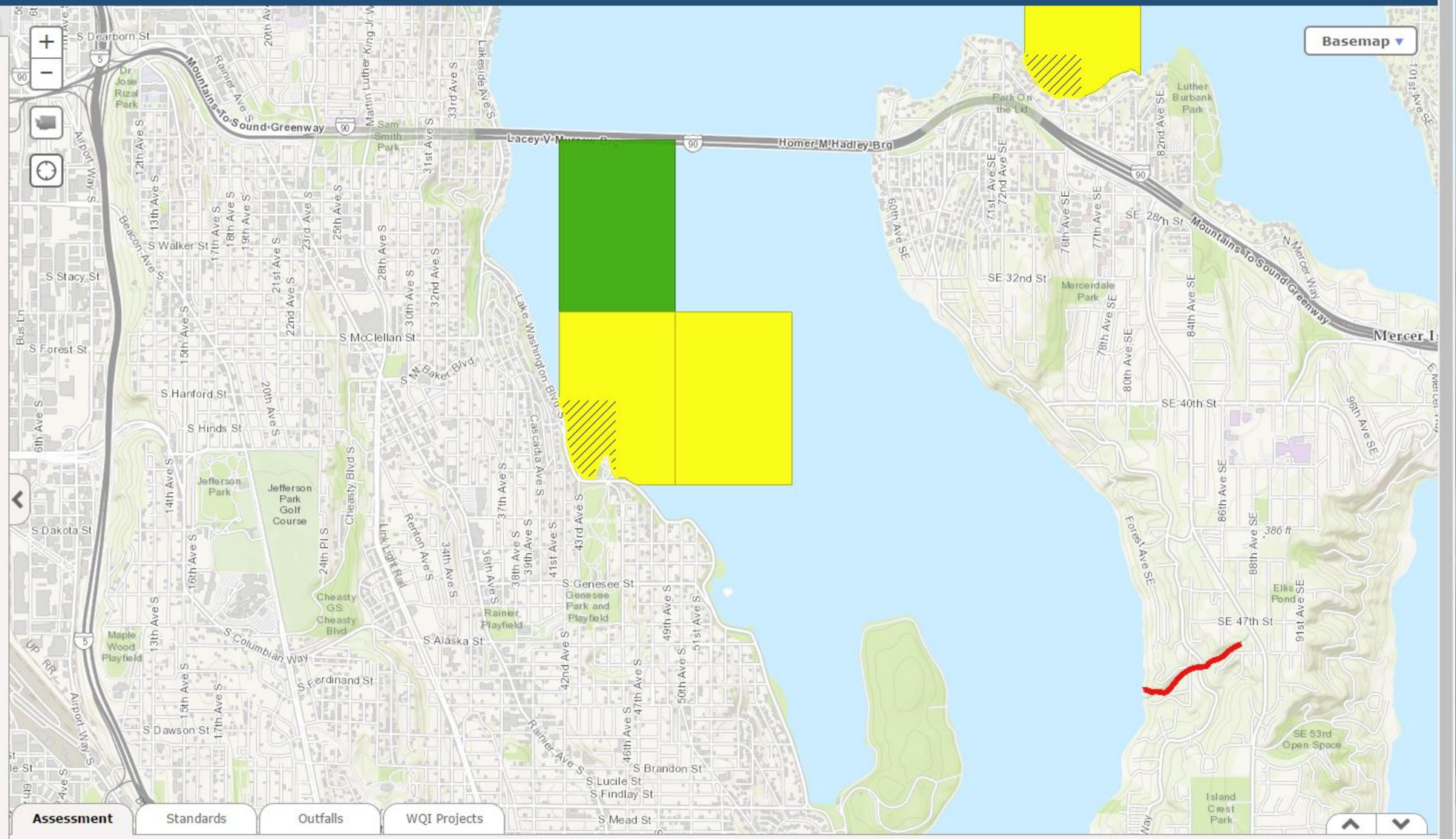
Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Change map data transparency

10%

0 0.2 0.4mi



Assessment | Standards | Outfalls | WQI Projects

Zoom to selection | Export to csv

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details

No filter applied, to view records filter data

Showing 0 to 0 of 0 entries

Previous Next

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
4672	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
4676	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
500005	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500006	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500007	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500038	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
12193	5	WASHINGTON LAKE	Bacteria	Water
12206	5	WASHINGTON LAKE	Bacteria	Water
43482	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
51591	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51592	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51593	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51706	5	WASHINGTON LAKE	4,4'-DDD	Tissue
51767	5	WASHINGTON LAKE	4,4'-DDE	Tissue
52642	5	WASHINGTON LAKE	Mercury	Tissue
52703	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52704	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52705	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52766	5	WASHINGTON LAKE	Total Chlordane	Tissue
52853	5	WASHINGTON LAKE	Total Phosphorus	Water
74460	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74461	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74775	5	WASHINGTON LAKE	Bacteria	Water
76477	5	WASHINGTON LAKE	Dieldrin	Tissue
76478	5	WASHINGTON LAKE	Dieldrin	Tissue
76479	5	WASHINGTON LAKE	Dieldrin	Tissue
77049	5	WASHINGTON LAKE	Chlordane	Tissue
77050	5	WASHINGTON LAKE	Chlordane	Tissue
77064	5	WASHINGTON LAKE	Chlordane	Tissue
500009	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
500010	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
8078	2	WASHINGTON LAKE	Lead	Water
11960	2	WASHINGTON LAKE	Ammonia-N	Water
11963	2	WASHINGTON LAKE	Ammonia-N	Water

Figure 4. TMDL List, Page 1

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
11964	2	WASHINGTON LAKE	Ammonia-N	Water
11970	2	WASHINGTON LAKE	Ammonia-N	Water
12207	2	WASHINGTON LAKE	Bacteria	Water
12264	2	WASHINGTON LAKE	Mercury	Water
12272	2	WASHINGTON LAKE	Mercury	Water
12311	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12312	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12313	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12314	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12315	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12316	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12317	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12318	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
51644	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51645	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51646	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
11972	1	WASHINGTON LAKE	Ammonia-N	Water
11973	1	WASHINGTON LAKE	Ammonia-N	Water
12183	1	WASHINGTON LAKE	Bacteria	Water
12186	1	WASHINGTON LAKE	Bacteria	Water
12189	1	WASHINGTON LAKE	Bacteria	Water
12190	1	WASHINGTON LAKE	Bacteria	Water
12194	1	WASHINGTON LAKE	Bacteria	Water
12195	1	WASHINGTON LAKE	Bacteria	Water
12196	1	WASHINGTON LAKE	Bacteria	Water
12197	1	WASHINGTON LAKE	Bacteria	Water
12200	1	WASHINGTON LAKE	Bacteria	Water
12201	1	WASHINGTON LAKE	Bacteria	Water
12202	1	WASHINGTON LAKE	Bacteria	Water
43481	1	WASHINGTON LAKE	Toxaphene	Tissue
43483	1	WASHINGTON LAKE	Mercury	Tissue
43484	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
43485	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
43486	1	WASHINGTON LAKE	Heptachlor	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
43487	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
43488	1	WASHINGTON LAKE	Endrin	Tissue
43492	1	WASHINGTON LAKE	Beta-BHC	Tissue
43493	1	WASHINGTON LAKE	Alpha-BHC	Tissue
43494	1	WASHINGTON LAKE	4,4'-DDT	Tissue
43495	1	WASHINGTON LAKE	4,4'-DDE	Tissue
43496	1	WASHINGTON LAKE	4,4'-DDD	Tissue
51827	1	WASHINGTON LAKE	4,4'-DDT	Tissue
51949	1	WASHINGTON LAKE	Alpha-BHC	Tissue
52010	1	WASHINGTON LAKE	Beta-BHC	Tissue
52403	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
52464	1	WASHINGTON LAKE	Heptachlor	Tissue
52585	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
52854	1	WASHINGTON LAKE	Total Phosphorus	Water
52855	1	WASHINGTON LAKE	Total Phosphorus	Water
52856	1	WASHINGTON LAKE	Total Phosphorus	Water
52857	1	WASHINGTON LAKE	Total Phosphorus	Water
52858	1	WASHINGTON LAKE	Total Phosphorus	Water
52859	1	WASHINGTON LAKE	Total Phosphorus	Water
52860	1	WASHINGTON LAKE	Total Phosphorus	Water
52861	1	WASHINGTON LAKE	Total Phosphorus	Water
52862	1	WASHINGTON LAKE	Total Phosphorus	Water
52863	1	WASHINGTON LAKE	Total Phosphorus	Water
52864	1	WASHINGTON LAKE	Total Phosphorus	Water
52865	1	WASHINGTON LAKE	Total Phosphorus	Water
74484	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74485	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74772	1	WASHINGTON LAKE	Bacteria	Water
74776	1	WASHINGTON LAKE	Bacteria	Water
75112	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75114	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75221	1	WASHINGTON LAKE	Beta-BHC	Tissue
75222	1	WASHINGTON LAKE	Beta-BHC	Tissue
75309	1	WASHINGTON LAKE	Endrin	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
75310	1	WASHINGTON LAKE	Endrin	Tissue
75311	1	WASHINGTON LAKE	Endrin	Tissue
75400	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75401	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75402	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75403	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75486	1	WASHINGTON LAKE	Heptachlor	Tissue
75487	1	WASHINGTON LAKE	Heptachlor	Tissue
75563	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75564	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75565	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75645	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75646	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75791	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75792	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75793	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75794	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
77219	1	WASHINGTON LAKE	Toxaphene	Tissue
77220	1	WASHINGTON LAKE	Toxaphene	Tissue
77236	1	WASHINGTON LAKE	Toxaphene	Tissue
77243	1	WASHINGTON LAKE	Endosulfan	Tissue
78987	1	WASHINGTON LAKE	Endosulfan	Tissue
78988	1	WASHINGTON LAKE	Endosulfan	Tissue
78989	1	WASHINGTON LAKE	Endosulfan	Tissue
79488	1	WASHINGTON LAKE	Mercury	Tissue
79502	1	WASHINGTON LAKE	Mercury	Tissue

Wetland name or number W6

RATING SUMMARY – Western Washington

Name of wetland (or ID #): wetland 6 Date of site visit: 31-Oct-16

Rated by Claire Hoffman Trained by Ecology? ☑ Yes ☐ No Date of training 2008

HGM Class used for rating Slope Wetland has multiple HGM classes? ☐ Yes ☑ No

NOTE: Form is not complete with out the figures requested (*figures can be combined*).
Source of base aerial photo/map Google Earth

OVERALL WETLAND CATEGORY IV (based on functions ☑ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

_____ **Category I** - Total score = 23 - 27
_____ **Category II** - Total score = 20 - 22
_____ **Category III** - Total score = 16 - 19
X **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		List appropriate rating (H, M, L)		
Site Potential	L	M	M	
Landscape Potential	L	L	L	
Value	H	M	M	**Total**
Score Based on Ratings	5	5	5	**15**

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number W6

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	1
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	1
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to another figure*)	S 4.1	1
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	4

Wetland name or number W6

HGM Classification of Wetland in Western Washington

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

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

☑ NO - go to 2 ☐ **YES** - the wetland class is **Tidal Fringe** - go to 1.1

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

☐ **NO - Saltwater Tidal Fringe (Estuarine)** ☐ **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

☑ NO - go to 3 ☐ **YES** - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

☑ NO - go to 4 ☐ **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.**

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

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
- ☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ☐ The overbank flooding occurs at least once every 2 years.

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

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

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

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

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

☐ NO - go to 8 ☐ **YES** - The wetland class is **Depressional**

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

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

HGM classes within the wetland unit 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 of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

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

Wetland name or number W6

SLOPE WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (*a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance*) Slope is 1% or less — points = 3 Slope is > 1% - 2% — points = 2 Slope is > 2% - 5% — points = 1 Slope is greater than 5% — points = 0	1
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. *Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.* Dense, uncut, herbaceous plants > 90% of the wetland area — points = 6 Dense, uncut, herbaceous plants > ½ of area — points = 3 Dense, woody, plants > ½ of area — points = 2 Dense, uncut, herbaceous plants > ¼ of area — points = 1 Does not meet any of the criteria above for plants — points = 0	2
Total for S 1 — Add the points in the boxes above	**3**

Rating of Site Potential If score is: ☐ **12 = H** ☐ **6 - 11 = M** ☑ **0 - 5 = L** *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Yes = 1 No = 0	0
Total for S 2 — Add the points in the boxes above	**0**

Rating of Landscape Potential If score is: ☐ **1 - 2 = M** ☑ **0 = L** *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *At least one aquatic resource in the basin is on the 303(d) list.* Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? A*nswer YES if there is a TMDL for the basin in which the unit is found*? Yes = 2 No = 0	2
Total for S 3 — Add the points in the boxes above	**3**

Rating of Value If score is: ☑ **2 - 4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W6

SLOPE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion

S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits 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** plants cover > 90% of the area of the wetland — points = 1 All other conditions — points = 0	1

Rating of Site Potential If score is: ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

S 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	0

Rating of Landscape Potential If score is: ☐ **1 = M** ☑ **0 = L** *Record the rating on the first page*

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) — points = 2 Surface flooding problems are in a sub-basin farther down-gradient — points = 1 No flooding problems anywhere downstream — points = 0	1
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 — Add the points in the boxes above	**1**

Rating of Value If score is: ☐ **2 - 4 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:
Dense uncut rigid plants are blackberries

Wetland name or number W6

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

☐ Aquatic bed	4 structures or more: points = 4	0
☐ Emergent	3 structures: points = 2	
☑ Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points - 1	
☐ Forested (areas where trees have > 30% cover)	1 structure: points = 0	

If the unit has a Forested class, check if:

☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

☐ Permanently flooded or inundated	4 or more types present: points = 3	0
☐ Seasonally flooded or inundated	3 types present: points = 2	
☐ Occasionally flooded or inundated	2 types present: points = 1	
☑ Saturated only	1 types present: points = 0	
☐ Permanently flowing stream or river in, or adjacent to, the wetland		
☐ Seasonally flowing stream in, or adjacent to, the wetland		
☐ **Lake Fringe wetland**	**2 points**	
☐ **Freshwater tidal wetland**	**2 points**	

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

1

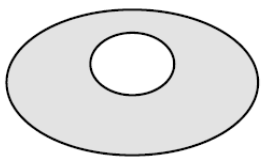
If you counted:	> 19 species	points = 2
	5 - 19 species	points = 1
	< 5 species	points = 0

H 1.4. Interspersion of habitats

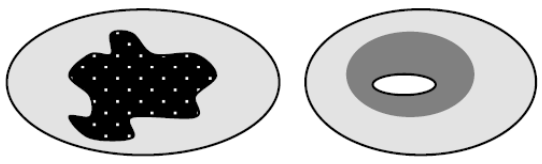
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*

0

None = 0 points

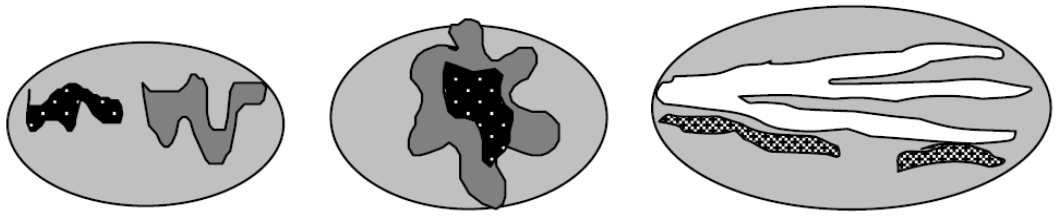


Low = 1 point



Moderate = 2 points

All three diagrams in this row are **HIGH** = 3 points



Wetland name or number W6

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☐ Standing snags (dbh > 4 in) within the wetland ☐ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (*cut shrubs or trees that have not yet weathered where wood is exposed*) ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by amphibians*) ☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	0
Total for H 1 Add the points in the boxes above	**1**

Rating of Site Potential If Score is: ☐ **15 - 18 = H** ☐ **7 - 14 = M** ☑ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 0 % undisturbed habitat + (10 % moderate & low intensity land uses / 2) = 5% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* 0 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 10% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	**-1**

Rating of Landscape Potential If Score is: ☐ **4 - 6 = H** ☐ **1 - 3 = M** ☑ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated* . Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	1

Rating of Value If Score is: ☐ **2 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W6

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.
http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here:
http://wdfw.wa.gov/conservation/phs/list/

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

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

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

Wetland name or number W6

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

SC 4.0. Forested Wetlands

Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.***

☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.

☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).

☐ Yes = **Category I** ☑ No = **Not a forested wetland for this section**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks

☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☑ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

☐ Long Beach Peninsula: Lands west of SR 103

☐ Grayland-Westport: Lands west of SR 105

☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☑ No = **Not an interdunal wetland for rating**

SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?

☐ Yes = **Category I** ☐ No - Go to **SC 6.2**

SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?

☐ Yes = **Category II** ☐ No - Go to **SC 6.3**

SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?

☐ Yes = **Category III** ☐ No = **Category IV**

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: 94043

Get Directions History

Places

- 150ft4
- Earth Point Topo Map
  USGS Quadrangles
- surveyed_wl_merge
  - surveyed_watercource_merge
  - surveyed_wl_merge
    - highpoint
- contributing basin
- surveyed_wl_merge
- forested
- 150ft
- 1km W3
- moderate & low intensity land use
- moderate to low
- moderate to low
- 1km w9
- moderate low w9
- 150ftw9
- W11 1km
- w11 mod to low
- w11mod to low
- mod to low w11
- w5 150ft

Layers Earth Gallery »

- Primary Database
  - Voyager
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean
  - Weather
  - Gallery
  - Global Awareness
  - More
  - Terrain

Sign in

Wetland 6

150 ft

Scrub-shrub
Saturated only

Dense uncut rigid plants (blackberries) over 90% of the wetland

Wetland 5

150 ft

Scrub-shrub
Saturated only

Dense uncut rigid plants (blackberries) over 90% of the wetland

Dense, uncut, woody plants

Wetland 11

150 ft

Seasonally flowing stream (approximate location)

Scrub-shrub
Saturated only

Wetland 11 likely continues to the east of the delineated wetland

Approximate wetland boundary

Google earth

Tour Guide 1990

47°33'51.41" N 122°17'57.79" W elev 0 ft eye alt 1286 ft

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: 94043

Get Directions History

Places

- surveyed_wl_merge
- surveyed_watercourse_merge
- surveyed_wl_merge
- highpoint
- contributing basin
- surveyed_wl_merge
- forested
- 150ft
- 1km W3
- moderate & low intensity land use
- moderate to low
- moderate to low
- 1km w9
- moderate low w9
- 150ftw9
- W11 1km
- w11 mod to low
- w11mod to low
- mod to low w11
- w5 150ft
- w5 1km
- w5low to mod
- w5low to modeb
- w2 1km
- w2 mod to low
- w2modtolow
- w4 1km
- w4 1kmb
- w4modtolow
- w4 mod to lowb
- modtolowall
- w11ltom
- w9modlow
- w3modlow
- w3modtolow
- w6 1km
- w6lowtomod
- w6 low tomods
- w6lowmod

Layers Earth Gallery »

- Primary Database
- Voyager
- Borders and Labels
- Places
- Photos
- Roads
- 3D Buildings
- Ocean

Sign in

1KM Radius for Wetland 6

No relatively undisturbed habitat

Moderate & Low Intensity

Moderate & Low Intensity

High Intensity

Wetland 6

High Intensity

Moderate & Low Intensity

High Intensity

Moderate & Low Intensity

Tour Guide 1990

Google earth

Imagery Date: 6/27/2016 47°33'46.88" N 122°17'52.70" W elev 0 ft eye alt 7136 ft

HTTP 404 Error Message | Water Quality Assessmer | Water Quality Atlas Map

State of Washington [US] | https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?CustomMap=y&RT=0&Layers=23,29&Filters=n,n,n,n

DEPARTMENT OF ECOLOGY State of Washington

Washington State Water Quality Atlas

Home | Add Map Data | Clear Map Data

Legend | Filter Data | Zoom To | Tools

Add or remove map data

Assessed Waters/Sediment

Water

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

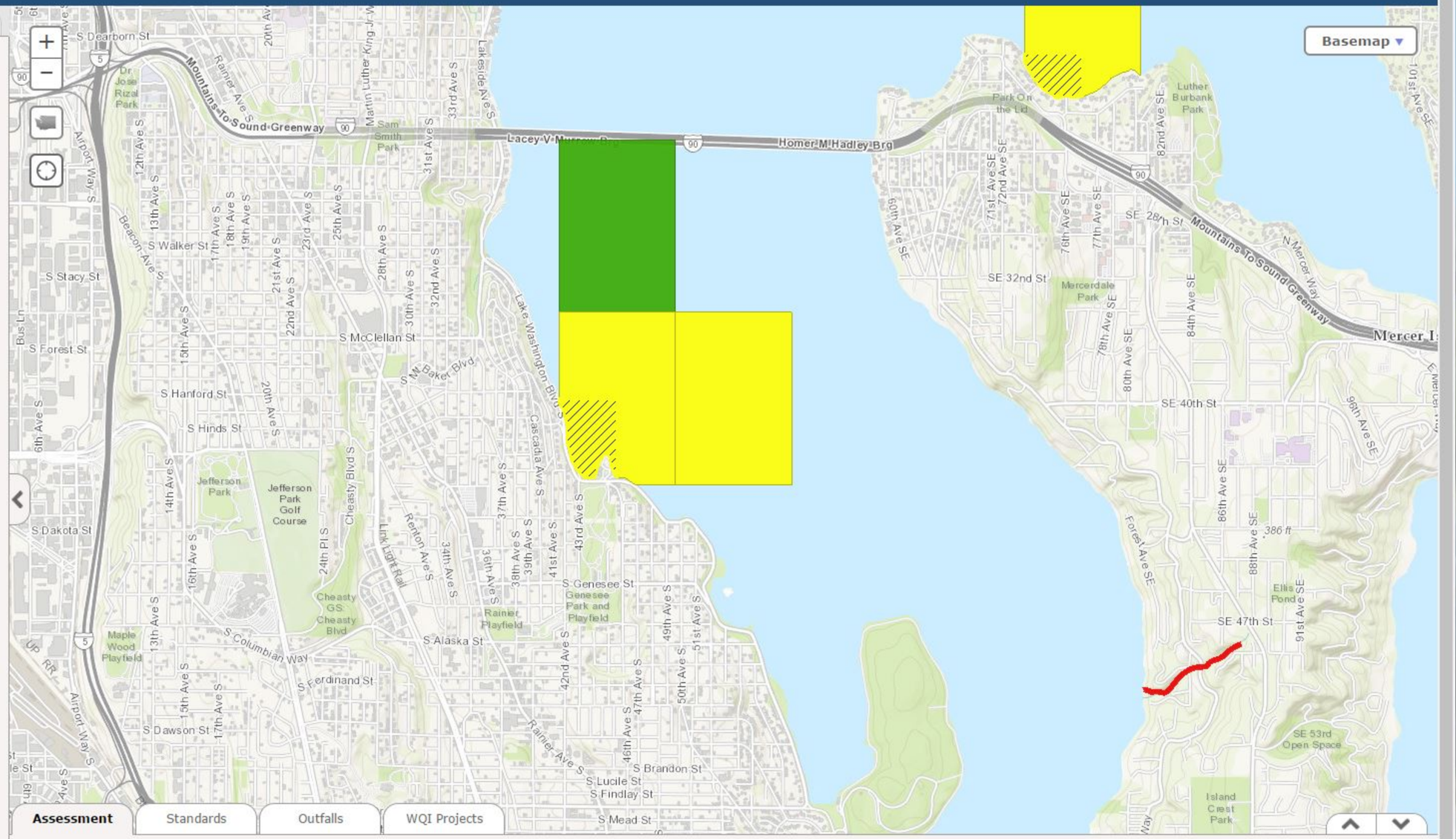
Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Change map data transparency

10%

0 0.2 0.4mi



Assessment | Standards | Outfalls | WQI Projects

Zoom to selection | Export to csv

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details

No filter applied, to view records filter data

Showing 0 to 0 of 0 entries

Previous Next

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
4672	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
4676	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
500005	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500006	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500007	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500038	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
12193	5	WASHINGTON LAKE	Bacteria	Water
12206	5	WASHINGTON LAKE	Bacteria	Water
43482	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
51591	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51592	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51593	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51706	5	WASHINGTON LAKE	4,4'-DDD	Tissue
51767	5	WASHINGTON LAKE	4,4'-DDE	Tissue
52642	5	WASHINGTON LAKE	Mercury	Tissue
52703	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52704	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52705	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52766	5	WASHINGTON LAKE	Total Chlordane	Tissue
52853	5	WASHINGTON LAKE	Total Phosphorus	Water
74460	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74461	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74775	5	WASHINGTON LAKE	Bacteria	Water
76477	5	WASHINGTON LAKE	Dieldrin	Tissue
76478	5	WASHINGTON LAKE	Dieldrin	Tissue
76479	5	WASHINGTON LAKE	Dieldrin	Tissue
77049	5	WASHINGTON LAKE	Chlordane	Tissue
77050	5	WASHINGTON LAKE	Chlordane	Tissue
77064	5	WASHINGTON LAKE	Chlordane	Tissue
500009	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
500010	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
8078	2	WASHINGTON LAKE	Lead	Water
11960	2	WASHINGTON LAKE	Ammonia-N	Water
11963	2	WASHINGTON LAKE	Ammonia-N	Water

Figure 4. TMDL List, Page 1

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
11964	2	WASHINGTON LAKE	Ammonia-N	Water
11970	2	WASHINGTON LAKE	Ammonia-N	Water
12207	2	WASHINGTON LAKE	Bacteria	Water
12264	2	WASHINGTON LAKE	Mercury	Water
12272	2	WASHINGTON LAKE	Mercury	Water
12311	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12312	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12313	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12314	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12315	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12316	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12317	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12318	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
51644	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51645	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51646	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
11972	1	WASHINGTON LAKE	Ammonia-N	Water
11973	1	WASHINGTON LAKE	Ammonia-N	Water
12183	1	WASHINGTON LAKE	Bacteria	Water
12186	1	WASHINGTON LAKE	Bacteria	Water
12189	1	WASHINGTON LAKE	Bacteria	Water
12190	1	WASHINGTON LAKE	Bacteria	Water
12194	1	WASHINGTON LAKE	Bacteria	Water
12195	1	WASHINGTON LAKE	Bacteria	Water
12196	1	WASHINGTON LAKE	Bacteria	Water
12197	1	WASHINGTON LAKE	Bacteria	Water
12200	1	WASHINGTON LAKE	Bacteria	Water
12201	1	WASHINGTON LAKE	Bacteria	Water
12202	1	WASHINGTON LAKE	Bacteria	Water
43481	1	WASHINGTON LAKE	Toxaphene	Tissue
43483	1	WASHINGTON LAKE	Mercury	Tissue
43484	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
43485	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
43486	1	WASHINGTON LAKE	Heptachlor	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
43487	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
43488	1	WASHINGTON LAKE	Endrin	Tissue
43492	1	WASHINGTON LAKE	Beta-BHC	Tissue
43493	1	WASHINGTON LAKE	Alpha-BHC	Tissue
43494	1	WASHINGTON LAKE	4,4'-DDT	Tissue
43495	1	WASHINGTON LAKE	4,4'-DDE	Tissue
43496	1	WASHINGTON LAKE	4,4'-DDD	Tissue
51827	1	WASHINGTON LAKE	4,4'-DDT	Tissue
51949	1	WASHINGTON LAKE	Alpha-BHC	Tissue
52010	1	WASHINGTON LAKE	Beta-BHC	Tissue
52403	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
52464	1	WASHINGTON LAKE	Heptachlor	Tissue
52585	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
52854	1	WASHINGTON LAKE	Total Phosphorus	Water
52855	1	WASHINGTON LAKE	Total Phosphorus	Water
52856	1	WASHINGTON LAKE	Total Phosphorus	Water
52857	1	WASHINGTON LAKE	Total Phosphorus	Water
52858	1	WASHINGTON LAKE	Total Phosphorus	Water
52859	1	WASHINGTON LAKE	Total Phosphorus	Water
52860	1	WASHINGTON LAKE	Total Phosphorus	Water
52861	1	WASHINGTON LAKE	Total Phosphorus	Water
52862	1	WASHINGTON LAKE	Total Phosphorus	Water
52863	1	WASHINGTON LAKE	Total Phosphorus	Water
52864	1	WASHINGTON LAKE	Total Phosphorus	Water
52865	1	WASHINGTON LAKE	Total Phosphorus	Water
74484	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74485	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74772	1	WASHINGTON LAKE	Bacteria	Water
74776	1	WASHINGTON LAKE	Bacteria	Water
75112	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75114	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75221	1	WASHINGTON LAKE	Beta-BHC	Tissue
75222	1	WASHINGTON LAKE	Beta-BHC	Tissue
75309	1	WASHINGTON LAKE	Endrin	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
75310	1	WASHINGTON LAKE	Endrin	Tissue
75311	1	WASHINGTON LAKE	Endrin	Tissue
75400	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75401	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75402	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75403	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75486	1	WASHINGTON LAKE	Heptachlor	Tissue
75487	1	WASHINGTON LAKE	Heptachlor	Tissue
75563	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75564	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75565	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75645	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75646	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75791	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75792	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75793	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75794	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
77219	1	WASHINGTON LAKE	Toxaphene	Tissue
77220	1	WASHINGTON LAKE	Toxaphene	Tissue
77236	1	WASHINGTON LAKE	Toxaphene	Tissue
77243	1	WASHINGTON LAKE	Endosulfan	Tissue
78987	1	WASHINGTON LAKE	Endosulfan	Tissue
78988	1	WASHINGTON LAKE	Endosulfan	Tissue
78989	1	WASHINGTON LAKE	Endosulfan	Tissue
79488	1	WASHINGTON LAKE	Mercury	Tissue
79502	1	WASHINGTON LAKE	Mercury	Tissue

Wetland name or number W8

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 8 Date of site visit: 5-Apr-17

Rated by Claire Hoffman Trained by Ecology? ☑ Yes ☐ No Date of training Mar-17

HGM Class used for rating Slope Wetland has multiple HGM classes? ☐ Yes ☑ No

NOTE: Form is not complete with out the figures requested (*figures can be combined*).
Source of base aerial photo/map Google earth

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

1. Category of wetland based on FUNCTIONS

_____ **Category I** - Total score = 23 - 27
_____ **Category II** - Total score = 20 - 22
X **Category III** - Total score = 16 - 19
_____ **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		List appropriate rating (H, M, L)		
Site Potential	L	L	L	
Landscape Potential	M	M	M	
Value	H	H	M	**Total**
Score Based on Ratings	6	6	5	**17**

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number W8

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	1
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	1
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to another figure*)	S 4.1	1
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	4

Wetland name or number W8

HGM Classification of Wetland in Western Washington

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

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

☑ NO - go to 2 ☐ **YES** - the wetland class is **Tidal Fringe** - go to 1.1

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

☐ **NO - Saltwater Tidal Fringe (Estuarine)** ☐ **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

☑ NO - go to 3 ☐ **YES** - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

☑ NO - go to 4 ☐ **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.**

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

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
- ☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ☐ The overbank flooding occurs at least once every 2 years.

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

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

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

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

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

☑ NO - go to 8 ☐ **YES** - The wetland class is **Depressional**

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

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

HGM classes within the wetland unit 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 of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

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

Wetland name or number W8

SLOPE WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (*a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance*) Slope is 1% or less — points = 3 Slope is > 1% - 2% — points = 2 Slope is > 2% - 5% — points = 1 Slope is greater than 5% — points = 0	2
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. *Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.* Dense, uncut, herbaceous plants > 90% of the wetland area — points = 6 Dense, uncut, herbaceous plants > ½ of area — points = 3 Dense, woody, plants > ½ of area — points = 2 Dense, uncut, herbaceous plants > ¼ of area — points = 1 Does not meet any of the criteria above for plants — points = 0	1
Total for S 1 — Add the points in the boxes above	**3**

Rating of Site Potential If score is: ☐ **12 = H** ☐ **6 - 11 = M** ☑ **0 - 5 = L** *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Yes = 1 No = 0	0
Total for S 2 — Add the points in the boxes above	**1**

Rating of Landscape Potential If score is: ☑ **1 - 2 = M** ☐ **0 = L** *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *At least one aquatic resource in the basin is on the 303(d) list.* Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? A*nswer YES if there is a TMDL for the basin in which the unit is found*? Yes = 2 No = 0	2
Total for S 3 — Add the points in the boxes above	**3**

Rating of Value If score is: ☑ **2 - 4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W8

SLOPE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion

S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits 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** plants cover > 90% of the area of the wetland — points = 1 All other conditions — points = 0	0

Rating of Site Potential If score is: ☐ **1 = M** ☑ **0 = L** *Record the rating on the first page*

S 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	1

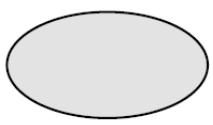
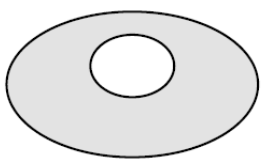
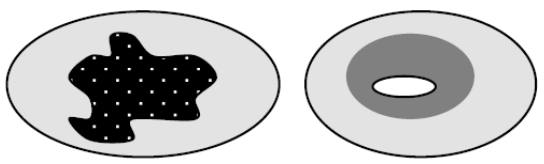
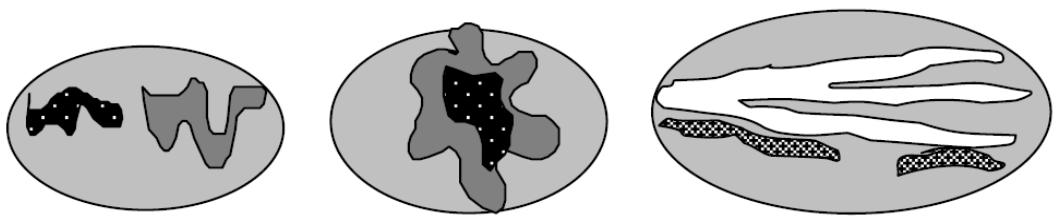
Rating of Landscape Potential If score is: ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) — points = 2 Surface flooding problems are in a sub-basin farther down-gradient — points = 1 No flooding problems anywhere downstream — points = 0	2
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 Add the points in the boxes above	**2**

Rating of Value If score is: ☑ **2 - 4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:

Wetland name or number W8

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

Wetland name or number W8

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☑ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☐ Standing snags (dbh > 4 in) within the wetland ☐ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (*cut shrubs or trees that have not yet weathered where wood is exposed*) ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by amphibians*) ☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	1
Total for H 1 Add the points in the boxes above	**3**

Rating of Site Potential If Score is: ☐ **15 - 18 = H** ☐ **7 - 14 = M** ☑ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 0 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 10% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0	1
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* 0 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 10% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	2
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	**1**

Rating of Landscape Potential If Score is: ☐ **4 - 6 = H** ☑ **1 - 3 = M** ☐ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated* . Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	1

Rating of Value If Score is: ☐ **2 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W8

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.
http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here:
http://wdfw.wa.gov/conservation/phs/list/

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

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

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

Wetland name or number W8

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

SC 4.0. Forested Wetlands

Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.***

☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.

☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).

☐ Yes = **Category I** ☐ No = **Not a forested wetland for this section**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks

☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☐ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

☐ Long Beach Peninsula: Lands west of SR 103

☐ Grayland-Westport: Lands west of SR 105

☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☐ No = **Not an interdunal wetland for rating**

SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?

☐ Yes = **Category I** ☐ No - Go to **SC 6.2**

SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?

☐ Yes = **Category II** ☐ No - Go to **SC 6.3**

SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?

☐ Yes = **Category III** ☐ No = **Category IV**

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: 37 25.818' N, 122 05.36' W

Get Directions History

Places

- mod to low w11
- w5 150ft
- w5 1km
- w5low to mod
- w5low to modeb
- w2 1km
- w2 mod to low
- w2modtolow
- w4 1km
- w4 1kmb
- w4modtolow
- w4 mod to lowb
- modtolowall
- w11ltom
- w9modlow
- w3modlow
- w3modtolow
- w6 1km
- w6lowtomod
- w6 low tomods
- w6lowmod
- SiteVisit_Points
- outlet
- Layers
- w1 150a
- w1150
- w1 150c
- outlet
- Wetland 1
- 150
- 150a
- 150aa
- 1km w1
- Polygon Measure
- Polygon Measure
- Polygon Measure
- Polygon Measure
- 1km W8
- Polygon Measure
- Polygon Measure
- Polygon Measure
- Line Measure
- Line Measure
- Line Measure
- Line Measure
- Temporary Places
- Polygon Measure

Layers

- Primary Database
- The new Google Earth
- Borders and Labels
- Places

Sign in

N

Wetland 8

150 feet

Saturated only
Forested

Google earth

Tour Guide 1990

47°34'06.62" N 122°17'59.29" W elev 227 ft eye alt 1083 ft

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: Tokyo, Japan

Get Directions History

Places

- w3modtolow
- w6 1km
- w6lowtomod
- w6 low tomods
- w6lowmod
- SiteVisit_Points
- outlet
- Temporary Places
  - Layers
  - w1 150a
  - w1150
  - w1 150c
  - outlet
  - Wetland 1
  - 150
  - 150a
  - 150aa
  - 1km w1
  - Polygon Measure
  - Polygon Measure
  - Polygon Measure
  - Polygon Measure
  - 1km W8
  - Polygon Measure
  - Polygon Measure

Layers

- Primary Database
  - The new Google Earth
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean
  - Weather
  - Gallery
  - Global Awareness
  - More
  - Terrain

Sign in

1 KM Radius from Wetland 8

No relatively undisturbed habitat

High Intensity

Moderate & Low Intensity

Wetland 8

Moderate & Low Intensity

High Intensity

Moderate & Low Intensity

Moderate & Low Intensity

Google earth

Tour Guide 1990

Imagery Date: 6/27/2016 47°33'49.02" N 122°18'40.91" W elev 304 ft eye alt 8066 ft

HTTP 404 Error Message | Water Quality Assessmer | Water Quality Atlas Map

State of Washington [US] | https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?CustomMap=y&RT=0&Layers=23,29&Filters=n,n,n,n

DEPARTMENT OF ECOLOGY State of Washington

Washington State Water Quality Atlas

Home | Add Map Data | Clear Map Data

Legend | Filter Data | Zoom To | Tools

Add or remove map data

Assessed Waters/Sediment

Water

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

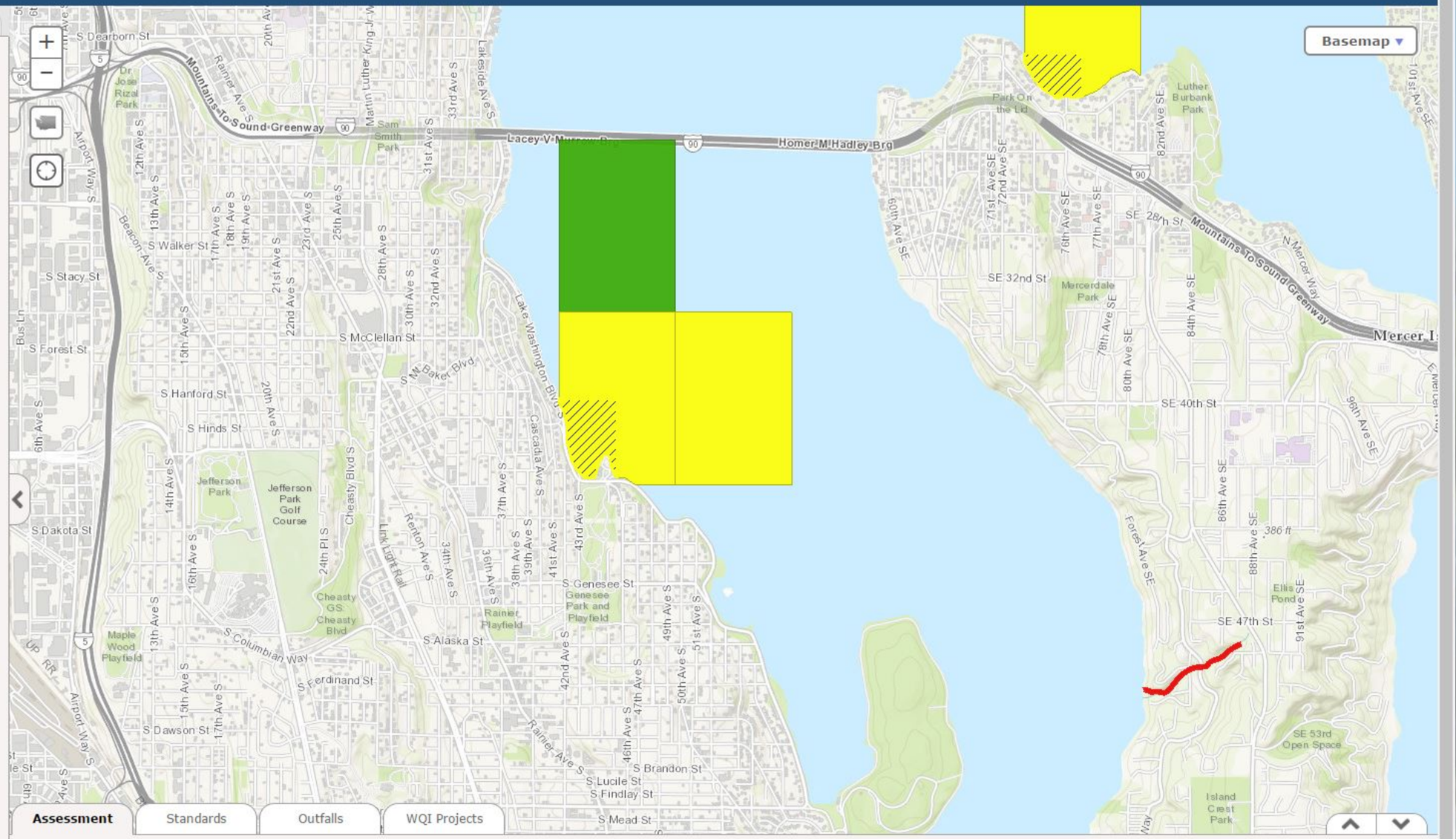
Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Change map data transparency

10%

0 0.2 0.4mi



Assessment | Standards | Outfalls | WQI Projects

Zoom to selection | Export to csv

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details

No filter applied, to view records filter data

Showing 0 to 0 of 0 entries

Previous Next

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
4672	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
4676	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
500005	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500006	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500007	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500038	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
12193	5	WASHINGTON LAKE	Bacteria	Water
12206	5	WASHINGTON LAKE	Bacteria	Water
43482	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
51591	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51592	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51593	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51706	5	WASHINGTON LAKE	4,4'-DDD	Tissue
51767	5	WASHINGTON LAKE	4,4'-DDE	Tissue
52642	5	WASHINGTON LAKE	Mercury	Tissue
52703	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52704	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52705	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52766	5	WASHINGTON LAKE	Total Chlordane	Tissue
52853	5	WASHINGTON LAKE	Total Phosphorus	Water
74460	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74461	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74775	5	WASHINGTON LAKE	Bacteria	Water
76477	5	WASHINGTON LAKE	Dieldrin	Tissue
76478	5	WASHINGTON LAKE	Dieldrin	Tissue
76479	5	WASHINGTON LAKE	Dieldrin	Tissue
77049	5	WASHINGTON LAKE	Chlordane	Tissue
77050	5	WASHINGTON LAKE	Chlordane	Tissue
77064	5	WASHINGTON LAKE	Chlordane	Tissue
500009	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
500010	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
8078	2	WASHINGTON LAKE	Lead	Water
11960	2	WASHINGTON LAKE	Ammonia-N	Water
11963	2	WASHINGTON LAKE	Ammonia-N	Water

Figure 4. TMDL List, Page 1

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
11964	2	WASHINGTON LAKE	Ammonia-N	Water
11970	2	WASHINGTON LAKE	Ammonia-N	Water
12207	2	WASHINGTON LAKE	Bacteria	Water
12264	2	WASHINGTON LAKE	Mercury	Water
12272	2	WASHINGTON LAKE	Mercury	Water
12311	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12312	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12313	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12314	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12315	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12316	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12317	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12318	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
51644	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51645	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51646	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
11972	1	WASHINGTON LAKE	Ammonia-N	Water
11973	1	WASHINGTON LAKE	Ammonia-N	Water
12183	1	WASHINGTON LAKE	Bacteria	Water
12186	1	WASHINGTON LAKE	Bacteria	Water
12189	1	WASHINGTON LAKE	Bacteria	Water
12190	1	WASHINGTON LAKE	Bacteria	Water
12194	1	WASHINGTON LAKE	Bacteria	Water
12195	1	WASHINGTON LAKE	Bacteria	Water
12196	1	WASHINGTON LAKE	Bacteria	Water
12197	1	WASHINGTON LAKE	Bacteria	Water
12200	1	WASHINGTON LAKE	Bacteria	Water
12201	1	WASHINGTON LAKE	Bacteria	Water
12202	1	WASHINGTON LAKE	Bacteria	Water
43481	1	WASHINGTON LAKE	Toxaphene	Tissue
43483	1	WASHINGTON LAKE	Mercury	Tissue
43484	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
43485	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
43486	1	WASHINGTON LAKE	Heptachlor	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
43487	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
43488	1	WASHINGTON LAKE	Endrin	Tissue
43492	1	WASHINGTON LAKE	Beta-BHC	Tissue
43493	1	WASHINGTON LAKE	Alpha-BHC	Tissue
43494	1	WASHINGTON LAKE	4,4'-DDT	Tissue
43495	1	WASHINGTON LAKE	4,4'-DDE	Tissue
43496	1	WASHINGTON LAKE	4,4'-DDD	Tissue
51827	1	WASHINGTON LAKE	4,4'-DDT	Tissue
51949	1	WASHINGTON LAKE	Alpha-BHC	Tissue
52010	1	WASHINGTON LAKE	Beta-BHC	Tissue
52403	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
52464	1	WASHINGTON LAKE	Heptachlor	Tissue
52585	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
52854	1	WASHINGTON LAKE	Total Phosphorus	Water
52855	1	WASHINGTON LAKE	Total Phosphorus	Water
52856	1	WASHINGTON LAKE	Total Phosphorus	Water
52857	1	WASHINGTON LAKE	Total Phosphorus	Water
52858	1	WASHINGTON LAKE	Total Phosphorus	Water
52859	1	WASHINGTON LAKE	Total Phosphorus	Water
52860	1	WASHINGTON LAKE	Total Phosphorus	Water
52861	1	WASHINGTON LAKE	Total Phosphorus	Water
52862	1	WASHINGTON LAKE	Total Phosphorus	Water
52863	1	WASHINGTON LAKE	Total Phosphorus	Water
52864	1	WASHINGTON LAKE	Total Phosphorus	Water
52865	1	WASHINGTON LAKE	Total Phosphorus	Water
74484	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74485	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74772	1	WASHINGTON LAKE	Bacteria	Water
74776	1	WASHINGTON LAKE	Bacteria	Water
75112	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75114	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75221	1	WASHINGTON LAKE	Beta-BHC	Tissue
75222	1	WASHINGTON LAKE	Beta-BHC	Tissue
75309	1	WASHINGTON LAKE	Endrin	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
75310	1	WASHINGTON LAKE	Endrin	Tissue
75311	1	WASHINGTON LAKE	Endrin	Tissue
75400	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75401	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75402	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75403	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75486	1	WASHINGTON LAKE	Heptachlor	Tissue
75487	1	WASHINGTON LAKE	Heptachlor	Tissue
75563	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75564	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75565	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75645	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75646	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75791	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75792	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75793	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75794	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
77219	1	WASHINGTON LAKE	Toxaphene	Tissue
77220	1	WASHINGTON LAKE	Toxaphene	Tissue
77236	1	WASHINGTON LAKE	Toxaphene	Tissue
77243	1	WASHINGTON LAKE	Endosulfan	Tissue
78987	1	WASHINGTON LAKE	Endosulfan	Tissue
78988	1	WASHINGTON LAKE	Endosulfan	Tissue
78989	1	WASHINGTON LAKE	Endosulfan	Tissue
79488	1	WASHINGTON LAKE	Mercury	Tissue
79502	1	WASHINGTON LAKE	Mercury	Tissue

Wetland name or number W9

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 9 Date of site visit: 20-Oct-16

Rated by Claire Hoffman Trained by Ecology? ☑ Yes ☐ No Date of training 2008

HGM Class used for rating Slope Wetland has multiple HGM classes? ☐ Yes ☑ No

NOTE: Form is not complete with out the figures requested (*figures can be combined*).
Source of base aerial photo/map google earth

OVERALL WETLAND CATEGORY IV (based on functions ☑ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

_____ **Category I** - Total score = 23 - 27
_____ **Category II** - Total score = 20 - 22
_____ **Category III** - Total score = 16 - 19
X **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		List appropriate rating (H, M, L)		
Site Potential	L	M	L	
Landscape Potential	L	L	L	
Value	H	M	M	**Total**
Score Based on Ratings	5	5	4	**14**

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number W9

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	1
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	1
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to another figure*)	S 4.1	1
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	4

Wetland name or number W9

HGM Classification of Wetland in Western Washington

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

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

☑ NO - go to 2 ☐ **YES** - the wetland class is **Tidal Fringe** - go to 1.1

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

☐ **NO - Saltwater Tidal Fringe (Estuarine)** ☐ **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

☑ NO - go to 3 ☐ **YES** - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

☑ NO - go to 4 ☐ **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.**

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

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
- ☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ☐ The overbank flooding occurs at least once every 2 years.

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

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

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

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

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

☐ NO - go to 8 ☐ **YES** - The wetland class is **Depressional**

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

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

HGM classes within the wetland unit 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 of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

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

Wetland name or number W9

SLOPE WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (*a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance*) Slope is 1% or less — points = 3 Slope is > 1% - 2% — points = 2 Slope is > 2% - 5% — points = 1 Slope is greater than 5% — points = 0	1
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. *Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.* Dense, uncut, herbaceous plants > 90% of the wetland area — points = 6 Dense, uncut, herbaceous plants > ½ of area — points = 3 Dense, woody, plants > ½ of area — points = 2 Dense, uncut, herbaceous plants > ¼ of area — points = 1 Does not meet any of the criteria above for plants — points = 0	2
Total for S 1 — Add the points in the boxes above	**3**

Rating of Site Potential If score is: ☐ **12 = H** ☐ **6 - 11 = M** ☑ **0 - 5 = L** *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Yes = 1 No = 0	0
Total for S 2 — Add the points in the boxes above	**0**

Rating of Landscape Potential If score is: ☐ **1 - 2 = M** ☑ **0 = L** *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *At least one aquatic resource in the basin is on the 303(d) list.* Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? A*nswer YES if there is a TMDL for the basin in which the unit is found*? Yes = 2 No = 0	2
Total for S 3 — Add the points in the boxes above	**3**

Rating of Value If score is: ☑ **2 - 4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W9

SLOPE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion

S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits 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** plants cover > 90% of the area of the wetland — points = 1 All other conditions — points = 0	1

Rating of Site Potential If score is: ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

S 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	0

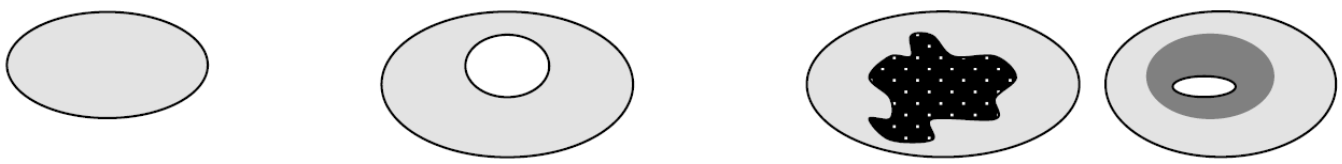
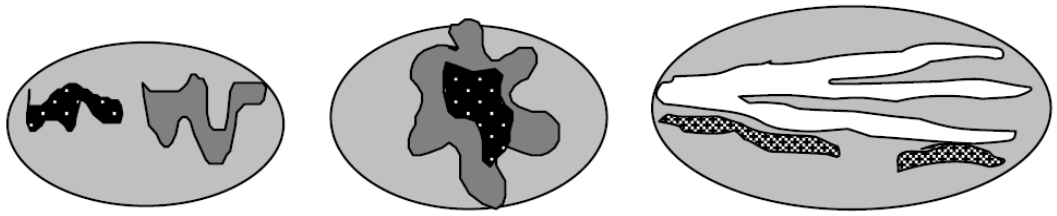
Rating of Landscape Potential If score is: ☐ **1 = M** ☑ **0 = L** *Record the rating on the first page*

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) — points = 2 Surface flooding problems are in a sub-basin farther down-gradient — points = 1 No flooding problems anywhere downstream — points = 0	1
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 — Add the points in the boxes above	**1**

Rating of Value If score is: ☐ **2 - 4 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:
in park below wetland, a lot of water flowing across grass and paved areas. Dense uncut woody vegetation is blackberries.

Wetland name or number W9

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

Wetland name or number W9

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☐ Standing snags (dbh > 4 in) within the wetland ☐ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (*cut shrubs or trees that have not yet weathered where wood is exposed*) ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by amphibians*) ☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	0
Total for H 1 Add the points in the boxes above	**0**

Rating of Site Potential If Score is: ☐ **15 - 18 = H** ☐ **7 - 14 = M** ☑ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 0 % undisturbed habitat + (10 % moderate & low intensity land uses / 2) = 5% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* 0 % undisturbed habitat + (17 % moderate & low intensity land uses / 2) = 8.5% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	0
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	**-2**

Rating of Landscape Potential If Score is: ☐ **4 - 6 = H** ☐ **1 - 3 = M** ☑ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated* . Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	1

Rating of Value If Score is: ☐ **2 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W9

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.
http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here:
http://wdfw.wa.gov/conservation/phs/list/

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

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

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

Wetland name or number W9

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

SC 4.0. Forested Wetlands

Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.***

☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.

☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).

☐ Yes = **Category I** ☑ No = **Not a forested wetland for this section**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks

☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☐ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

☐ Long Beach Peninsula: Lands west of SR 103

☐ Grayland-Westport: Lands west of SR 105

☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☑ No = **Not an interdunal wetland for rating**

SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?

☐ Yes = **Category I** ☐ No - Go to **SC 6.2**

SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?

☐ Yes = **Category II** ☐ No - Go to **SC 6.3**

SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?

☐ Yes = **Category III** ☐ No = **Category IV**

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form

Google Earth Pro

File Edit View Tools Add Help

Sign in

▼ Search

Search

ex: 94043

Get Directions History

▼ Places

- Scrub shrub
- 150 feet
- 150ft2
- 150ft 3
- outlet
- 150ft4
- Earth Point Topo Map
  USGS Quadrangles
- surveyed_wl_merge
  - surveyed_watercource_merge
  - surveyed_wl_merge
    - highpoint
- contributing basin
- surveyed_wl_merge
- forested
- 150ft
- 1km W3
- moderate & low intensity land use
- moderate to low
- moderate to low
- 1km w9
- moderate low w9
- 150ftw9

▼ Layers Earth Gallery »

- Primary Database
  - Voyager
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean
  - Weather
  - Gallery
  - Global Awareness
  - More
- Terrain

Wetland 9

150 ft

Scrub-shrub
Saturated only
Dense uncut rigid vegetation (blackberries) over 90% of the wetland

Stream 1

Tour Guide 1990

Google earth

47°34'02.54" N 122°17'55.72" W elev 0 ft eye alt 447 ft

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: 94043

Get Directions History

Places

- 150 feet
- 150ft2
- 150ft 3
- outlet
- 150ft4
- Earth Point Topo Map
  USGS Quadrangles
- surveyed_wl_merge
  - surveyed_watercourse_merge
  - surveyed_wl_merge
    - highpoint
- contributing basin
- surveyed_wl_merge
- forested
- 150ft
- 1km W3
- moderate & low intensity land use
- moderate to low
- moderate to low
- 1km w9
- moderate low w9
- 150ftw9
- W11 1km
- w11 mod to low
- w11mod to low
- mod to low w11
- w5 150ft
- w5 1km
- w5low to mod
- w5low to modeb
- w2 1km
- w2 mod to low
- w2modtolow
- w4 1km
- w4 1kmb
- w4modtolow
- w4 mod to lowb
- modtolowall
- w11ltom
- w9modlow

Layers Earth Gallery

- Primary Database
  - Voyager
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean

Sign in

1KM Radius from Wetland 9

No relatively undisturbed habitat

Moderate & Low Intensity

High Intensity

Moderate & Low Intensity

Wetland 9

High Intensity

Moderate & Low Intensity

Tour Guide 1990

Google earth

Imagery Date: 6/27/2016 47°33'47.35" N 122°18'22.03" W elev 0 ft eye alt 8910 ft

HTTP 404 Error Message | Water Quality Assessmer | Water Quality Atlas Map

State of Washington [US] | https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?CustomMap=y&RT=0&Layers=23,29&Filters=n,n,n,n

DEPARTMENT OF ECOLOGY State of Washington

Washington State Water Quality Atlas

Home | Add Map Data | Clear Map Data

Legend | Filter Data | Zoom To | Tools

Add or remove map data

Assessed Waters/Sediment

Water

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

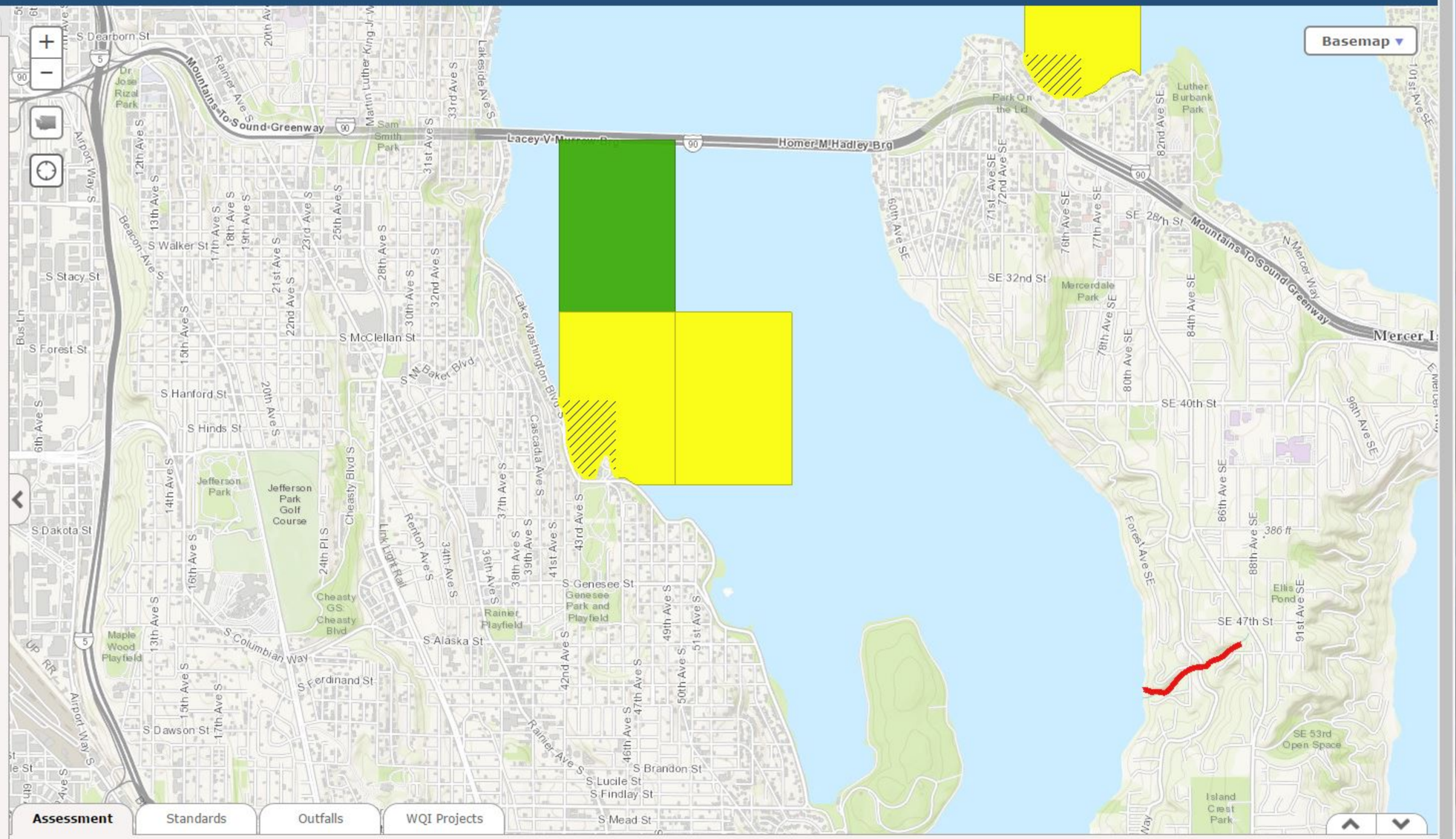
Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Change map data transparency

10%

0 0.2 0.4mi



Assessment | Standards | Outfalls | WQI Projects

Zoom to selection | Export to csv

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details

No filter applied, to view records filter data

Showing 0 to 0 of 0 entries

Previous Next

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
4672	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
4676	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
500005	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500006	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500007	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500038	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
12193	5	WASHINGTON LAKE	Bacteria	Water
12206	5	WASHINGTON LAKE	Bacteria	Water
43482	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
51591	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51592	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51593	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51706	5	WASHINGTON LAKE	4,4'-DDD	Tissue
51767	5	WASHINGTON LAKE	4,4'-DDE	Tissue
52642	5	WASHINGTON LAKE	Mercury	Tissue
52703	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52704	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52705	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52766	5	WASHINGTON LAKE	Total Chlordane	Tissue
52853	5	WASHINGTON LAKE	Total Phosphorus	Water
74460	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74461	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74775	5	WASHINGTON LAKE	Bacteria	Water
76477	5	WASHINGTON LAKE	Dieldrin	Tissue
76478	5	WASHINGTON LAKE	Dieldrin	Tissue
76479	5	WASHINGTON LAKE	Dieldrin	Tissue
77049	5	WASHINGTON LAKE	Chlordane	Tissue
77050	5	WASHINGTON LAKE	Chlordane	Tissue
77064	5	WASHINGTON LAKE	Chlordane	Tissue
500009	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
500010	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
8078	2	WASHINGTON LAKE	Lead	Water
11960	2	WASHINGTON LAKE	Ammonia-N	Water
11963	2	WASHINGTON LAKE	Ammonia-N	Water

Figure 4. TMDL List, Page 1

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
11964	2	WASHINGTON LAKE	Ammonia-N	Water
11970	2	WASHINGTON LAKE	Ammonia-N	Water
12207	2	WASHINGTON LAKE	Bacteria	Water
12264	2	WASHINGTON LAKE	Mercury	Water
12272	2	WASHINGTON LAKE	Mercury	Water
12311	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12312	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12313	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12314	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12315	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12316	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12317	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12318	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
51644	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51645	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51646	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
11972	1	WASHINGTON LAKE	Ammonia-N	Water
11973	1	WASHINGTON LAKE	Ammonia-N	Water
12183	1	WASHINGTON LAKE	Bacteria	Water
12186	1	WASHINGTON LAKE	Bacteria	Water
12189	1	WASHINGTON LAKE	Bacteria	Water
12190	1	WASHINGTON LAKE	Bacteria	Water
12194	1	WASHINGTON LAKE	Bacteria	Water
12195	1	WASHINGTON LAKE	Bacteria	Water
12196	1	WASHINGTON LAKE	Bacteria	Water
12197	1	WASHINGTON LAKE	Bacteria	Water
12200	1	WASHINGTON LAKE	Bacteria	Water
12201	1	WASHINGTON LAKE	Bacteria	Water
12202	1	WASHINGTON LAKE	Bacteria	Water
43481	1	WASHINGTON LAKE	Toxaphene	Tissue
43483	1	WASHINGTON LAKE	Mercury	Tissue
43484	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
43485	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
43486	1	WASHINGTON LAKE	Heptachlor	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
43487	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
43488	1	WASHINGTON LAKE	Endrin	Tissue
43492	1	WASHINGTON LAKE	Beta-BHC	Tissue
43493	1	WASHINGTON LAKE	Alpha-BHC	Tissue
43494	1	WASHINGTON LAKE	4,4'-DDT	Tissue
43495	1	WASHINGTON LAKE	4,4'-DDE	Tissue
43496	1	WASHINGTON LAKE	4,4'-DDD	Tissue
51827	1	WASHINGTON LAKE	4,4'-DDT	Tissue
51949	1	WASHINGTON LAKE	Alpha-BHC	Tissue
52010	1	WASHINGTON LAKE	Beta-BHC	Tissue
52403	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
52464	1	WASHINGTON LAKE	Heptachlor	Tissue
52585	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
52854	1	WASHINGTON LAKE	Total Phosphorus	Water
52855	1	WASHINGTON LAKE	Total Phosphorus	Water
52856	1	WASHINGTON LAKE	Total Phosphorus	Water
52857	1	WASHINGTON LAKE	Total Phosphorus	Water
52858	1	WASHINGTON LAKE	Total Phosphorus	Water
52859	1	WASHINGTON LAKE	Total Phosphorus	Water
52860	1	WASHINGTON LAKE	Total Phosphorus	Water
52861	1	WASHINGTON LAKE	Total Phosphorus	Water
52862	1	WASHINGTON LAKE	Total Phosphorus	Water
52863	1	WASHINGTON LAKE	Total Phosphorus	Water
52864	1	WASHINGTON LAKE	Total Phosphorus	Water
52865	1	WASHINGTON LAKE	Total Phosphorus	Water
74484	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74485	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74772	1	WASHINGTON LAKE	Bacteria	Water
74776	1	WASHINGTON LAKE	Bacteria	Water
75112	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75114	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75221	1	WASHINGTON LAKE	Beta-BHC	Tissue
75222	1	WASHINGTON LAKE	Beta-BHC	Tissue
75309	1	WASHINGTON LAKE	Endrin	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
75310	1	WASHINGTON LAKE	Endrin	Tissue
75311	1	WASHINGTON LAKE	Endrin	Tissue
75400	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75401	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75402	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75403	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75486	1	WASHINGTON LAKE	Heptachlor	Tissue
75487	1	WASHINGTON LAKE	Heptachlor	Tissue
75563	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75564	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75565	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75645	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75646	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75791	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75792	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75793	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75794	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
77219	1	WASHINGTON LAKE	Toxaphene	Tissue
77220	1	WASHINGTON LAKE	Toxaphene	Tissue
77236	1	WASHINGTON LAKE	Toxaphene	Tissue
77243	1	WASHINGTON LAKE	Endosulfan	Tissue
78987	1	WASHINGTON LAKE	Endosulfan	Tissue
78988	1	WASHINGTON LAKE	Endosulfan	Tissue
78989	1	WASHINGTON LAKE	Endosulfan	Tissue
79488	1	WASHINGTON LAKE	Mercury	Tissue
79502	1	WASHINGTON LAKE	Mercury	Tissue

Wetland name or number W11

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 11 Date of site visit: 20-Oct-16

Rated by Claire Hoffman Trained by Ecology? ☑ Yes ☐ No Date of training 2008

HGM Class used for rating Slope Wetland has multiple HGM classes? ☐ Yes ☑ No

NOTE: Form is not complete with out the figures requested (*figures can be combined*).
Source of base aerial photo/map Google Earth

OVERALL WETLAND CATEGORY IV (based on functions ☑ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

_____ **Category I** - Total score = 23 - 27
_____ **Category II** - Total score = 20 - 22
_____ **Category III** - Total score = 16 - 19
X **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		List appropriate rating (H, M, L)		
Site Potential	L	L	L	
Landscape Potential	L	L	L	
Value	H	M	M	**Total**
Score Based on Ratings	5	4	4	**13**

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number W11

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	1
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	1
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to another figure*)	S 4.1	1
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	4

Wetland name or number W11

HGM Classification of Wetland in Western Washington

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

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

☑ NO - go to 2 ☐ **YES** - the wetland class is **Tidal Fringe** - go to 1.1

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

☐ **NO - Saltwater Tidal Fringe (Estuarine)** ☐ **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

☑ NO - go to 3 ☐ **YES** - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

☑ NO - go to 4 ☐ **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.**

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

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
- ☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ☐ The overbank flooding occurs at least once every 2 years.

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

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

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

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

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

☐ NO - go to 8 ☐ **YES** - The wetland class is **Depressional**

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

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

HGM classes within the wetland unit 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 of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

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

Wetland name or number W11

SLOPE WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (*a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance*) Slope is 1% or less — points = 3 Slope is > 1% - 2% — points = 2 Slope is > 2% - 5% — points = 1 Slope is greater than 5% — points = 0	1
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. *Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.* Dense, uncut, herbaceous plants > 90% of the wetland area — points = 6 Dense, uncut, herbaceous plants > ½ of area — points = 3 Dense, woody, plants > ½ of area — points = 2 Dense, uncut, herbaceous plants > ¼ of area — points = 1 Does not meet any of the criteria above for plants — points = 0	2
Total for S 1 — Add the points in the boxes above	**3**

Rating of Site Potential If score is: ☐ **12 = H** ☐ **6 - 11 = M** ☑ **0 - 5 = L** *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Yes = 1 No = 0	0
Total for S 2 — Add the points in the boxes above	**0**

Rating of Landscape Potential If score is: ☐ **1 - 2 = M** ☑ **0 = L** *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *At least one aquatic resource in the basin is on the 303(d) list.* Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? A*nswer YES if there is a TMDL for the basin in which the unit is found*? Yes = 2 No = 0	2
Total for S 3 — Add the points in the boxes above	**3**

Rating of Value If score is: ☑ **2 - 4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W11

SLOPE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion

S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits 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** plants cover > 90% of the area of the wetland — points = 1 All other conditions — points = 0	0

Rating of Site Potential If score is: ☐ **1 = M** ☑ **0 = L** *Record the rating on the first page*

S 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	0

Rating of Landscape Potential If score is: ☐ **1 = M** ☑ **0 = L** *Record the rating on the first page*

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) — points = 2 Surface flooding problems are in a sub-basin farther down-gradient — points = 1 No flooding problems anywhere downstream — points = 0	1
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 — Add the points in the boxes above	**1**

Rating of Value If score is: ☐ **2 - 4 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:
downslope of the delineated portion of the wetland, the wetland had been disturbed by human activity (homeless encampment) and subsequently restored. Wetland is reestablishing, a channel is also forming. Wetland soils are not evident in restored area. Restoration is recent (within the last 1 or 1 years). Upland plants that were planted are not growing well in wet areas. Restored area included in rating even though it was not delineated.

Wetland name or number W11

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

☐ Aquatic bed	4 structures or more: points = 4	0
☐ Emergent	3 structures: points = 2	
☑ Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points - 1	
☐ Forested (areas where trees have > 30% cover)	1 structure: points = 0	

If the unit has a Forested class, check if:

☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

☐ Permanently flooded or inundated	4 or more types present: points = 3	1
☐ Seasonally flooded or inundated	3 types present: points = 2	
☐ Occasionally flooded or inundated	2 types present: points = 1	
☑ Saturated only	1 types present: points = 0	
☐ Permanently flowing stream or river in, or adjacent to, the wetland		
☑ Seasonally flowing stream in, or adjacent to, the wetland		
☐ **Lake Fringe wetland**	**2 points**	
☐ **Freshwater tidal wetland**	**2 points**	

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

1

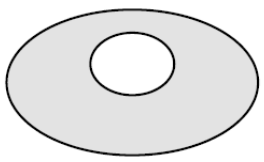
If you counted:	> 19 species	points = 2
	5 - 19 species	points = 1
	< 5 species	points = 0

H 1.4. Interspersion of habitats

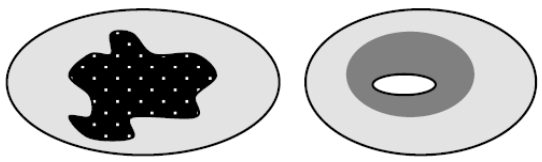
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*

2

None = 0 points

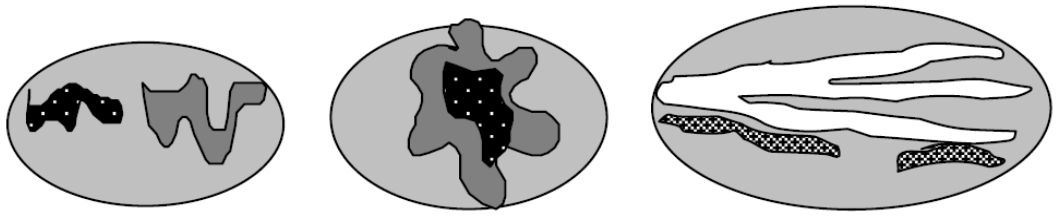


Low = 1 point



Moderate = 2 points

All three diagrams in this row are **HIGH** = 3 points



Wetland name or number W11

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☐ Standing snags (dbh > 4 in) within the wetland ☑ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (*cut shrubs or trees that have not yet weathered where wood is exposed*) ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by amphibians*) ☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	1
Total for H 1 Add the points in the boxes above	**5**

Rating of Site Potential If Score is: ☐ **15 - 18 = H** ☐ **7 - 14 = M** ☑ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 0 % undisturbed habitat + (10 % moderate & low intensity land uses / 2) = 5% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* 0 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 10% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	**-1**

Rating of Landscape Potential If Score is: ☐ **4 - 6 = H** ☐ **1 - 3 = M** ☑ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated* . Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	1

Rating of Value If Score is: ☐ **2 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number W11

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.
http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here:
http://wdfw.wa.gov/conservation/phs/list/

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

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

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

Wetland name or number W11

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

SC 4.0. Forested Wetlands

Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.***

☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.

☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).

☐ Yes = **Category I** ☑ No = **Not a forested wetland for this section**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks

☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☑ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

☐ Long Beach Peninsula: Lands west of SR 103

☐ Grayland-Westport: Lands west of SR 105

☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☑ No = **Not an interdunal wetland for rating**

SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?

☐ Yes = **Category I** ☐ No - Go to **SC 6.2**

SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?

☐ Yes = **Category II** ☐ No - Go to **SC 6.3**

SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?

☐ Yes = **Category III** ☐ No = **Category IV**

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: 94043

Get Directions History

Places

- 150ft4
- Earth Point Topo Map
  USGS Quadrangles
- surveyed_wl_merge
  - surveyed_watercource_merge
  - surveyed_wl_merge
    - highpoint
- contributing basin
- surveyed_wl_merge
- forested
- 150ft
- 1km W3
- moderate & low intensity land use
- moderate to low
- moderate to low
- 1km w9
- moderate low w9
- 150ftw9
- W11 1km
- w11 mod to low
- w11mod to low
- mod to low w11
- w5 150ft

Layers Earth Gallery »

- Primary Database
  - Voyager
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean
  - Weather
  - Gallery
  - Global Awareness
  - More
  - Terrain

Sign in

Wetland 6

150 ft

Scrub-shrub
Saturated only

Dense uncut rigid plants (blackberries) over 90% of the wetland

Wetland 5

150 ft

Scrub-shrub
Saturated only

Dense uncut rigid plants (blackberries) over 90% of the wetland

Dense, uncut, woody plants

Wetland 11

150 ft

Seasonally flowing stream (approximate location)

Scrub-shrub
Saturated only

Wetland 11 likely continues to the east of the delineated wetland

Approximate wetland boundary

Google earth

Tour Guide 1990

47°33'51.41" N 122°17'57.79" W elev 0 ft eye alt 1286 ft

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: 94043

Get Directions History

Places

- Scrub shrub
- 150 feet
- 150ft2
- 150ft 3
- outlet
- 150ft4
- Earth Point Topo Map
  USGS Quadrangles
- surveyed_wl_merge
  - surveyed_watercourse_merge
  - surveyed_wl_merge
    - highpoint
- contributing basin
- surveyed_wl_merge
- forested
- 150ft
- 1km W3
- moderate & low intensity land use
- moderate to low
- moderate to low
- 1km w9
- moderate low w9
- 150ftw9
- W11 1km
- w11 mod to low
- w11mod to low
- mod to low w11
- w5 150ft
- w5 1km
- w5low to mod
- w5low to modeb
- w2 1km
- w2 mod to low
- w2modtolow
- w4 1km
- w4 1kmb
- w4modtolow
- w4 mod to lowb
- modtolowall
- w11ltom

Layers Earth Gallery

- Primary Database
  - Voyager
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean

Sign in

1KM Radius from Wetland 11

No relatively undisturbed habitat

Moderate & Low Intensity

High Intensity

Moderate & Low Intensity

High Intensity

Wetland 11

Moderate & Low Intensity

Moderate & Low Intensity

High Intensity

Moderate & Low Intensity

Tour Guide 1990

Google earth

47°33'34.01" N 122°18'04.18" W elev 0 ft eye alt 12837 ft

HTTP 404 Error Message | Water Quality Assessmer | Water Quality Atlas Map

State of Washington [US] | https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?CustomMap=y&RT=0&Layers=23,29&Filters=n,n,n,n

DEPARTMENT OF ECOLOGY State of Washington

Washington State Water Quality Atlas

Home | Add Map Data | Clear Map Data

Legend | Filter Data | Zoom To | Tools

Add or remove map data

Assessed Waters/Sediment

Water

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

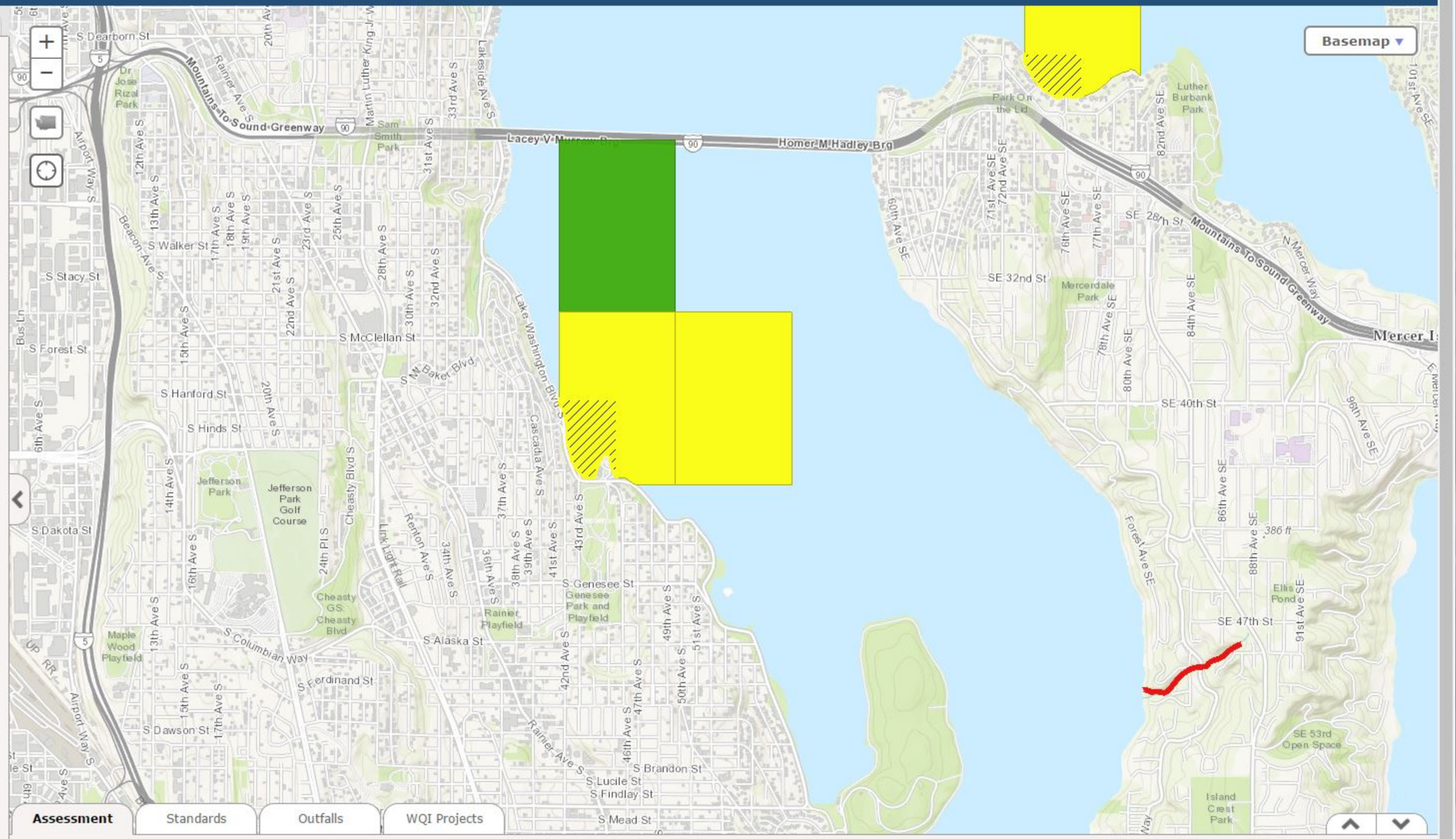
Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Change map data transparency

10%

0 0.2 0.4mi



Assessment | Standards | Outfalls | WQI Projects

Zoom to selection | Export to csv

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details

No filter applied, to view records filter data

Showing 0 to 0 of 0 entries

Previous Next

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
4672	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
4676	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
500005	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500006	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500007	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500038	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
12193	5	WASHINGTON LAKE	Bacteria	Water
12206	5	WASHINGTON LAKE	Bacteria	Water
43482	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
51591	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51592	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51593	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51706	5	WASHINGTON LAKE	4,4'-DDD	Tissue
51767	5	WASHINGTON LAKE	4,4'-DDE	Tissue
52642	5	WASHINGTON LAKE	Mercury	Tissue
52703	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52704	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52705	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52766	5	WASHINGTON LAKE	Total Chlordane	Tissue
52853	5	WASHINGTON LAKE	Total Phosphorus	Water
74460	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74461	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74775	5	WASHINGTON LAKE	Bacteria	Water
76477	5	WASHINGTON LAKE	Dieldrin	Tissue
76478	5	WASHINGTON LAKE	Dieldrin	Tissue
76479	5	WASHINGTON LAKE	Dieldrin	Tissue
77049	5	WASHINGTON LAKE	Chlordane	Tissue
77050	5	WASHINGTON LAKE	Chlordane	Tissue
77064	5	WASHINGTON LAKE	Chlordane	Tissue
500009	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
500010	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
8078	2	WASHINGTON LAKE	Lead	Water
11960	2	WASHINGTON LAKE	Ammonia-N	Water
11963	2	WASHINGTON LAKE	Ammonia-N	Water

Figure 4. TMDL List, Page 1

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
11964	2	WASHINGTON LAKE	Ammonia-N	Water
11970	2	WASHINGTON LAKE	Ammonia-N	Water
12207	2	WASHINGTON LAKE	Bacteria	Water
12264	2	WASHINGTON LAKE	Mercury	Water
12272	2	WASHINGTON LAKE	Mercury	Water
12311	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12312	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12313	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12314	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12315	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12316	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12317	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12318	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
51644	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51645	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51646	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
11972	1	WASHINGTON LAKE	Ammonia-N	Water
11973	1	WASHINGTON LAKE	Ammonia-N	Water
12183	1	WASHINGTON LAKE	Bacteria	Water
12186	1	WASHINGTON LAKE	Bacteria	Water
12189	1	WASHINGTON LAKE	Bacteria	Water
12190	1	WASHINGTON LAKE	Bacteria	Water
12194	1	WASHINGTON LAKE	Bacteria	Water
12195	1	WASHINGTON LAKE	Bacteria	Water
12196	1	WASHINGTON LAKE	Bacteria	Water
12197	1	WASHINGTON LAKE	Bacteria	Water
12200	1	WASHINGTON LAKE	Bacteria	Water
12201	1	WASHINGTON LAKE	Bacteria	Water
12202	1	WASHINGTON LAKE	Bacteria	Water
43481	1	WASHINGTON LAKE	Toxaphene	Tissue
43483	1	WASHINGTON LAKE	Mercury	Tissue
43484	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
43485	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
43486	1	WASHINGTON LAKE	Heptachlor	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
43487	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
43488	1	WASHINGTON LAKE	Endrin	Tissue
43492	1	WASHINGTON LAKE	Beta-BHC	Tissue
43493	1	WASHINGTON LAKE	Alpha-BHC	Tissue
43494	1	WASHINGTON LAKE	4,4'-DDT	Tissue
43495	1	WASHINGTON LAKE	4,4'-DDE	Tissue
43496	1	WASHINGTON LAKE	4,4'-DDD	Tissue
51827	1	WASHINGTON LAKE	4,4'-DDT	Tissue
51949	1	WASHINGTON LAKE	Alpha-BHC	Tissue
52010	1	WASHINGTON LAKE	Beta-BHC	Tissue
52403	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
52464	1	WASHINGTON LAKE	Heptachlor	Tissue
52585	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
52854	1	WASHINGTON LAKE	Total Phosphorus	Water
52855	1	WASHINGTON LAKE	Total Phosphorus	Water
52856	1	WASHINGTON LAKE	Total Phosphorus	Water
52857	1	WASHINGTON LAKE	Total Phosphorus	Water
52858	1	WASHINGTON LAKE	Total Phosphorus	Water
52859	1	WASHINGTON LAKE	Total Phosphorus	Water
52860	1	WASHINGTON LAKE	Total Phosphorus	Water
52861	1	WASHINGTON LAKE	Total Phosphorus	Water
52862	1	WASHINGTON LAKE	Total Phosphorus	Water
52863	1	WASHINGTON LAKE	Total Phosphorus	Water
52864	1	WASHINGTON LAKE	Total Phosphorus	Water
52865	1	WASHINGTON LAKE	Total Phosphorus	Water
74484	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74485	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74772	1	WASHINGTON LAKE	Bacteria	Water
74776	1	WASHINGTON LAKE	Bacteria	Water
75112	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75114	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75221	1	WASHINGTON LAKE	Beta-BHC	Tissue
75222	1	WASHINGTON LAKE	Beta-BHC	Tissue
75309	1	WASHINGTON LAKE	Endrin	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
75310	1	WASHINGTON LAKE	Endrin	Tissue
75311	1	WASHINGTON LAKE	Endrin	Tissue
75400	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75401	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75402	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75403	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75486	1	WASHINGTON LAKE	Heptachlor	Tissue
75487	1	WASHINGTON LAKE	Heptachlor	Tissue
75563	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75564	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75565	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75645	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75646	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75791	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75792	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75793	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75794	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
77219	1	WASHINGTON LAKE	Toxaphene	Tissue
77220	1	WASHINGTON LAKE	Toxaphene	Tissue
77236	1	WASHINGTON LAKE	Toxaphene	Tissue
77243	1	WASHINGTON LAKE	Endosulfan	Tissue
78987	1	WASHINGTON LAKE	Endosulfan	Tissue
78988	1	WASHINGTON LAKE	Endosulfan	Tissue
78989	1	WASHINGTON LAKE	Endosulfan	Tissue
79488	1	WASHINGTON LAKE	Mercury	Tissue
79502	1	WASHINGTON LAKE	Mercury	Tissue

Wetland name or number 12

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 12 Date of site visit: 5-Apr-17

Rated by Claire Hoffman Trained by Ecology? ☑ Yes ☐ No Date of training Mar-17

HGM Class used for rating Slope Wetland has multiple HGM classes? ☐ Yes ☑ No

NOTE: Form is not complete with out the figures requested (*figures can be combined*).
Source of base aerial photo/map Google Earth

OVERALL WETLAND CATEGORY IV (based on functions ☑ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

_____ **Category I** - Total score = 23 - 27
_____ **Category II** - Total score = 20 - 22
_____ **Category III** - Total score = 16 - 19
X **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		List appropriate rating (H, M, L)		
Site Potential	L	M	L	
Landscape Potential	L	L	L	
Value	M	M	M	**Total**
Score Based on Ratings	4	5	4	**13**

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number 12

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	1
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	1
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to another figure*)	S 4.1	1
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	3
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	4

Wetland name or number 12

HGM Classification of Wetland in Western Washington

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

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

☑ NO - go to 2 ☐ **YES** - the wetland class is **Tidal Fringe** - go to 1.1

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

☑ **NO - Saltwater Tidal Fringe (Estuarine)** ☐ **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

☐ NO - go to 3 ☐ **YES** - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

☑ NO - go to 4 ☐ **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.**

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

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
- ☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ☐ The overbank flooding occurs at least once every 2 years.

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

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

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

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

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

☑ NO - go to 8 ☐ **YES** - The wetland class is **Depressional**

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

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

HGM classes within the wetland unit 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 of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

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

Wetland name or number 12

SLOPE WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (*a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance*) Slope is 1% or less — points = 3 Slope is > 1% - 2% — points = 2 Slope is > 2% - 5% — points = 1 Slope is greater than 5% — points = 0	3
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. *Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.* Dense, uncut, herbaceous plants > 90% of the wetland area — points = 6 Dense, uncut, herbaceous plants > ½ of area — points = 3 Dense, woody, plants > ½ of area — points = 2 Dense, uncut, herbaceous plants > ¼ of area — points = 1 Does not meet any of the criteria above for plants — points = 0	2
Total for S 1 — Add the points in the boxes above	**5**

Rating of Site Potential If score is: ☐ **12 = H** ☐ **6 - 11 = M** ☑ **0 - 5 = L** *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Yes = 1 No = 0	0
Total for S 2 — Add the points in the boxes above	**0**

Rating of Landscape Potential If score is: ☐ **1 - 2 = M** ☑ **0 = L** *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? *At least one aquatic resource in the basin is on the 303(d) list.* Yes = 1 No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? A*nswer YES if there is a TMDL for the basin in which the unit is found*? Yes = 2 No = 0	0
Total for S 3 — Add the points in the boxes above	**1**

Rating of Value If score is: ☐ **2 - 4 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

Wetland name or number 12

SLOPE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion

S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits 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** plants cover > 90% of the area of the wetland — points = 1 All other conditions — points = 0	1

Rating of Site Potential If score is: ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

S 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	0

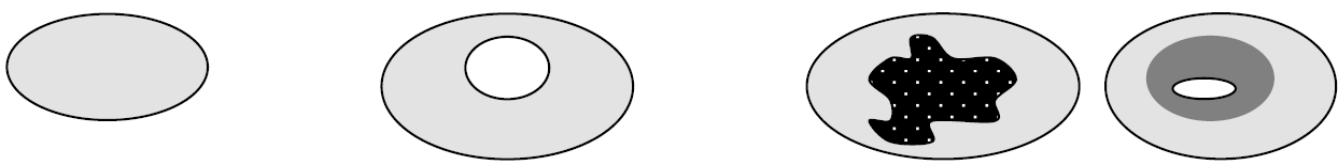
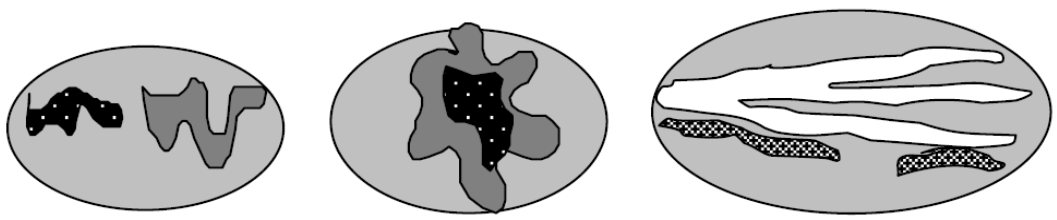
Rating of Landscape Potential If score is: ☐ **1 = M** ☑ **0 = L** *Record the rating on the first page*

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) — points = 2 Surface flooding problems are in a sub-basin farther down-gradient — points = 1 No flooding problems anywhere downstream — points = 0	1
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for S 6 Add the points in the boxes above	**1**

Rating of Value If score is: ☐ **2 - 4 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:

Wetland name or number 12

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

Wetland name or number 12

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☑ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☐ Standing snags (dbh > 4 in) within the wetland ☐ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (*cut shrubs or trees that have not yet weathered where wood is exposed*) ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by amphibians*) ☑ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	2
Total for H 1 Add the points in the boxes above	**3**

Rating of Site Potential If Score is: ☐ **15 - 18 = H** ☐ **7 - 14 = M** ☑ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 0 % undisturbed habitat + (10 % moderate & low intensity land uses / 2) = 5% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* 0 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 10% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	**-1**

Rating of Landscape Potential If Score is: ☐ **4 - 6 = H** ☐ **1 - 3 = M** ☑ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated* . Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	1

Rating of Value If Score is: ☐ **2 = H** ☑ **1 = M** ☐ **0 = L** *Record the rating on the first page*

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.
http://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here:
http://wdfw.wa.gov/conservation/phs/list/

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

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

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

Wetland name or number 12

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland name or number 12

SC 4.0. Forested Wetlands

Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.***

☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.

☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).

☐ Yes = **Category I** ☐ No = **Not a forested wetland for this section**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks

☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☐ No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

☐ Long Beach Peninsula: Lands west of SR 103

☐ Grayland-Westport: Lands west of SR 105

☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☐ No = **Not an interdunal wetland for rating**

SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?

☐ Yes = **Category I** ☐ No - Go to **SC 6.2**

SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?

☐ Yes = **Category II** ☐ No - Go to **SC 6.3**

SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?

☐ Yes = **Category III** ☐ No = **Category IV**

Category of wetland based on Special Characteristics

If you answered No for all types, enter "Not Applicable" on Summary Form

Google Earth Pro

File Edit View Tools Add Help

Sign in

▼ Search

Search

ex: 37 25.818' N, 122 05.36' W

Get Directions History

▼ Places

- mod to low w11
- w5 150ft
- w5 1km
- w5low to mod
- w5low to modeb
- w2 1km
- w2 mod to low
- w2modtolow
- w4 1km
- w4 1kmb
- w4modtolow
- w4 mod to lowb
- modtolowall
- w11ltom
- w9modlow
- w3modlow
- w3modtolow
- w6 1km
- w6lowtomod
- w6 low tomods
- w6lowmod
- SiteVisit_Points
- outlet
- Layers
- w1 150a
- w1150
- w1 150c
- outlet
- Wetland 1
- 150
- 150a
- 150aa
- 1km w1
- Polygon Measure
- Polygon Measure
- Polygon Measure
- Polygon Measure
- 1km W8
- Polygon Measure
- Polygon Measure
- Polygon Measure
- Line Measure
- Line Measure
- Line Measure
- Line Measure
- Temporary Places
- Polygon Measure

▼ Layers

- Primary Database
- The new Google Earth
- Borders and Labels
- Places

150 feet

150 feet

Wetland 12

Scrub shrub
Saturated only
dense, uncut woody plants

Wetland 1

Saturated only

Seasonally flooded

outlet

Google earth

Tour Guide 1990

47°33'40.58" N 122°18'03.80" W elev 277 ft eye alt 1095 ft

Google Earth Pro

File Edit View Tools Add Help

Search

Search

ex: Tokyo, Japan

Get Directions History

Places

- modtolowall
- w11ltom
- w9modlow
- w3modlow
- w3modtolow
- w6 1km
- w6lowtomod
- w6 low tomods
- w6lowmod
- SiteVisit_Points
- outlet
- Temporary Places
  - Layers
  - w1 150a
  - w1150
  - w1 150c
  - outlet
  - Wetland 1
  - 150
  - 150a
  - 150aa
  - 1km w1
  - Polygon Measure
  - Polygon Measure
  - Polygon Measure
  - Polygon Measure

Layers

- Primary Database
  - The new Google Earth
  - Borders and Labels
  - Places
  - Photos
  - Roads
  - 3D Buildings
  - Ocean
  - Weather
  - Gallery
  - Global Awareness
  - More
  - Terrain

Sign in

1 KM Radius from Wetlands 1 and 12

No relatively undisturbed habitat

High Intensity

Moderate & Low Intensity

Moderate & Low Intensity

Wetland 1

Wetland 12

Moderate & Low Intensity

Moderate & Low Intensity

Moderate & Low Intensity

Tour Guide 1990

Imagery Date: 6/27/2016 47°34'04.58" N 122°18'21.52" W elev 349 ft eye alt 8143 ft

Google earth

HTTP 404 Error Message | Water Quality Assessmer | Water Quality Atlas Map

State of Washington [US] | https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?CustomMap=y&RT=0&Layers=23,29&Filters=n,n,n,n

DEPARTMENT OF ECOLOGY State of Washington

Washington State Water Quality Atlas

Home | Add Map Data | Clear Map Data

Legend | Filter Data | Zoom To | Tools

Add or remove map data

Assessed Waters/Sediment

Water

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

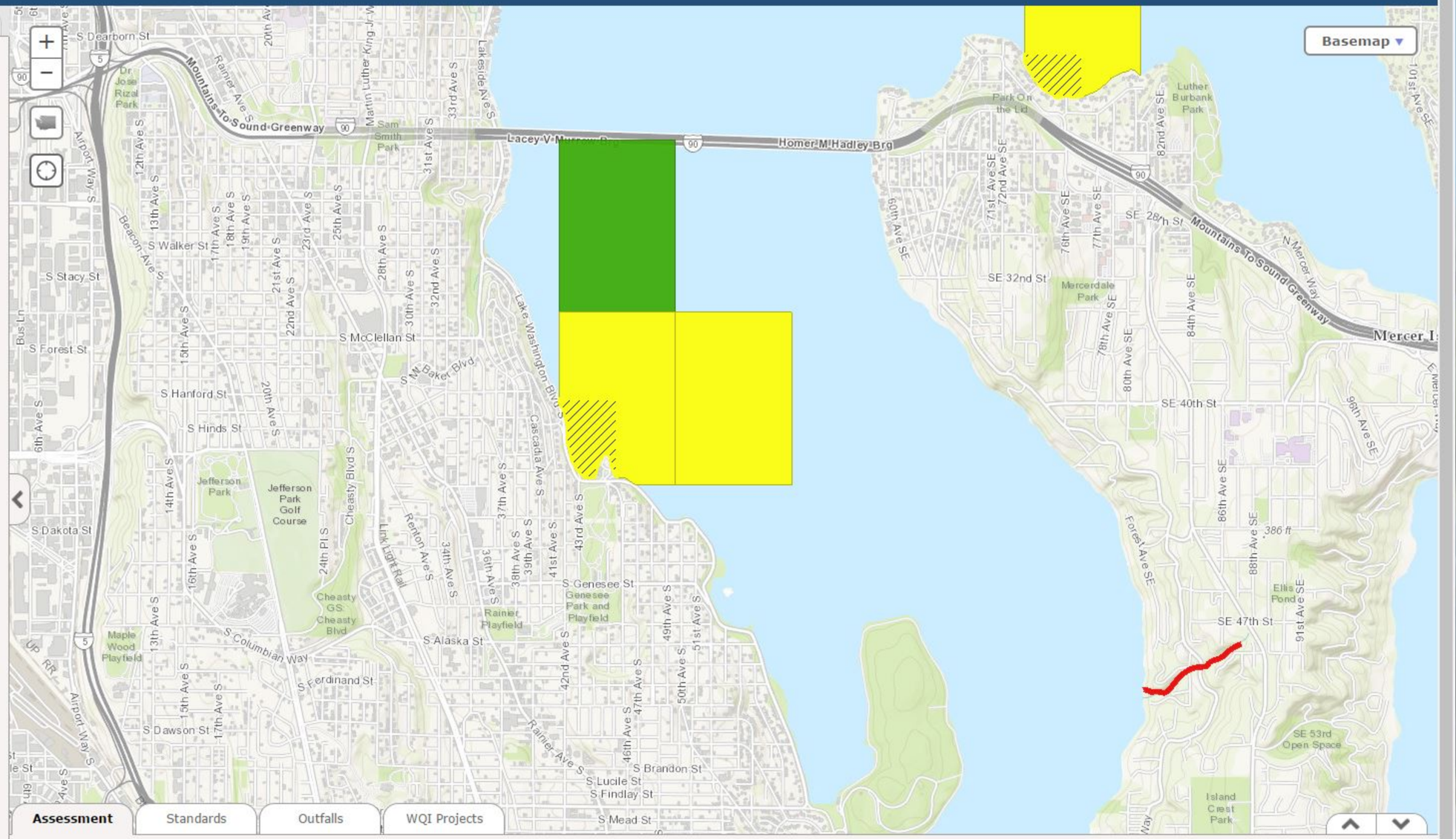
Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Change map data transparency

10%

0 0.2 0.4mi



Assessment | Standards | Outfalls | WQI Projects

Zoom to selection | Export to csv

Find	Listing ID	Assessment Unit ID	Category	Medium	Parameter	Details

No filter applied, to view records filter data

Showing 0 to 0 of 0 entries

Previous Next

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
4672	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
4676	4C	WASHINGTON LAKE	Invasive Exotic Species	Habitat
500005	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500006	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500007	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
500038	2 RANK 4	WASHINGTON LAKE	Sediment Bioassay	Sediment
12193	5	WASHINGTON LAKE	Bacteria	Water
12206	5	WASHINGTON LAKE	Bacteria	Water
43482	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
51591	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51592	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51593	5	WASHINGTON LAKE	2,3,7,8-TCDD (Dioxin)	Tissue
51706	5	WASHINGTON LAKE	4,4'-DDD	Tissue
51767	5	WASHINGTON LAKE	4,4'-DDE	Tissue
52642	5	WASHINGTON LAKE	Mercury	Tissue
52703	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52704	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52705	5	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Tissue
52766	5	WASHINGTON LAKE	Total Chlordane	Tissue
52853	5	WASHINGTON LAKE	Total Phosphorus	Water
74460	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74461	5	WASHINGTON LAKE	4,4'-DDE	Tissue
74775	5	WASHINGTON LAKE	Bacteria	Water
76477	5	WASHINGTON LAKE	Dieldrin	Tissue
76478	5	WASHINGTON LAKE	Dieldrin	Tissue
76479	5	WASHINGTON LAKE	Dieldrin	Tissue
77049	5	WASHINGTON LAKE	Chlordane	Tissue
77050	5	WASHINGTON LAKE	Chlordane	Tissue
77064	5	WASHINGTON LAKE	Chlordane	Tissue
500009	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
500010	5	WASHINGTON LAKE	Sediment Bioassay	Sediment
8078	2	WASHINGTON LAKE	Lead	Water
11960	2	WASHINGTON LAKE	Ammonia-N	Water
11963	2	WASHINGTON LAKE	Ammonia-N	Water

Figure 4. TMDL List, Page 1

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
11964	2	WASHINGTON LAKE	Ammonia-N	Water
11970	2	WASHINGTON LAKE	Ammonia-N	Water
12207	2	WASHINGTON LAKE	Bacteria	Water
12264	2	WASHINGTON LAKE	Mercury	Water
12272	2	WASHINGTON LAKE	Mercury	Water
12311	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12312	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12313	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12314	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12315	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12316	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12317	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
12318	2	WASHINGTON LAKE	Polychlorinated Biphenyls (PCBs)	Water
51644	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51645	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
51646	2	WASHINGTON LAKE	2,3,7,8-TCDD TEQ	Tissue
11972	1	WASHINGTON LAKE	Ammonia-N	Water
11973	1	WASHINGTON LAKE	Ammonia-N	Water
12183	1	WASHINGTON LAKE	Bacteria	Water
12186	1	WASHINGTON LAKE	Bacteria	Water
12189	1	WASHINGTON LAKE	Bacteria	Water
12190	1	WASHINGTON LAKE	Bacteria	Water
12194	1	WASHINGTON LAKE	Bacteria	Water
12195	1	WASHINGTON LAKE	Bacteria	Water
12196	1	WASHINGTON LAKE	Bacteria	Water
12197	1	WASHINGTON LAKE	Bacteria	Water
12200	1	WASHINGTON LAKE	Bacteria	Water
12201	1	WASHINGTON LAKE	Bacteria	Water
12202	1	WASHINGTON LAKE	Bacteria	Water
43481	1	WASHINGTON LAKE	Toxaphene	Tissue
43483	1	WASHINGTON LAKE	Mercury	Tissue
43484	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
43485	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
43486	1	WASHINGTON LAKE	Heptachlor	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
43487	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
43488	1	WASHINGTON LAKE	Endrin	Tissue
43492	1	WASHINGTON LAKE	Beta-BHC	Tissue
43493	1	WASHINGTON LAKE	Alpha-BHC	Tissue
43494	1	WASHINGTON LAKE	4,4'-DDT	Tissue
43495	1	WASHINGTON LAKE	4,4'-DDE	Tissue
43496	1	WASHINGTON LAKE	4,4'-DDD	Tissue
51827	1	WASHINGTON LAKE	4,4'-DDT	Tissue
51949	1	WASHINGTON LAKE	Alpha-BHC	Tissue
52010	1	WASHINGTON LAKE	Beta-BHC	Tissue
52403	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
52464	1	WASHINGTON LAKE	Heptachlor	Tissue
52585	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
52854	1	WASHINGTON LAKE	Total Phosphorus	Water
52855	1	WASHINGTON LAKE	Total Phosphorus	Water
52856	1	WASHINGTON LAKE	Total Phosphorus	Water
52857	1	WASHINGTON LAKE	Total Phosphorus	Water
52858	1	WASHINGTON LAKE	Total Phosphorus	Water
52859	1	WASHINGTON LAKE	Total Phosphorus	Water
52860	1	WASHINGTON LAKE	Total Phosphorus	Water
52861	1	WASHINGTON LAKE	Total Phosphorus	Water
52862	1	WASHINGTON LAKE	Total Phosphorus	Water
52863	1	WASHINGTON LAKE	Total Phosphorus	Water
52864	1	WASHINGTON LAKE	Total Phosphorus	Water
52865	1	WASHINGTON LAKE	Total Phosphorus	Water
74484	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74485	1	WASHINGTON LAKE	4,4'-DDD	Tissue
74772	1	WASHINGTON LAKE	Bacteria	Water
74776	1	WASHINGTON LAKE	Bacteria	Water
75112	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75114	1	WASHINGTON LAKE	4,4'-DDT	Tissue
75221	1	WASHINGTON LAKE	Beta-BHC	Tissue
75222	1	WASHINGTON LAKE	Beta-BHC	Tissue
75309	1	WASHINGTON LAKE	Endrin	Tissue

LISTING_ID	CATEGORY_2014	WATERBODY_NAME	PARAMETER_NAME	MEDIUM_NAME
75310	1	WASHINGTON LAKE	Endrin	Tissue
75311	1	WASHINGTON LAKE	Endrin	Tissue
75400	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75401	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75402	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75403	1	WASHINGTON LAKE	Endrin Aldehyde	Tissue
75486	1	WASHINGTON LAKE	Heptachlor	Tissue
75487	1	WASHINGTON LAKE	Heptachlor	Tissue
75563	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75564	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75565	1	WASHINGTON LAKE	Heptachlor Epoxide	Tissue
75645	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75646	1	WASHINGTON LAKE	Hexachlorobenzene	Tissue
75791	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75792	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75793	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
75794	1	WASHINGTON LAKE	Hexachlorocyclohexane (Lindane)	Tissue
77219	1	WASHINGTON LAKE	Toxaphene	Tissue
77220	1	WASHINGTON LAKE	Toxaphene	Tissue
77236	1	WASHINGTON LAKE	Toxaphene	Tissue
77243	1	WASHINGTON LAKE	Endosulfan	Tissue
78987	1	WASHINGTON LAKE	Endosulfan	Tissue
78988	1	WASHINGTON LAKE	Endosulfan	Tissue
78989	1	WASHINGTON LAKE	Endosulfan	Tissue
79488	1	WASHINGTON LAKE	Mercury	Tissue
79502	1	WASHINGTON LAKE	Mercury	Tissue

APPENDIX D: BIRD SURVEY DATA SHEETS

BIRD SURVEY DATA SHEET

Project / Site: CHEASTY GREENSPACE 140744.01	**Date:** 12-13-16
Scope / Purpose: WINTER SURVEY	**Time:** 8:30 am - 11:00 am
Observers: ELON LOGAN & PETER CARR	**County / State:** KING / WA
Survey Conditions: Cold & calm, occ. light wind **TEMPERATURE** ~35° **WEATHER** CLEAR (PARTLY-CLOUDY) OVERCAST **PRECIPITATION** (NONE) MIST DRIZZLE RAIN	**Site Activity Notes:** High level of ambient noise - planes overhead (every 1-3 mins) - traffic on Cheasty Blvd & others - light rail regular noise from bells & crossings

4-ltr code	Species	Initial Position	Detection Method	If AUD S or C	Sex M	Sex F	Sex U	Behavior / Notes
GCKI	Golden-crowned kinglet	FLT / (GRD)	(VIS) / AUD		X	X		F
SOSP	Song sparrow	FLT / (GRD)	(VIS) / AUD				X	F
BCCH	Black capped chickadee	FLT / (GRD)	(VIS) / (AUD)	X			X	F, FL
CBCH	Chestnut-backed chickadee	FLT / (GRD)	(VIS) / AUD				X	F
BEWR	Bewick's wren	FLT / (GRD)	(VIS) / AUD				X	F
NOFL	Northern flicker	(FLT) / GRD	(VIS) / (AUD)	X			X	F, FL, AL
RCKI	Ruby-crowned kinglet	FLT / (GRD)	(VIS) / AUD				X	F
PAWR	Pacific wren	FLT / (GRD)	(VIS) / AUD				X	F
BRCR	Brown creeper	FLT / (GRD)	(VIS) / AUD				X	F
AMGO	American goldfinch	(FLT) / GRD	VIS / (AUD)	X			X	FL
AMRO	American robin	FLT / (GRD)	(VIS) / (AUD)	X			X	F
RBSA	Red-breasted sapsucker	FLT / (GRD) tree	(VIS) / AUD				X	F, FL excavations obs
SPTO	Spotted towhee	FLT / (GRD)	(VIS) / (AUD)	X			X	F
RTHA	Red-tailed hawk	(FLT) / GRD	(VIS) / (AUD)	X			X	FL over Send & greenspace
DCCO	Double-crested cormorant	(FLT) / GRD	(VIS) / AUD				X	FL
BAEA	Bald eagle	(FLT) / GRD	(VIS) / AUD				X	FL west & greenspace
STJA	Steller's jay	(FLT) / GRD	(VIS) / AUD				X	FL, F
ANHU	Anna's hummingbird	FLT / (GRD)	(VIS) / (AUD)	X			X	Perched & vocalizing
DOWO	Downy woodpecker	FLT / (GRD)	(VIS) / (AUD)	X			X	F
DEJU	Dark-eyed junco	FLT (GRD)	(VIS) / AUD				X	FL, F

Data Codes

Initial Position (choose one): FLT = in flight GRD = on ground/tree

Detection Method: VIS = visual/seen AUD = aural/heard

If AUD (pick one): S = song C = call

Behavior Codes: F = Forage, FL = flying, R= resting/roosting, FS = flushed, AL = alert posture (erect w/neck extended, not vocalizing), A = antagonistic behavior (chase or aggressive contact), CO = copulation, NM = carrying nest material

Other notes:
Eastern gray squirrel (2)

BIRD SURVEY DATA SHEET

Project / Site: CHEASTY GREENSPACE 140744.01	**Date:** 12-13-16
Observers: LON LOGAN & PETER CARR	**Time:** 8:30a START

~~Transect / Point~~	Species	Initial Position	Detection Method	If AUD S or C		Sex M	Sex F	Sex U	Behavior / Notes
GW×W	Glaucous-winged × Western gull	(FLT) / GRD	(VIS) / AUD					X	FL over greenspace
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						

Data Codes	**Initial Position (choose one):** FLT = in flight GRD = on ground **Detection Method:** VIS = visual/seen AUD = aural/heard **If AUD (pick one):** S = song C = call **Behavior Codes:** F = Forage, FL = flying, R= resting/roosting, FS = flushed, AL = alert posture (erect w/neck extended, not vocalizing), A = antagonistic behavior (chase or aggressive contact), CO = copulation, NM = carrying nest material
Other notes:	

BIRD SURVEY DATA SHEET

Project / Site: CHEASTY GREENSPACE 140744.01	**Date:** 4-4-17
Scope / Purpose: SPRING SURVEY	**Time:** 6:35a - 8:40a
Observers: FLON LOGAN & PETER CARR	**County / State:** KING / WA
Survey Conditions: Overcast, no wind **TEMPERATURE** ~45° ↑ **WEATHER** CLEAR PARTLY-CLOUDY (OVERCAST) **PRECIPITATION** (NONE) MIST DRIZZLE RAIN	**Site Activity Notes:** High level of background noise as previously noted. Spring conditions - plants leafing out, flowers blooming (red currant, salmonberry, skunk cabbage, etc.)

~~Transect~~ / ~~Point~~ 4th	Species	Initial Position	Detection Method	If AUD S or C		Sex M	F	U	Behavior / Notes
AMRO	American robin	FLT / (GRD)	(VIS) / (AUD)					X	AL, F, FL
HOFI	House finch	FLT / (GRD)	VIS / (AUD)	X		X			Singing west of greenspace
RCKI	Ruby-crowned kinglet	FLT / (GRD)	VIS / (AUD)	X		X			F
BEWR	Bewick's wren	FLT / (GRD)	(VIS) / (AUD)	X		X		X	F
AMCR	American crow	(FLT) / (GRD)	(VIS) / (AUD)					X	Some individ in park; flyovers
GWxW	Glaucous winged x Western hybrid gull	(FLT) / GRD	(VIS) / AUD					X	FL
SOSP	Song sparrow	FLT / (GRD)	(VIS) / (AUD)	X					F
SPTO	Spotted towhee	FLT / (GRD)	(VIS) / (AUD)					X	F
BCCH	Black-capped chickadee	(FLT) / (GRD)	(VIS) / (AUD)	X		X			Several ♂ singing
STJA	Steller's jay	(FLT) / GRD	(VIS) / AUD					X	
NOFL	Northern flicker	FLT / (GRD)	VIS / (AUD)					X	Several drumming
DEJU	Dark-eyed junco	FLT / GRD	VIS / (AUD)					X	
ANHU	Anna's hummingbird	FLT / (GRD)	(VIS) / (AUD)	X		X			Several individuals (~5)
COHA	Cooper's hawk	FLT / (GRD)	(VIS) / (AUD)			X	X		NM; Pair in courtship, extremely active, vocalizing, moving, interacting.
PAWR	Pacific wren	FLT / (GRD)	VIS / (AUD)	X		X			F
AMGO	American goldfinch	(FLT) / GRD	VIS / (AUD)					X	FL
BRCR	Brown creeper	FLT / (GRD)	(VIS) / AUD					X	F
RBNU	Red-breasted nuthatch	FLT / GRD	VIS / (AUD)					X	
RBSA	Reb-breasted sapsucker	FLT / (GRD)	(VIS) / AUD					X	F
VATH	Varied thrush	FLT / GRD	VIS / (AUD)					X	5 notes heard only

Data Codes

Initial Position (choose one): FLT = in flight GRD = on ground / FLL

Detection Method: VIS = visual/seen AUD = aural/heard

If AUD (pick one): S = song C = call

Behavior Codes: F = Forage, FL = flying, R= resting/roosting, FS = flushed, AL = alert posture (erect w/neck extended, not vocalizing), A = antagonistic behavior (chase or aggressive contact), CO = copulation, NM = carrying nest material

Other notes:

Sunrise 6:43a

Eastern grey squirrel (2)

BIRD SURVEY DATA SHEET

Project / Site: CHEASTY GREENSPACE 140744.01	**Date:** 4-4-17
Observers: ILON LOGAN & PETER CARR	**Time:** 6:35a START

~~Transect~~ / ~~Point~~	Species	Initial Position	Detection Method	If AUD S or C		Sex M	F	U	Behavior / Notes
BUSH	Bushtit	FLT / (GRD)	(VIS) / AUD					X	F
CBCH	Chestnut-backed chickadee	FLT / (GRD)	(VIS) / AUD					X	F
YRWA	Yellow rumped warbler	FLT / GRD	VIS / (AUD)	X		X			
GCKI	Golden-crowned kinglet	FLT / (GRD)	(VIS) / AUD					X	F
EUST	European starling	FLT / (GRD)	(VIS) / AUD					X	NM
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						
		FLT / GRD	VIS / AUD						

Data Codes

Initial Position (choose one): FLT = in flight GRD = on ground

Detection Method: VIS = visual/seen AUD = aural/heard

If AUD (pick one): S = song C = call

Behavior Codes: F = Forage, FL = flying, R= resting/roosting, FS = flushed, AL = alert posture (erect w/neck extended, not vocalizing), A = antagonistic behavior (chase or aggressive contact), CO = copulation, NM = carrying nest material

Other notes: Migrant species have not yet arrived (mostly); Birds active @ dawn. Much quieter by 8:30a. COHA active nesting building; they have an alternate nest site in vicinity (according to pedestrian on Cheasty blvd).

BIRD SURVEY DATA SHEET

Project / Site: CHEASTY GREENSPACE 140744.01	**Date:** 5-4-17
Scope / Purpose: SPRING SURVEY (3)	**Time:** 6:00a - 9:30a
Observers: ILON LOGAN & PETER CARR	**County / State:** KING / WA
Survey Conditions: Heavy fog, no wind	**Site Activity Notes:** Abundant spring plant growth
TEMPERATURE ~55° 98% humidity	
WEATHER CLEAR PARTLY-CLOUDY (OVERCAST)	
PRECIPITATION (NONE) MIST DRIZZLE RAIN	

~~Transect~~ 4 LTR / ~~Point~~	Species	Initial Position	Detection Method	If AUD S or C		Sex M	F	U	Behavior / Notes
	Red breasted sapsucker	FLT / (GRD)	(VIS) / AUD					X	N - Nesting in snag S of maint. yard
AMRO	American robin	FLT / (GRD)	(VIS) / (AUD)	X				X	7+ in greenspace singing.
DEJU	Dark-eyed junco	FLT / (GRD)	VIS / (AUD)	X				X	F
EUST	European starling	FLT / (GRD)	(VIS) / (AUD)					X	N - in snag in meadow - S of maint yard
BCCH	Black-capped chickadee	FLT / (GRD)	(VIS) / (AUD)	X				X	F
AMGO	American goldfinch	(FLT) / GRD	(VIS) / (AUD)		X			X	FL
SPTO	Spotted towhee	FLT / (GRD)	(VIS) / (AUD)		X			X	F
SOSP	Song sparrow	FLT / (GRD)	(VIS) / (AUD)	X		X			AL, F
AMCR	American crow	(FLT) / GRD	VIS / (AUD)		X			X	
CAGO	Canada goose	(FLT) / GRD	VIS / (AUD)		X			X	FL
BEWR	Bewick's wren	FLT / (GRD)	VIS / (AUD)	X		X			
HOFI	House finch	FLT / (GRD)	VIS / (AUD)	X		X			
WIWA	Wilsons warbler	FLT / (GRD)	VIS / (AUD)	X		X			F
PAWR	Pacific wren	FLT / (GRD)	VIS / (AUD)	X		X			F
STJA	Steller's jay	(FLT) / GRD	VIS / (AUD)		X		X		A
SWTH	Swainson's thrush	FLT / (GRD)	(VIS) / AUD					X	F
PSFL	Pacific-slope flycatcher	FLT / (GRD)	VIS / (AUD)	X		X			
NOFL	Northern flicker	(FLT) / GRD	(VIS) / (AUD)					X	
DOWO	Downy woodpecker	FLT / (GRD)	(VIS) / (AUD)		X	X			F
GWWG	Glaucous winged gull	(FLT) / GRD	(VIS) / AUD					X	

Data Codes	Other notes:
Initial Position (choose one): FLT = in flight GRD = on ground / FLT **Detection Method:** VIS = visual/seen AUD = aural/heard **If AUD (pick one):** S = song C = call **Behavior Codes:** F = Forage, FL = flying, R= resting/roosting, FS = flushed, AL = alert posture (erect w/neck extended, not vocalizing), A = antagonistic behavior (chase or aggressive contact), CO = copulation, NM = carrying nest material N= nesting confirmed	SUNRISE @ 5:48AM

BIRD SURVEY DATA SHEET

Project / Site: CHEASTY GREENSPACE 140744.01	**Date:** 5-4-17
Observers: ILON LOGAN & PETER CARR	**Time:** 6:00a START

Transect / Point	Species	Initial Position	Detection Method	If AUD S or C	Sex M	Sex F	Sex U	Behavior / Notes
COHA	Cooper's hawk	FLT / GRD	VIS / AUD		X	X		N - ♀ likely on eggs. F
ANHU	Anna's hummingbird	FLT / GRD	VIS / AUD	X	X			F, AL
RBNU	Red-breasted nuthatch	FLT / GRD	VIS / AUD	X	X			F
BUSH	Bushtit	FLT / GRD	VIS / AUD		X		X	F
CBCH	Chestnut-backed chick	FLT / GRD	VIS / AUD				X	F
VIREO	VIREO SP.	FLT / GRD	VIS / AUD				X	Probable/unconfirmed
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					
		FLT / GRD	VIS / AUD					

Data Codes	**Initial Position (choose one):** FLT = in flight GRD = on ground **Detection Method:** VIS = visual/seen AUD = aural/heard **If AUD (pick one):** S = song C = call **Behavior Codes:** F = Forage, FL = flying, R= resting/roosting, FS = flushed, AL = alert posture (erect w/neck extended, not vocalizing), A = antagonistic behavior (chase or aggressive contact), CO = copulation, NM = carrying nest material
Other notes:	

APPENDIX E: TREE INVENTORY

Table E-1. Trees in along Cheasty South portion of the Trail

Tree ID	Species	DBH	Condition	Exceptional	Notes
1	*Acer macrophyllum*	7	Good	No	
2	*Alnus rubra*	19	Poor	No	Phytophora
3	*Acer macrophyllum*	40	Good	Likely, grove	
4	*Acer macrophyllum*	40	Poor	No	
5	*Acer macrophyllum*	29	Fair	Likely, grove	
6	*Acer macrophyllum*	24	Good	Likely, grove	
7	*Acer macrophyllum*	76	Fair	Likely, grove	
8	*Acer macrophyllum*	17	Fair	Likely, grove	
9	*Acer macrophyllum*	70	Fair	Likely, grove	
10	*Acer macrophyllum*	10	Good	No	
11	*Prunus avium*	11	Good	No	
12	*Prunus avium*	12	Good	No	
13	*Prunus avium*	9	Good	No	
14	*Picea sp*	18	Fair	Unknown	
15	*Acer macrophyllum*	32	Fair	Likely, grove	
16	*Acer macrophyllum*	28	Dead	No	
!1	*Acer macrophyllum*	52	Good	Likely, grove	
!10	*Alnus rubra*	12	Dead	No	
!11	*Alnus rubra*	13	Good	Likely, grove	
!12	*Alnus rubra*	18	Poor	No	Phytophora
!13	*Alnus rubra*	19	Fair	Likely, grove	Phytophora
!14	*Acer macrophyllum*	22	Dead	No	
!15	*Acer macrophyllum*	34	Poor	No	Kretz,
!16	*Alnus rubra*	16	Poor	No	Phytophora
!17	*Acer macrophyllum*	86	Good	Likely, grove	Co doms, kretz
!18	*Acer macrophyllum*	28	Good	Likely, grove	
!19	*Acer macrophyllum*	10	Good	No	
!2	*Acer macrophyllum*	6	Good	No	
!20	*Acer macrophyllum*	39	Good	Likely, grove	Codom
!21	*Acer macrophyllum*	13	Good	Likely, grove	Hollow cavity at base
!22	*Acer macrophyllum*	49	Very Poor	No	Kretz, stringy, codom, arm?
!23	*Acer macrophyllum*	57	Poor	No	Heave root, decline, lean, should be removed if trail over roots.
!24	*Acer macrophyllum*	21	Good	Likely, grove	
!25	*Acer macrophyllum*	14	Good	Likely, grove	
!26	*Acer macrophyllum*	32	Good	Likely, grove	Codom
!27	*Acer macrophyllum*	16	Good	Likely, grove	
!28	*Acer macrophyllum*	14	Good	Likely, grove	
!29	*Acer macrophyllum*	13	Fair	Likely, grove	
!3	*Acer macrophyllum*	9	Good	No	
!30	*Acer macrophyllum*	27	Good	Likely, grove	
!31	*Acer macrophyllum*	30	Good	Likely, grove	
!32	*Acer macrophyllum*	10	Good	No	
!33	*Acer macrophyllum*	56	Good	Likely, grove	

Tree ID	Species	DBH	Condition	Exceptional	Notes
!33	*Acer macrophyllum*	20	Good	Likely, grove	
!34	*Acer macrophyllum*	8	Good	Likely, grove	
!35	*Acer macrophyllum*	24	Good	Likely, grove	
!36	*Acer macrophyllum*	42	Good	Likely, grove	
!36	*Acer macrophyllum*	30	Poor	No	Heaving
!37	*Salix lasiandra*	9	Very Poor	No	
!38	*Acer platanoides*	27	Good	No	
!39	*Malus sp*	21	Good	Yes	
!39	*Acer macrophyllum*	8	Good	No	
!4	*Acer macrophyllum*	10	Good	No	
!40	*Acer macrophyllum*	15	Good	Likely, grove	
!41	*Corylus cornuta*	10	Good	No	
!42	*Corylus cornuta*	14	Good	No	
!43	*Acer macrophyllum*	19	Good	Likely, grove	
!44	*Acer macrophyllum*	40	Good	Likely, grove	
!5	*Acer macrophyllum*	11	Good	No	
!6	*Acer macrophyllum*	80	Poor	No	Kretz
!7	*Alnus rubra*	12	Poor	No	Phytophora
!8	*Alnus rubra*	18	Poor	No	Phytophora
!9	*Acer macrophyllum*	14	Good	Likely, grove	
?1	*Salix lasiandra*	6	Fair	No	
?10	*Ilex aquifolium*	14	Dead	No	
?11	*Acer macrophyllum*	23	Fair	Likely, grove	
?12	*Acer macrophyllum*	62	Good	Likely, grove	
?13	*Acer macrophyllum*	18	Good	Likely, grove	
?14	*Acer macrophyllum*	21	Good	Likely, grove	
?15	*Acer macrophyllum*	23	Good	Likely, grove	
?16	*Acer macrophyllum*	6	Fair	No	
?16	*Acer macrophyllum*	30	Good	Likely, grove	
?18	*Populus trichocarpa*	41	Good	Likely, grove	
?2	*Populus trichocarpa*	25	Fair	Likely, grove	
?3	*Populus trichocarpa*	21	Fair	Likely, grove	
?4	*Populus trichocarpa*	31	Good	Likely, grove	
?5	*Populus trichocarpa*	32	Poor	No	
?6	*Populus trichocarpa*	24	Poor	No	
?7	*Ilex aquifolium*	14	Very Poor	No	
?8	*Acer macrophyllum*	10	Good	No	
?9	*Acer macrophyllum*	18	Fair	Likely, grove	

Table E-2. Trees in along Cheasty North portion of the Trail

Tree ID	Species	DBH	Condition	Exceptional	Notes
17	*Acer macrophyllum*	16	Fair	Likely, grove	
19	*Acer macrophyllum*	13	Dead	No	
20	*Acer macrophyllum*	26	Poor	No	
21	*Acer macrophyllum*	8	Dead	No	
22	*Acer macrophyllum*	36	Good	Likely, grove	
23	*Acer macrophyllum*	11	Dead	No	
24	*Acer macrophyllum*	17	Good	Likely, grove	
25	*Acer macrophyllum*	14	Fair	Likely, grove	
26	*Acer macrophyllum*	10	Dead	No	
28	*Acer macrophyllum*	108	Fair	Likely, grove	Multi-stemmed
28	*Acer macrophyllum*	11	Poor	No	
29	*Acer macrophyllum*	11	Fair	No	
30	*Acer macrophyllum*	11	Fair	No	
31	*Acer macrophyllum*	27	Good	No	
32	*Acer macrophyllum*	63	Fair	Likely, grove	
33	*Prunus avium*	17	Fair	No	
33	*Unknown*	27	Poor	No	
35	*Acer macrophyllum*	18	Good	Likely, grove	
36	*Acer macrophyllum*	12	Fair	No	
37	*Acer macrophyllum*	11	Fair	No	
38	*Acer macrophyllum*	34	Good	Likely, grove	
39	*Acer macrophyllum*	11	Fair	No	
40	*Acer macrophyllum*	11	Fair	No	
41	*Acer macrophyllum*	17	Fair	Likely, grove	
42	*Acer macrophyllum*	33	Good	Likely, grove	
44	*Acer macrophyllum*	17	Fair	Likely, grove	
45	*Acer macrophyllum*	21	Good	Likely, grove	
45	*Acer macrophyllum*	17	Poor	No	
46	*Acer macrophyllum*	12	Poor	No	
47	*Acer macrophyllum*	10	Dead	No	
48	*Acer macrophyllum*	20	Fair	Likely, grove	
49	*Acer macrophyllum*	12	Fair	No	
50	*Acer macrophyllum*	17	Good	Likely, grove	
51	*Acer macrophyllum*	27	Good	Likely, grove	
52	*Acer macrophyllum*	21	Dead	No	
52	*Arbutus menziesii*	12	Good	No	
53	*Acer macrophyllum*	12	Fair	No	
54	*Acer macrophyllum*	27	Fair	Likely, grove	
55	*Prunus avium*	8	Good	No	
56	*Acer macrophyllum*	21	Dead	No	
57	*Acer macrophyllum*	15	Good	Likely, grove	
58	*Acer macrophyllum*	14	Dead	No	
59	*Acer macrophyllum*	47	Good	Likely, grove	
60	*Acer macrophyllum*	11	Good	No	
61	*Acer macrophyllum*	9	Fair	No	
62	*Acer macrophyllum*	35	Fair	Likely, grove	

Tree ID	Species	DBH	Condition	Exceptional	Notes
63	*Acer macrophyllum*	7	Good	No	
64	*Acer macrophyllum*	16	Good	Likely, grove	
65	*Acer macrophyllum*	11	Fair	No	
66	*Acer macrophyllum*	9	Dead	No	
67	*Acer macrophyllum*	14	Good	Likely, grove	
68	*Acer macrophyllum*	24	Good	Likely, grove	
69	*Arbutus menziesii*	10	Dead	No	
70	*Acer macrophyllum*	34	Fair	Likely, grove	
71	*Acer macrophyllum*	14	Dead	No	
72	*Acer macrophyllum*	25	Dead	No	
73	*Acer macrophyllum*	17	Good	Likely, grove	
74	*Acer macrophyllum*	35	Fair	Likely, grove	
75	*Acer macrophyllum*	18	Good	Likely, grove	
76	*Acer macrophyllum*	16	Good	Likely, grove	
!45	*Alnus rubra*	15	Good	Likely, grove	
!46	*Alnus rubra*	18	Good	Likely, grove	
!47	*Alnus rubra*	11	Good	No	
!48	*Acer macrophyllum*	8	Good	No	
!49	*Acer macrophyllum*	54	Poor	Likely, grove	
!50	*Acer macrophyllum*	34	Good	Likely, grove	
!50	*Acer macrophyllum*	9	Good	No	
!52	*Acer macrophyllum*	17	Good	Likely, grove	
!53	*Acer macrophyllum*	24	Good	Likely, grove	
!54	*Prunus emarginata*	8	Good	Likely, grove	
!55	*Acer macrophyllum*	30	Good	Likely, grove	
!56	*Acer macrophyllum*	32	Poor	No	
!57	*Acer macrophyllum*	13	Poor	No	
!58	*Acer macrophyllum*	12	Good	No	
!59	*Acer macrophyllum*	28	Good	Likely, grove	
!60	*Acer macrophyllum*	50	Good	Likely, grove	
!61	*Acer macrophyllum*	21	Good	Likely, grove	
!62	*Acer macrophyllum*	11	Good	No	
!63	*Acer macrophyllum*	7	Good	No	
!64	*Acer macrophyllum*	41	Good	Likely, grove	
!65	*Acer macrophyllum*	10	Good	No	
!66	*Acer macrophyllum*	47	Good	Likely, grove	
!66	*Acer macrophyllum*	44	Good	Likely, grove	
!67	*Acer macrophyllum*	7	Good	No	
!68	*Acer macrophyllum*	20	Good	Likely, grove	
!69	*Acer macrophyllum*	28	Good	Likely, grove	
!71	*Acer macrophyllum*	19	Poor	No	
!72	*Acer macrophyllum*	19	Fair	Likely, grove	
!73	*Acer macrophyllum*	22	Good	Likely, grove	
!74	*Acer macrophyllum*	13	Good	Likely, grove	
!75	*Acer macrophyllum*	72	Fair	Likely, grove	378 post
!76	*Acer macrophyllum*	9	Dead	No	

Tree ID	Species	DBH	Condition	Exceptional	Notes
!77	*Acer macrophyllum*	8	Good	No	
!78	*Acer macrophyllum*	6	Good	No	
!79	*Acer macrophyllum*	10	Good	No	
!80	*Acer macrophyllum*	25	Fair	Likely, grove	
!81	*Acer macrophyllum*	23	Poor	No	
!82	*Acer macrophyllum*	17	Good	Likely, grove	
!83	*Acer macrophyllum*	21	Good	Likely, grove	
!84	*Acer macrophyllum*	15	Poor	No	
!85	*Acer macrophyllum*	38	Good	Likely, grove	
!86	*Acer macrophyllum*	9	Good	No	
!87	*Acer macrophyllum*	11	Good	No	
!88	*Acer macrophyllum*	11	Good	No	
!89	*Acer macrophyllum*	45	Poor	No	
!90	*Acer macrophyllum*	19	Dead	No	
!91	*Acer macrophyllum*	28	Very Poor	No	
!92	*Acer macrophyllum*	32	Fair	Likely, grove	
!93	*Acer macrophyllum*	22	Good	Likely, grove	
?19	*Prunus avium*	7	Good	No	
?20	*Unknown*	11	Good	No	
?21	*Acer macrophyllum*	19	Fair	Likely, grove	452
?22	*Acer macrophyllum*	18	Good	Likely, grove	
?23	*Acer macrophyllum*	11	Dead	No	
?23	*Acer macrophyllum*		Poor	No	Almost dead, partially failed, remove with trail construction 450
?24	*Acer macrophyllum*	26	Fair	Likely, grove	3 stems
?25	*Acer macrophyllum*	10	Poor	No	
?26	*Acer macrophyllum*	7	Fair	No	
?26	*Acer macrophyllum*	12	Poor	No	
?27	*Acer macrophyllum*	11	Fair	No	
?27	*Acer macrophyllum*	8	Poor	No	
?29	*Acer macrophyllum*	6	Poor	No	
?30	*Acer macrophyllum*	19	Fair	Likely, grove	2 stems
?31	*Acer macrophyllum*	25	Poor	No	448
?32	*Acer macrophyllum*		Fair	Unknown	
?33	*Acer macrophyllum*	26	Fair	Likely, grove	3 stems
?34	*Salix lasiandra*	24	Poor	No	
?35	*Populus trichocarpa*	30	Fair	Likely, grove	2 stems
?36	*Prunus avium*	20	Good	No	11 stems-prunus
?37	*Acer macrophyllum*	22	Excellent	Likely, grove	
?37	*Populus trichocarpa*	7	Good	No	
?38	*Acer macrophyllum*	13	Poor	No	
?39	*Acer macrophyllum*	12	Good	No	435
?40	*Acer macrophyllum*	11	Fair	No	2stems
?41	*Acer macrophyllum*	6	Fair	No	
?42	*Acer macrophyllum*	25	Good	Likely, grove	3stems

APPENDIX F: TRAIL DESIGN

MATCHLINE - SEE SHEET L-2

WETLAND 4
24TH PLACE ENTRY
110' WETLAND BUFFER
50' WETLAND BUFFER
CENTRAL CONNECTOR TRAIL
PARK BOUNDARY
SWITCHBACK, TYP (3 / L-3)
WETLAND 11
24TH PL S
25TH AV S
CHEASTY BV S
100' WATERCOURSE-BUFFER
WATERCOURSE 1
WETLAND 5
WETLAND 6
WOOD BRIDGE (2 / L-4)
NORTH CONNECTOR TRAIL
S ANDOVER ST
WETLAND BUFFER, TYP
BUFFER IMPACT 460 SF
ANDOVER ENTRY
STREAM BUFFER, TYP
50' WETLAND BUFFER
PROVIDE ROLLING GRADE ON ALL TRAILS VIA GRADE REVERSAL, TYP (1 / L-4)
SINGLE TRACK TRAIL 1-WAY, 18" WIDE, TYP (2 / L-3)
BUFFER IMPACT 327 SF
28TH AVE S
VIEW POINT ENTRY
BUFFER IMPACT 1,373 SF
WETLAND 8
S ADAM ST
S NEVADA ST
WETLAND 9
MIXED USE TRAIL 2-WAY, 4' WIDE, TYP (1 / L-3)
29TH AVE S
S DAKOTA ST
P-PATCH ENTRY

60 30 0 60 120
SCALE IN FEET

N

>>>>CAUTION - CALL 811<<<<
UTILITY NOTIFICATION CENTER
BEFORE YOU DIG!
WWW.CALL811.COM
Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

NO.	REVISION – AS BUILT	DATE
7		
6		
5		
4		
3		
2		
1	TRAIL REVISION	7/20/2018

REVIEWED:
PARK ENGINEER ____ DATE

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

ESA
5309 Shilshole Ave. NW
Seattle, WA 98107
P: (206) 789-9658
F: (206) 789-9684

Seattle Parks & Recreation

SEATTLE PARKS DEPARTMENT

CHEASTY TRAIL DESIGN

NORTH LOOP PLAN

DESIGNED ABG
DRAWN ABG
CHECKED PDA
ORDINANCE NO. X
CONTRACT NO. X
SCALE AS SHOWN

DATE 7/20/2018
SHEET 1 OF 4
L-1

MATCHLINE - SEE SHEET L-1

WETLAND 4

WETLAND BUFFER, TYP

WETLAND 3

110' WETLAND BUFFER

SEPARATE BIKE ENTRY

JEFFERSON ENTRY

SINGLE TRACK TRAIL 1-WAY, 18" WIDE, TYP (2 / L-3)

SWITCHBACK, TYP (3 / L-3)

28TH AVE S

JILL PL S

S GENESEE ST

PARK BOUNDARY

S COLUMBIAN WY

RAINIER VISTA ENTRY

CHEASTY BV S

MIXED USE TRAIL 2-WAY, 4' WIDE, TYP (1 / L-3)

50' WETLAND BUFFER

WETLAND 2

WETLAND 12

50' WETLAND BUFFER

S ALASKA ST

SOUTH CONNECTOR TRAIL

WETLAND 1

PROVIDE ROLLING GRADE ON ALL TRAILS VIA GRADE REVERSAL, TYP (1 / L-4)

60 30 0 60 120

SCALE IN FEET

N

>>>>CAUTION - CALL 811<<<<
UTILITY NOTIFICATION CENTER BEFORE YOU DIG!
WWW.CALL811.COM

Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

NO.	REVISION – AS BUILT	DATE
7		
6		
5		
4		
3		
2		
1	TRAIL REVISION	7/20/2018

REVIEWED: _____ PARK ENGINEER _____ DATE

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

ESA
5309 Shilshole Ave. NW
Seattle, WA 98107
P: (206) 789-9658
F: (206) 789-9684

Seattle Parks & Recreation

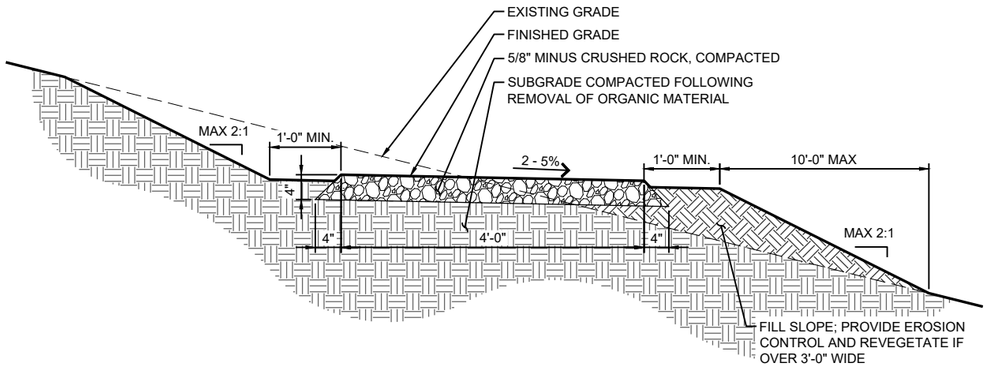
SEATTLE PARKS DEPARTMENT

CHEASTY TRAIL DESIGN

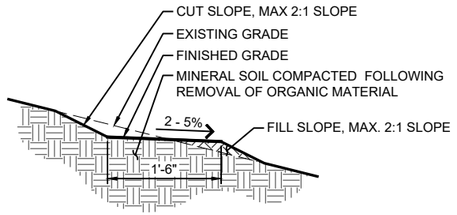
SOUTH LOOP PLAN

DESIGNED ABG
DRAWN ABG
CHECKED PDA
ORDINANCE NO. X
CONTRACT NO. X
SCALE AS SHOWN

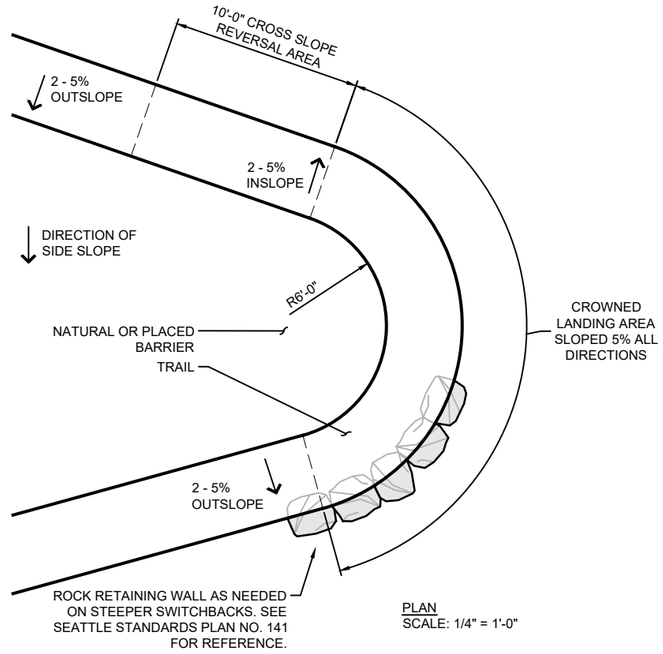
DATE 7/20/2018
SHEET 2 OF 4
L-2



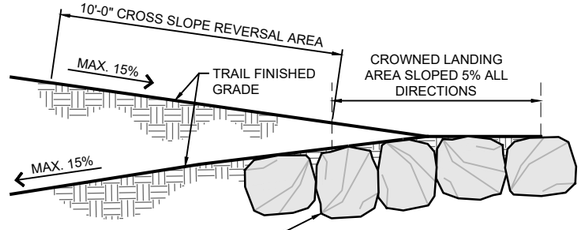
DETAIL 1 L-1 / 1 L-2
MIXED USE TRAIL
SCALE: NTS



DETAIL 2 L-1 / 2 L-2
SINGLE TRACK TRAIL
SCALE: NTS



PLAN
SCALE: 1/4" = 1'-0"



ELEVATION
SCALE: 3/8" = 1'-0"

DETAIL 3 L-1 / 3 L-2
SWITCHBACK
SCALE: NTS

NOTES

1. WALK AND FLAG CORRIDORS TO FIELD FIT TRAILS ON SITE. RECLAIM OLD TRAIL WHERE POSSIBLE.
2. WHEN LOCATING TRAIL ALIGNMENT USE THE "HALF RULE": THE TRAIL GRADE SHOULD BE LESS THAN HALF THE SLOPE OF THE HILLSIDE.
3. LOCATE GRADE REVERSALS ABOVE ALL TURNS.
4. BUILD SWITCHBACKS ON FLATTEST AREA AVAILABLE TO EACH SWITCHBACK LOCATION. TO DISCOURAGE SHORTCUTS, WRAP SWITCHBACKS AROUND AN OBSTACLE (ROCK OR TREE) WHERE POSSIBLE.
5. ALL TRAIL CONSTRUCTION SHALL INCLUDE STANDARD CLEARING LIMITS AS FOLLOWS: BRUSH AND BRANCHES 36" ABOVE GROUND LEVEL SHALL BE REMOVED TO A HEIGHT OF 8' WITHIN 36" OF THE TRAIL. ALL VEGETATION BELOW 36" HEIGHT SHALL BE CUT BACK TO THE WIDTH OF THE TRAIL. FALLEN LOGS SHALL BE CUT FLUSH AT THE EDGE OF THE TRAIL.
6. FOLLOWING CLEARING WITHIN THE DESIGNED TRAIL CORRIDOR, REMOVE ALL ROOTS AND ORGANIC MATERIAL TO A DEPTH OF 6" PRIOR TO IMPORTING TRAIL AGGREGATE. ESTABLISH DESIGN CROSS-SLOPE IN SUBGRADE MATERIALS.
7. IMPORT TRAIL AGGREGATE FOLLOWING DEPARTMENTAL APPROVAL OF PREPARED TRAIL BED. TRAIL AGGREGATE SHALL BE 5/8" MINUS CRUSHED ROCK UNLESS OTHERWISE SPECIFIED. PLACE MATERIAL UNIFORMLY, PROVIDING FULL DESIGN WIDTH ACROSS SURFACE. TAPER EDGES AT A 45° ANGLE INTO THE SUBGRADE, LEAVING APPROX. 1" OF TREAD ABOVE GRADE. WHERE DESIRED, PROVIDE COMPLETE MECHANICAL COMPACTION, WHERE THIS IS IMPRACTICAL OR IMPOSSIBLE, COMPACT BY HAND WITH AN APPROPRIATELY WEIGHTED IMPLEMENT.
8. FOLLOWING IMPORT AND PLACEMENT OF TREAD AGGREGATE AND CONSTRUCTION OF DRAINAGE ELEMENTS OR OTHER SPECIFIED TRAIL COMPONENTS, PERFORM SITE RESTORATION AND REVEGETATION AS DIRECTED BY THE DESIGNATED REPRESENTATIVE OF THE DEPARTMENT OF PARKS AND RECREATION.
9. SLOPE OR CROWN TREAD AS DIRECTED. TRAIL TREADS TO BE OUTSLOPED FOR POSITIVE DRAINAGE.
10. FULL OR PARTIAL BENCH CONSTRUCTION OF TRAILS DEPENDS ON SIDE SLOPE FOR TRAIL AREA. SEE SEATTLE STANDARD DETAIL 32 60 00.19 FOR REFERENCE.

>>>>CAUTION - CALL 811<<<<
UTILITY NOTIFICATION CENTER BEFORE YOU DIG!
WWW.CALL811.COM
Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

NO.	REVISION – AS BUILT	DATE
7		
6		
5		
4		
3		
2		
1	TRAIL REVISION	7/20/2018

REVIEWED: _____ PARK ENGINEER _____ DATE

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

ESA
5309 Shilshole Ave. NW
Seattle, WA 98107
P: (206) 789-9658
F: (206) 789-9684

Seattle Parks & Recreation

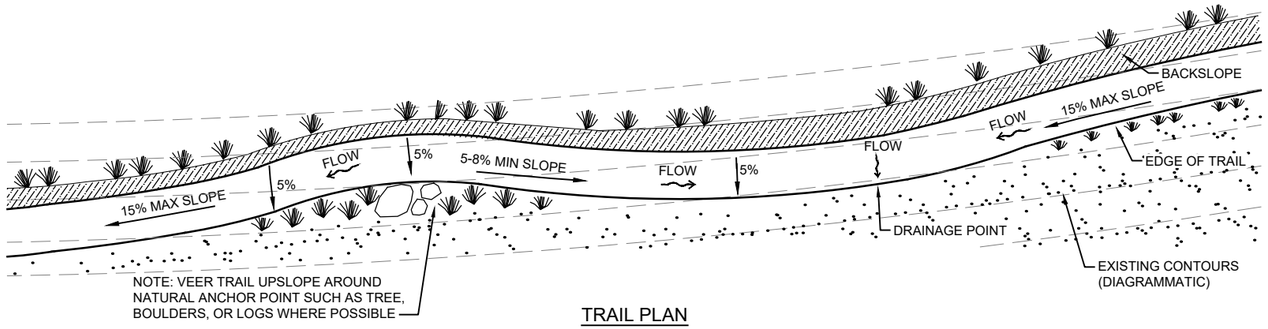
SEATTLE PARKS DEPARTMENT

CHEASTY TRAIL DESIGN

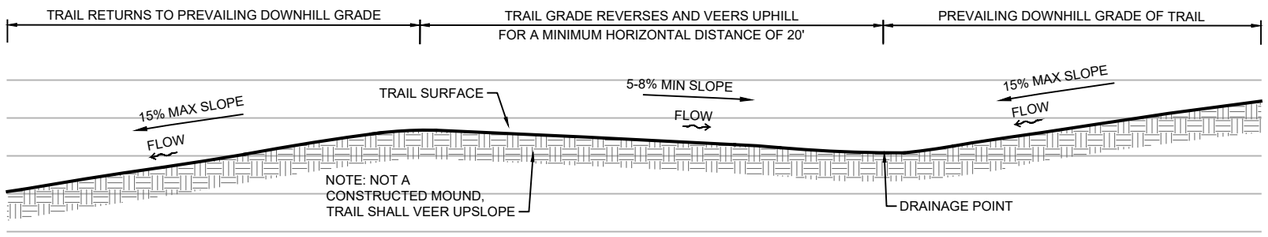
TRAIL DETAILS & NOTES

DESIGNED ABG
DRAWN ABG
CHECKED PDA
ORDINANCE NO. X
CONTRACT NO. X
SCALE AS SHOWN

DATE 7/20/2018
SHEET 3 OF 4
L-3

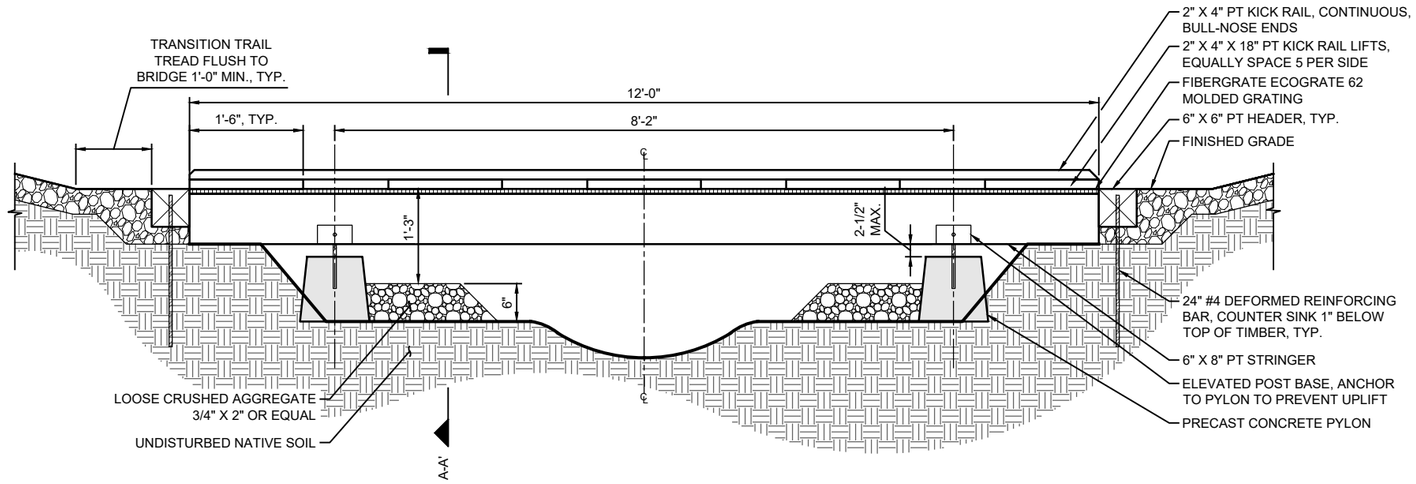


TRAIL PLAN

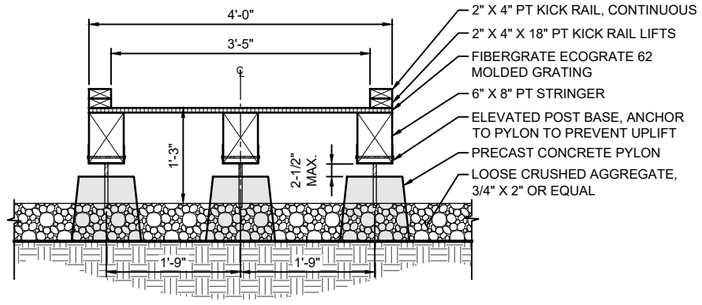


TRAIL PROFILE

DETAIL 1/L-1 — 1/L-2
GRADE REVERSAL
SCALE: NTS



DETAIL 2/L-1 — 2/L-2
WOOD BRIDGE
SCALE: NTS



SECTION A-A'

>>>>CAUTION - CALL 811<<<<
UTILITY NOTIFICATION CENTER
BEFORE YOU DIG!
WWW.CALL811.COM
Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

NO.	REVISION – AS BUILT	DATE
7		
6		
5		
4		
3		
2		
1	TRAIL REVISION	7/20/2018

REVIEWED: _____ PARK ENGINEER _____ DATE

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

ESA
5309 Shilshole Ave. NW
Seattle, WA 98107
P: (206) 789-9658
F: (206) 789-9684

Seattle Parks & Recreation

SEATTLE PARKS DEPARTMENT

CHEASTY TRAIL DESIGN

TRAIL DETAILS

DESIGNED ABG
DRAWN ABG
CHECKED PDA
ORDINANCE NO. X
CONTRACT NO. X
SCALE AS SHOWN

DATE 7/20/2018
SHEET 4 OF 4
L-4