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 <u>Obligate</u>: species that always occur in standing water or in saturated soils.
- FACW <u>Facultative wetland</u>: 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 <u>Facultative</u>: 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 <u>Facultative upland</u>: 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).

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APPENDIX B: WETLAND DETERMINATION DATA SHEETS

Project/Site: Cheasty Trail Pilot Project		City/Co	unty: <u>Seattle, K</u>	(ing	Sampling Date: Oct 31, 2016
Applicant/Owner: City of Seattle Parks				State: WA	Sampling Point: W1 DP1
Investigator(s): Claire Hoffman, Jessica Redman					
Landform (hillslope, terrace, etc.): at base of slope		_Local ı	relief (concave	, convex, none): <u>flat</u>	Slope (%): <u>0</u>
Subregion (LRR): LRR A					
Soil Map Unit Name: na					<u> </u>
Are climatic / hydrologic conditions on the site typical for thi					
Are Vegetation, Soil, or Hydrology sig	•		,	ormal Circumstances" pres	ent? Yes⊠ No □
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in	- -
SUMMARY OF FINDINGS – Attach site map			-		·
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes ⊠ No □			s the Sampled		~ □
Wetland Hydrology Present? Yes ⊠ No □		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	vithin a Wetlar	nd? Yes⊠ No	J □
Remarks: likely disturbed in the past					
VEGETATION – Use scientific names of plan	ite				
		Domin	ant Indicator	Dominance Test works	sheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>)	% Cover	Specie	es? Status	Number of Dominant Sp	ecies
1. Populus balsamifera				That Are OBL, FACW, o	r FAC: 3 (A)
2				Total Number of Domina	
3				Species Across All Strat	a: <u>5</u> (B)
4				Percent of Dominant Spe	
Sapling/Shrub Stratum (Plot size: 10)		= 1018	ai Cover	That Are OBL, FACW, o	r FAC: <u>60</u> (A/B)
1.				Prevalence Index work	sheet:
2				Total % Cover of:	Multiply by:
3				OBL species	x 1 =
4				· · · · · ·	x 2 =
5					x 3 =
Herb Stratum (Plot size: 5)		= Tota	al Cover		x 4 =
1. Juncus effusus	10	٧	FACW		x 5 = (A) (B)
2. Polystichum munitum				Column Totals.	(A) (B)
3. Hedera helix				Prevalence Index	= B/A = 3.05
4				Hydrophytic Vegetation	n Indicators:
5				Rapid Test for Hydro	. ,
6				□ Dominance Test is > □ □ Dominance Test is > □ D	
7				☐ Prevalence Index is	
8					tations¹ (Provide supporting or on a separate sheet)
9				☐ Wetland Non-Vascul	• • • • • • • • • • • • • • • • • • • •
10				☐ Problematic Hydroph	nytic Vegetation¹ (Explain)
11	25		al Cover		and wetland hydrology must
Woody Vine Stratum (Plot size: 5)	<u>23</u>	- 1016	ai Covei	be present, unless distu	bed or problematic.
1. Rubus armeniacus	20	У	FAC	Lludranhutia	
2				Hydrophytic Vegetation	
0/ Para Craund in Harb Strature CO	20	= Tota	al Cover		s⊠ No □
% Bare Ground in Herb Stratum 60 Remarks:					

Depth	Matrix	o to the u	cpui ne		ment the indicator x Features	or commit	aD	ocince of file	ioutora.j	
(inches)	Color (moist)	%	Colo	(moist)		Loc ²	Textur	<u>e</u>	Remarks	
0-9	7.5YR 2.5/1	100					sandy l	oam_		
9-20	7.5YR 2.5/1 & 2.5Y	<u>5/1 40&40</u>	<u>7.5YF</u>	R 4/6	20	_ M	sandy l	oam with cla	y <u>mixed matrix</u>	
	-	_								
							-			_
	oncentration, D=De Indicators: (Appl				S=Covered or Coate	ed Sand G			PL=Pore Lining, Problematic Hyd	
Histosol				andy Redox (S				2 cm Muck	•	
	oipedon (A2)			stripped Matrix	•			-	t Material (TF2)	
☐ Black Hi				oamy Mucky M	ineral (F1) (excep t	MLRA 1)			ow Dark Surface (ΓF12)
☐ Hydroge	n Sulfide (A4)			oamy Gleyed I		,		Other (Exp	lain in Remarks)	,
□ Depleted	d Below Dark Surfa	ce (A11)		epleted Matrix	(F3)					
	ark Surface (A12)			Redox Dark Sur	٠,,		ıl ^ɛ		ydrophytic vegeta	
-	lucky Mineral (S1)			epleted Dark S	, ,			-	Irology must be pr	
-	Gleyed Matrix (S4)			Redox Depress	ions (F8)			unless distu	irbed or problemat	ic.
	Layer (if present):									
Type:										
Depth (in	ches):						Hydri	c Soil Prese	ent? Yes 🛛 N	lo 🗌
HYDROLO Wetland Hy	GY drology Indicator	e-								
-	cators (minimum of		ired: che	ck all that anni	v)			Secondary I	ndicators (2 or mo	re required)
-	Water (A1)	one requ			ned Leaves (B9) (e	vcent MI I		-	tained Leaves (B9	-
	iter Table (A2)				A, and 4B)	veebt miri	```		and 4B)) (WILKA 1, 2,
☐ Saturation	` '			☐ Salt Crust	•				e Patterns (B10)	
	arks (B1)			=	vertebrates (B13)			_ •	son Water Table (C2)
	nt Deposits (B2)				Sulfide Odor (C1)				on Visible on Aeria	,
	posits (B3)				Chizospheres along	Living Poo	ote (C3)		phic Position (D2)	ii iiilagery (C9)
	at or Crust (B4)				of Reduced Iron (C	-	ns (C3)		Aquitard (D3)	
	oosits (B5)				n Reduction in Tille		:)		utral Test (D5)	
	Soil Cracks (B6)				Stressed Plants (D	-			Ant Mounds (D6) (I DD A\
	on Visible on Aeria	Imagery	(R7)		lain in Remarks)	I) (LIXIX A	,		eave Hummocks (I	•
	Vegetated Conca		. ,	□ ⊃mer (Exp	iani in Nemarks)			1 103t-11t	ave Hullillocks (I	-· <i>)</i>
Field Obser		ve Guriace	, (BO)							
Surface Wat		Yes 🗌	No 🏻	Denth (inches	s):					
Water Table			No ⊠		s):	14/24	الممط المنا	lualant Dur-	om42 V 🔽 🕨	u. 🗆
Saturation P	resent? pillary fringe)	Yes 🗌	No 🛚	Depth (Inches	s):	wet	iana Hyd	irology Pres	ent? Yes 🛛 1	No 📙
		m gauge,	monitori	ng well, aerial	photos, previous in	spections),	if availa	ole:		
Pemarks: or	ne of the rainiast O	etoher on	record v	ery rainy night	before and until ~9	·30am				
							that had	surface coil -	racks in Ostaba-	
one visit Apr	ıı J, ZUT <i>T</i> - Saturatı	ou to the S	uriace, a	and ponding ap	proximately 3 inche	ञ्जा। वास्त्र ।	ınat fiad i	suriace SOILC	TAUKS III OCIODEL.	

Project/Site: Cheasty Trail Pilot Project		City/C	ounty	: <u>Seattle, K</u>	(ing	Sampling Date: Oct 31, 2016	;
Applicant/Owner: City of Seattle Parks					State: WA	Sampling Point: W1 DP2	
					ownship, Range: <u>SE-16-24</u>		
Landform (hillslope, terrace, etc.): at base of slope		Loca	l relie	f (concave,	, convex, none): <u>flat</u>	Slope (%): <u>0</u>	
Subregion (LRR): LRR A	Lat: 47.5	61071			Long: -122.300474	Datum: NAD1983	,
Soil Map Unit Name: na							
Are climatic / hydrologic conditions on the site typical for thi							
Are Vegetation, Soil, or Hydrology sign	•			,	ormal Circumstances" pres		
Are Vegetation, Soil, or Hydrology natu					ed, explain any answers in	- -	
SUMMARY OF FINDINGS – Attach site map						•	c.
Hydrophytic Vegetation Present? Yes ⊠ No □							
Hydric Soil Present? Yes ⊠ No □				e Sampled		. 🗆	
Wetland Hydrology Present? Yes ⊠ No □			with	in a Wetlar	nd? Yes⊠ No	0 🗀	
Remarks: likely disturbed in the past		•					
VEGETATION – Use scientific names of plan	ts.						
[Absolute	Domi	nant	Indicator	Dominance Test works	sheet:	
<u>Tree Stratum</u> (Plot size: <u>30</u>)	% Cover			-	Number of Dominant Sp	ecies	
1. Populus balsamifera					That Are OBL, FACW, o	or FAC: <u>2</u> (A)	
2					Total Number of Domina		
3					Species Across All Strat	ta: <u>3</u> (B)	
4Sapling/Shrub Stratum (Plot size: 10)	85				Percent of Dominant Sports That Are OBL, FACW, o	ecies or FAC: <u>67</u> (A/B))
1					Prevalence Index work	sheet:	
2					Total % Cover of:	Multiply by:	
3.						x 1 =	
4					FACW species	x 2 =	
5					FAC species	x 3 =	
		= To	tal Co	over		x 4 =	
Herb Stratum (Plot size: <u>5</u>)	F					x 5 =	
grass sp. Hedera helix	<u>5</u> 30			EACH.	Column Totals:	(A) (B)	1
3		-			Prevalence Index	= B/A =	
4					Hydrophytic Vegetation	n Indicators:	
5.					☐ Rapid Test for Hydro	ophytic Vegetation	
6					□ Dominance Test is >	·50%	
7					☐ Prevalence Index is	≤3.0 ¹	
8						tations¹ (Provide supporting or on a separate sheet)	
9					☐ Wetland Non-Vascul	•	
10					<u> </u>	hytic Vegetation¹ (Explain)	
11	-				¹ Indicators of hydric soil	and wetland hydrology must	
Woody Vine Stratum (Plot size: 5)		_ = To	tal Co	over	be present, unless distu	rbed or problematic.	
1. Rubus armeniacus	10	У		FAC			
2					Hydrophytic Vegetation		
	<u>10</u>	= To	tal Co	over		s⊠ No□	
% Bare Ground in Herb Stratum 60 Remarks: primarily bare ground							
Tromano, primarily bare ground							

Depth	cription: (Describ Matrix	e to the	aepth n		ment the indicator ox Features	or contirn	n tne abs	sence of indicators.)
(inches)	Color (moist)	%	Cold	or (moist)		Loc ²	Texture	e Remarks
0-9	7.5YR 2.5/2	100					sandy lo	pam
9-16	2.5Y 5/1	80	7.5Y	′R 4/4	20		loamy s	and with cobbles
16-18	2.5Y 5/2	100					-	lay loam
10 10	2.01 6/2	100					oundy o	may rounn
								
•		•			S=Covered or Coate	ed Sand Gr		² Location: PL=Pore Lining, M=Matrix.
-	Indicators: (Appl	icable to						dicators for Problematic Hydric Soils ³ :
☐ Histosol	(A1) pipedon (A2)			Sandy Redox (Stripped Matrix				2 cm Muck (A10) Red Parent Material (TF2)
☐ Black Hi					vineral (F1) (except	MIRA 1)	_	Very Shallow Dark Surface (TF12)
	n Sulfide (A4)			Loamy Gleyed		WEIGH 1)		Other (Explain in Remarks)
	l Below Dark Surfa	ce (A11)		Depleted Matrix			_	Caron (Express and terraine)
	rk Surface (A12)	(/		, Redox Dark Su	` '		3In	dicators of hydrophytic vegetation and
☐ Sandy M	lucky Mineral (S1)			Depleted Dark	Surface (F7)			wetland hydrology must be present,
-	leyed Matrix (S4)			Redox Depress	sions (F8)			unless disturbed or problematic.
	Layer (if present):							
Type:	-l							
Depth (in	ches):			-			Hydri	c Soil Present? Yes ⊠ No □
Remarks:								
HYDROLO	GY							
	drology Indicator	s:						
•	cators (minimum of		uired; ch	eck all that app	ly)			Secondary Indicators (2 or more required)
-	Water (A1)		-		ined Leaves (B9) (e	xcept MLR		☐ Water-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2)				A, and 4B)			4A, and 4B)
☐ Saturation	` '			☐ Salt Crust	•			☐ Drainage Patterns (B10)
	arks (B1)			☐ Aquatic In	vertebrates (B13)			☐ Dry-Season Water Table (C2)
	nt Deposits (B2)				Sulfide Odor (C1)			☐ Saturation Visible on Aerial Imagery (C9)
	oosits (B3)				Rhizospheres along	Living Roo	ts (C3)	☐ Geomorphic Position (D2)
	t or Crust (B4)				of Reduced Iron (C	_	, ,	☐ Shallow Aquitard (D3)
-	osits (B5)			☐ Recent Iro	n Reduction in Tille	d Soils (C6)	☐ FAC-Neutral Test (D5)
Surface	Soil Cracks (B6)			☐ Stunted or	Stressed Plants (D	1) (LRR A))	Raised Ant Mounds (D6) (LRR A)
☐ Inundation	on Visible on Aeria	l Imagery	(B7)	☐ Other (Exp	olain in Remarks)			☐ Frost-Heave Hummocks (D7)
	Vegetated Conca	ve Surfac	e (B8)					
Field Obser	vations:							
Surface Wat	er Present?	Yes 🗌	No 🖂	Depth (inche	s):			
Water Table	Present?	Yes 🗌	No 🛛	Depth (inche	s):			
Saturation P	resent?	Yes 🗌	No 🛛	Depth (inche	s):	Wetl	and Hyd	rology Present? Yes ⊠ No 🏻
	pillary fringe)						: . !! . !.	1.
Describe Re	corded Data (strea	ım gauge	, monitoi	rıng weil, aerial	photos, previous ins	spections),	ıı avallab	ne:
Domanica	o of the reining t	otobor-	n roos	Vonu roine : =! -!	at hofore and	0.20am N4	ooto s-it-	rio for DO but gooms unusual it is as to use a
Remarks: or all given rair		บเบมยาร 0	nrecord	, very rainy nigh	it belote and until ~	J.JUAM. IVI	eels crite	ria for B8, but seems unusual it is not wet at
, ,								

Project/Site: Cheasty Trail Pilot Project		City/Co	ounty: <u>Seattle, K</u>	King	Sampling Date: Oct 31, 2016
Applicant/Owner: City of Seattle Parks				State: WA	Sampling Point: W2 DP1
Investigator(s): Claire Hoffman, Jessica Redman					
Landform (hillslope, terrace, etc.): hillslope		Local	relief (concave,	, convex, none): concave	Slope (%): <u>5</u>
Subregion (LRR): LRR A					
Soil Map Unit Name: na					<u> </u>
Are climatic / hydrologic conditions on the site typical for					
Are Vegetation, Soil, or Hydrology	•		,	ormal Circumstances" pres	sent? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology r				ed, explain any answers in	- -
SUMMARY OF FINDINGS – Attach site ma					•
Hydrophytic Vegetation Present? Yes ⊠ No					
Hydric Soil Present? Yes 🖂 No			s the Sampled		
Wetland Hydrology Present? Yes ⊠ No		'	within a Wetlar	nd? Yes⊠ N	0 📙
Remarks:					
VEGETATION – Use scientific names of pl	ants.				
Tree Stratum (Plot size: 30)			nant Indicator les? Status	Dominance Test works	
1. Acer macrophyllum				Number of Dominant Sp That Are OBL. FACW. o	pecies or FAC: <u>3</u> (A)
Populus balsamifera			FAC		
3.				Total Number of Domina Species Across All Strat	
4				Percent of Dominant Sp	
Openity of Objects on a Collection (Distriction 40)	<u>10</u>	= Tot	al Cover		or FAC: <u>67</u> (A/B)
Sapling/Shrub Stratum (Plot size: 10) 1. Corylus cornuta	5	V	EACH	Prevalence Index work	sheet:
Coryus contuta Alnus rubra					Multiply by:
3					x 1 =
4.					x 2 =
5				FAC species	x 3 =
	5	= Tot	al Cover		x 4 =
Herb Stratum (Plot size: <u>5</u>)	00	.,	EA C\A/		x 5 =
Equisetum telmateia Tolmiea menziesii	4.0			Column Totals:	(A) (B)
Lysichiton americanus				Prevalence Index	= B/A =
Athyrium filix-femina				Hydrophytic Vegetatio	
5. Urtica dioica				☐ Rapid Test for Hydro	ophytic Vegetation
6. Hedera helix					·50%
7				☐ Prevalence Index is	
8				Morphological Adapt	tations¹ (Provide supporting or on a separate sheet)
9				☐ Wetland Non-Vascu	
10				-	hytic Vegetation¹ (Explain)
11					and wetland hydrology must
Woody Vine Stratum (Plot size: 5)	<u>160</u>	= 100	al Cover	be present, unless distu	rbed or problematic.
1. Rubus armeniacus	5	У	FAC		
2				Hydrophytic Vegetation	
0/ Para Cround in Llash Charters 40	5	= Tot	al Cover		s⊠ No □
% Bare Ground in Herb Stratum 10 Remarks:					

Depth Matix Setox Features Setor (moist) Setor (mois	Profile Des	cription: (Describ	e to the (depth n	eeded to document the indicator or	confirm	the absence of indicators.)
Secondary Indicators (Persent) Sandy Marks (Persen	Depth	Matrix					
### Secondary Indicators (Pt-sport Lining Mematrix ### Surface (A11) ### Deptite (Inches) ###	(inches)	Color (moist)	%	Cold	or (moist) % Type ¹ L	_oc ²	Texture Remarks
"Type: C-Concentration, D-Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.	0-8	10YR 2/1	100			:	sandy <u>loam</u>
"Type: C-Concentration, D-Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.	8-16	10YR 4/2	90	10Y	R4/6 10	:	sandv loam
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Sardy Redox (S5) 2 cm Mluck (A10) Red Parent Material (TF2) Black Histic (A3) Loarny Mlucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulface (A11) Depleted Matrix (F3) Other (Explain in Remarks) Other (Expla	<u> </u>					 •	
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Histosel (A1)						Sand Gra	
Histic Epipedon (A2)	Hydric Soil	Indicators: (Appl	icable to	all LRR	s, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
Black Histic (A3)		` '					_ , ,
Hydrogen Sulfide (A4)					,		_
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Depleted Dark Surface (F6) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes ☑ No ☐	_	` '				LRA 1)	· · · · · · · · · · · · · · · · · · ·
Thick Dark Surface (A12)	_ , ,	` '	(444)				Uther (Explain in Remarks)
Sandy Mucky Mineral (S1)			ce (A11)		. ,		3Indicators of hydrophytic vocatation and
Sandy Gleyed Matrix (S4)	_	, ,			, ,		, , , ,
Restrictive Layer (if present):	,	• ,			. , ,		
Type: Depth (inches)::::::::::::::::::::::::::::::::::::					redex Depressions (1 c)		aniese distance of problematic.
Remarks: Hydric Soil Present? Yes No							
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4 High Water Table (A2) 1, 2, 4A, and 4B) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation (Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced fron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Depth (inches): Water Table Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Surface Wetland Hydrology Present? Yes No Depth (includes capillary fringe) Describe Recorded Data (Stream gauge, monitoring well, aerial photos, previous inspections), if available:	Depth (in						Hydric Soil Present? Yes 🕅 No 🗆
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) □ Surface Water (A1) □ Water-Stained Leaves (B9) (except MLRA □ Water-Stained Leaves (B9) (MLRA 1, 2, 4, and 4B) □ Saturation (A3) □ Salt Crust (B11) □ Drainage Patterns (B10) □ Water Marks (B1) □ Aquatic Invertebrates (B13) □ Dry-Season Water Table (C2) □ Sediment Deposits (B2) □ Hydrogen Sulfide Odor (C1) □ Saturation Visible on Aerial Imagery (C9) □ Intro Deposits (B3) □ Oxidized Rhizospheres along Living Roots (C3) □ Geomorphic Position (D2) □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Shallow Aquitard (D3) □ Iron Deposits (B5) □ Recent Iron Reduction in Tilled Soils (C6) □ FAC-Neutral Test (D5) □ Surface Soil Cracks (B6) □ Stunted or Stressed Plants (D1) (LRR A) □ Raised Ant Mounds (D6) (LRR A) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ Frost-Heave Hummocks (D7) □ Sparsely Vegetated Concave Surface (B8) □ Presence (Fepole Present? Yes □ No □ Depth (inches): □ Depth (inches): □ Depth (inches): surface Wetland Hydrology Present? Yes □ No □ Depth (inches): surface Water Table Present? Yes □		,			-		Tryunc Con Tresent: Tes 🖂 No 🗀
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☑ High Water Table (A2) 1, 2, 4A, and 4B) 4A, and 4B) ☐ Saturation (A3) ☐ Salt Crust (B11) ☐ Drainage Patterns (B10) ☐ Water Marks (B1) ☐ Aquatic Invertebrates (B13) ☐ Dry-Season Water Table (C2) ☐ Sediment Deposits (B2) ☐ Hydrogen Sulfide Odor (C1) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Drift Deposits (B3) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Geomorphic Position (D2) ☐ Algal Mat or Crust (B4) ☐ Presence of Reduced Iron (C4) ☐ Shallow Aquitard (D3) ☐ Iron Deposits (B5) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ FAC-Neutral Test (D5) ☐ Surface Soil Cracks (B6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Frost-Heave Hummocks (D7) ☐ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): Water Table Present? Yes ☐ No ☐ Depth (inches): 9 Saturation Present? Yes ☐ No ☐ Depth (inches): surface (includes capillary fringe) Wetland Hydrology Present? Yes ☐ No ☐ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	-	*	one requ	uired; ch			
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□ Drift Deposits (B3) □ Oxidized Rhizospheres along Living Roots (C3) □ Geomorphic Position (D2) □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Shallow Aquitard (D3) □ Iron Deposits (B5) □ Recent Iron Reduction in Tilled Soils (C6) □ FAC-Neutral Test (D5) □ Surface Soil Cracks (B6) □ Stunted or Stressed Plants (D1) (LRR A) □ Raised Ant Mounds (D6) (LRR A) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ Frost-Heave Hummocks (D7) □ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes □ No □ Depth (inches): □ Water Table Present? Yes □ No □ Depth (inches): surface Wetland Hydrology Present? Yes □ No □ (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					, ,		
☐ Algal Mat or Crust (B4) ☐ Presence of Reduced Iron (C4) ☐ Shallow Aquitard (D3) ☐ Iron Deposits (B5) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ FAC-Neutral Test (D5) ☐ Surface Soil Cracks (B6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Raised Ant Mounds (D6) (LRR A) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Frost-Heave Hummocks (D7) ☐ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): ☐ Water Table Present? Yes ☐ No ☐ Depth (inches): g Saturation Present? Yes ☐ No ☐ Depth (inches): surface (includes capillary fringe) Wetland Hydrology Present? Yes ☐ No ☐ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	☐ Sedimer	nt Deposits (B2)			☐ Hydrogen Sulfide Odor (C1)		☐ Saturation Visible on Aerial Imagery (C9)
□ Iron Deposits (B5) □ Recent Iron Reduction in Tilled Soils (C6) □ FAC-Neutral Test (D5) □ Surface Soil Cracks (B6) □ Stunted or Stressed Plants (D1) (LRR A) □ Raised Ant Mounds (D6) (LRR A) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ Frost-Heave Hummocks (D7) □ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes □ No □ Depth (inches): □ Water Table Present? Yes □ No □ Depth (inches): 9 □ Saturation Present? Yes □ No □ Depth (inches): surface Wetland Hydrology Present? Yes □ No □ Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	1	` '				ing Roots	s (C3) Geomorphic Position (D2)
□ Surface Soil Cracks (B6) □ Stunted or Stressed Plants (D1) (LRR A) □ Raised Ant Mounds (D6) (LRR A) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ Frost-Heave Hummocks (D7) □ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes □ No □ Depth (inches): □ Water Table Present? Yes □ No □ Depth (inches): 9 □ Saturation Present? Yes □ No □ Depth (inches): surface (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	☐ Algal Ma	at or Crust (B4)			☐ Presence of Reduced Iron (C4)		☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Frost-Heave Hummocks (D7) ☐ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): ☐ Water Table Present? Yes ☐ No ☐ Depth (inches): 9 ☐ Saturation Present? Yes ☐ No ☐ Depth (inches): surface ☐ Wetland Hydrology Present? Yes ☐ No ☐ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	☐ Iron Dep	oosits (B5)			☐ Recent Iron Reduction in Tilled S	oils (C6)	☐ FAC-Neutral Test (D5)
☐ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): Water Table Present? Yes ☒ No ☐ Depth (inches): 9 Saturation Present? Yes ☒ No ☐ Depth (inches): surface	☐ Surface	Soil Cracks (B6)			☐ Stunted or Stressed Plants (D1) ((LRR A)	☐ Raised Ant Mounds (D6) (LRR A)
Field Observations: Surface Water Present? Yes □ No □ Depth (inches): Water Table Present? Yes □ No □ Depth (inches): 9 Saturation Present? Yes □ No □ Depth (inches): surface (includes capillary fringe) Wetland Hydrology Present? Yes □ No □ Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	☐ Inundati	on Visible on Aerial	Imagery	(B7)	☐ Other (Explain in Remarks)		☐ Frost-Heave Hummocks (D7)
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): 9 Saturation Present? Yes No Depth (inches): surface Wetland Hydrology Present? Yes No Depth (inches): surface Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		Vegetated Concav	ve Surfac	e (B8)			
Water Table Present? Yes ⋈ No ☐ Depth (inches): 9	☐ Sparsely	y vogotatou comou					
Saturation Present? Yes No Depth (inches): surface Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Field Obser	rvations:	Yes 🗌	No ⊠	Depth (inches):		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Field Obser Surface Wat	rvations: ter Present?			, ,		
	Field Obser Surface Wat Water Table	rvations: ter Present? Present?	Yes 🛚	No 🗌	Depth (inches): 9	Wetla	nd Hydrology Present? Yes ⊠ No □
Remarks:	Field Obser Surface Wat Water Table Saturation F (includes ca	rvations: ter Present? Present? Present? pillary fringe)	Yes ⊠ Yes ⊠	No 🗆	Depth (inches): 9 Depth (inches): surface		
Remarks:	Field Obser Surface Wat Water Table Saturation F (includes ca	rvations: ter Present? Present? Present? pillary fringe)	Yes ⊠ Yes ⊠	No 🗆	Depth (inches): 9 Depth (inches): surface		
	Field Obser Surface Wat Water Table Saturation F (includes ca	rvations: ter Present? Present? Present? pillary fringe)	Yes ⊠ Yes ⊠	No 🗆	Depth (inches): 9 Depth (inches): surface		
	Field Obser Surface War Water Table Saturation F (includes ca Describe Re	rvations: ter Present? Present? Present? pillary fringe)	Yes ⊠ Yes ⊠	No 🗆	Depth (inches): 9 Depth (inches): surface		
	Field Obser Surface War Water Table Saturation F (includes ca Describe Re	rvations: ter Present? Present? Present? pillary fringe)	Yes ⊠ Yes ⊠	No 🗆	Depth (inches): 9 Depth (inches): surface		
	Field Obser Surface War Water Table Saturation F (includes ca Describe Re	rvations: ter Present? Present? Present? pillary fringe)	Yes ⊠ Yes ⊠	No 🗆	Depth (inches): 9 Depth (inches): surface		

Project/Site: Cheasty Trail Pilot Project		City/Co	unty: <u>Sea</u>	attle, Kir	ng	Sampling Date: Oct	31, 2016
Applicant/Owner: City of Seattle Parks					State: WA	Sampling Point: W2	DP2
Investigator(s): Claire Hoffman, Jessica Redman			Section	on, Tov	vnship, Range: <u>SE-16-24-</u>	-4	
Landform (hillslope, terrace, etc.): slope		Local	relief (con	ncave, d	convex, none): convex	Slope (%): <u>5</u>
Subregion (LRR): LRR A	Lat: <u>47°3</u>	3'49.57	"N		Long: <u>122°18'1.56"W</u>	Datum: N	IAD1983
Soil Map Unit Name: na							
Are climatic / hydrologic conditions on the site typical for this							
Are Vegetation, Soil, or Hydrology sign	•			,	mal Circumstances" pres	ent? Yes⊠ No.Γ	٦
Are Vegetation, Soil, or Hydrology natu					d, explain any answers in		_
SUMMARY OF FINDINGS – Attach site map			,			,	ıres, etc.
Hydrophytic Vegetation Present? Yes ☐ No ☒							
Hydric Soil Present? Yes ☐ No ☒			s the San within a W	•		. 🔽	
Wetland Hydrology Present? Yes ☐ No ☒		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	WILIIIII a V	veliani	ir res ∐ inc	, M	
Remarks:		•					
VEGETATION – Use scientific names of plan	ts.						
	Absolute				Dominance Test works	heet:	
Tree Stratum (Plot size: 30)	% Cover				Number of Dominant Spe		
1. Acer macrophyllum					That Are OBL, FACW, or	r FAC: <u>0</u>	_ (A)
2					Total Number of Domina		<i>(</i> =)
3					Species Across All Strata	a: <u>4</u>	(B)
4					Percent of Dominant Spe		
Sapling/Shrub Stratum (Plot size: 10)	60	- 1018	ai Covei		That Are OBL, FACW, or	r FAC: 0	(A/B)
Oemleria cerasiformis	5	У	FACI	:U_	Prevalence Index works	sheet:	
2. Corylus cornuta					Total % Cover of:	Multiply by	<u>.</u>
3					OBL species	x 1 =	
4					FACW species	x 2 =	
5					FAC species	x 3 =	
	25	= Tota	al Cover		FACU species		
Herb Stratum (Plot size: 5)	00		E401		UPL species		
1. Polystichum munitum	80				Column Totals:	(A)	(B)
2. <u>Urtica dioica</u>					Prevalence Index :	= B/A =	
Vaccinium parvifolium Hedera helix					Hydrophytic Vegetation		
5					☐ Rapid Test for Hydro		
6.					☐ Dominance Test is >		
7					☐ Prevalence Index is	≤3.0 ¹	
8					☐ Morphological Adapt	ations¹ (Provide sup	porting
9						or on a separate she	et)
10.				,	Wetland Non-Vascul		
11.					Problematic Hydroph	, , ,	,
Woody Vine Stratum (Plot size: 5)	85				¹ Indicators of hydric soil a be present, unless distur		gy must
1. Rubus armeniacus	trace		FAC		Hydrophytic		
2					Vegetation		
% Bare Ground in Herb Stratum <u>0</u>	trace	= Tota	al Cover		Present? Yes	□ No ⊠	
Remarks:							

	cription: (Describ	e to the d	epth ne				or conf	irm the	absence of indi	cators.)
Depth (inches)	Matrix Color (moist)	%	Colo	Redo: or (moist)	x Features %	Type ¹	Loc2	Te	xture	Remarks
0-18	10YR 2/2	100	0010	n (moist)		турс				
<u>0-10</u>	101K 2/2	100			· ———			<u> 5ai</u>		
<u> </u>		_	·							
	oncentration, D=De						ed Sand	Grains		PL=Pore Lining, M=Matrix.
_	Indicators: (Appl	icable to a				ed.)				Problematic Hydric Soils ³ :
☐ Histosol	. ,			Sandy Redox (S Stripped Matrix (2 cm Muck	· /
☐ Black His	oipedon (A2)		_	Loamy Mucky M	,	(evcent	MIDA	1)		Material (TF2) w Dark Surface (TF12)
	n Sulfide (A4)			Loamy Gleyed N	, ,	(except	INILIXA	1)		ain in Remarks)
	l Below Dark Surfa	ce (A11)		Depleted Matrix					□ outer (Expir	an in remaine,
	rk Surface (A12)	(,		Redox Dark Sur	. ,				³ Indicators of hy	/drophytic vegetation and
☐ Sandy M	ucky Mineral (S1)			Depleted Dark S	urface (F7	')			wetland hydr	rology must be present,
_	leyed Matrix (S4)			Redox Depressi	ons (F8)				unless distur	bed or problematic.
_	Layer (if present):									
Type:										
Depth (in	ches):			-				Н	ydric Soil Preser	nt? Yes □ No ⊠
Remarks:										
HYDROLO	GY									
Wetland Hy	drology Indicators	s:								
Primary India	cators (minimum of	one requi	red; che	eck all that apply	/)				Secondary In	ndicators (2 or more required)
☐ Surface	Water (A1)			☐ Water-Stair	ned Leaves	s (B9) (e	xcept M	ILRA	☐ Water-Sta	ained Leaves (B9) (MLRA 1, 2,
☐ High Wa	ter Table (A2)				, and 4B)	, , ,	•			nd 4B)
☐ Saturation				☐ Salt Crust (B11)				☐ Drainage	Patterns (B10)
☐ Water M	arks (B1)			☐ Aquatic Inv	ertebrates	(B13)			☐ Dry-Seas	on Water Table (C2)
☐ Sedimen	t Deposits (B2)			☐ Hydrogen S	Sulfide Odd	or (C1)			☐ Saturation	n Visible on Aerial Imagery (C9)
☐ Drift Dep	osits (B3)			☐ Oxidized R	hizosphere	es along	Living R	loots (C	3) 🗌 Geomorp	hic Position (D2)
☐ Algal Ma	t or Crust (B4)			☐ Presence of	f Reduced	I Iron (C4	4)		☐ Shallow A	Aquitard (D3)
☐ Iron Dep	osits (B5)			☐ Recent Iron	Reduction	n in Tille	d Soils (C6)	☐ FAC-Neu	tral Test (D5)
☐ Surface	Soil Cracks (B6)			☐ Stunted or	Stressed F	Plants (D	1) (LRR	A)	☐ Raised A	nt Mounds (D6) (LRR A)
☐ Inundation	on Visible on Aerial	Imagery (B7)	☐ Other (Exp	ain in Ren	narks)			☐ Frost-Hea	ave Hummocks (D7)
☐ Sparsely	Vegetated Conca	ve Surface	(B8)							
Field Obser	vations:									
Surface Wat	er Present?	Yes 🗌	No 🛛	Depth (inches):					
Water Table	Present?	Yes 🗌	No 🛛	Depth (inches):					
Saturation P		Yes 🗌	No 🛛	Depth (inches):		W	etland	Hydrology Prese	ent? Yes 🗌 No 🖂
(includes cap	oillary fringe) corded Data (strea	m gallao	monitor	ing well periol r	hotos pro	vious in	enaction	c) if av	ailabla:	
Describe Re	corded Data (Strea	iii gauge, i	HOHILOI	ilig well, aeriai p	motos, pre	vious iris	spection	s), 11 av	aliable.	
Domarkasas	il moist but not sat	urated								
inciliarks. S0	าก เมษายน มนเ มษา Sat	urat e u								
Ī										

Project/Site: Cheasty Trail Pilot Project			City/Coun	ty: <u>Seattle, K</u>	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, To	ownship, Range: <u>SE-16-2</u>	4-4
Landform (hillslope, terrace, etc.): slope			Local reli	ief (concave	, convex, none): concave	Slope (%): <u>20</u>
Subregion (LRR): <u>LRR A</u>						
						ation: <u>PFOB, PEM1B</u>
Are climatic / hydrologic conditions on the site typic						
Are Vegetation, Soil, or Hydrology _		•		,	ormal Circumstances" pre	
Are Vegetation, Soil, or Hydrology _					ed, explain any answers i	
SUMMARY OF FINDINGS – Attach sit					-	
Lludranhutia Variation Process?	l No □					
	No			he Sampled		_
	No 🗆		with	hin a Wetlar	nd? Yes⊠ N	lo 📙
Remarks:			<u> </u>			
VEGETATION – Use scientific names	of plan	ts.				
				nt Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size: 30) 1.)		% Cover			Number of Dominant Sp That Are OBL, FACW, o	
2					Total Number of Domin	
3					Species Across All Stra	
4					Percent of Dominant Sp	nacias
Sapling/Shrub Stratum (Plot size: 10)		5	= Total (Cover		or FAC: <u>75</u> (A/B)
1. Corylus cornuta		10		FACU	Prevalence Index wor	
2Hedera helix		70	У	FACU	Total % Cover of:	Multiply by:
3				<u> </u>		x 1 =
4					· ·	x 2 =
5						x 3 =
Herb Stratum (Plot size: 5)		80	= Total (Cover		x 4 =
1. Equisetum telmateia		60	V	FACW		x 5 = (A) (B)
2. Polystichum munitum					Column Totals.	(A) (B)
3. <u>Urtica dioica</u>					Prevalence Index	= B/A =
4. Athyrium filix-femina					Hydrophytic Vegetation	on Indicators:
5					☐ Rapid Test for Hydr	ophytic Vegetation
6				<u> </u>	□ Dominance Test is a larger than the property of the	>50%
7					Prevalence Index is	
8						otations¹ (Provide supporting s or on a separate sheet)
9					☐ Wetland Non-Vascu	,
10					☐ Problematic Hydrop	phytic Vegetation¹ (Explain)
11		150				l and wetland hydrology must
Woody Vine Stratum (Plot size: <u>5</u>)		150	- Total C	Cover	be present, unless distu	ırbed or problematic.
1. Rubus armeniacus		trace	у	FAC	Distant d	
2					Hydrophytic Vegetation	
		trace				s⊠ No□
% Bare Ground in Herb Stratum Remarks: Acer macrophyllum (rooted outside th	0 1404100-1	\ included 5	DIIAD as a	dominant b -	aguagia the entrying	
Remarks. Acer macrophylium (rooted outside th	e welland), included F	NUAR AS (uommant be	cause is the only vine	

	Matrix			dox Featu				
(inches)	Color (moist)	%	Color (moist)	%		Loc ²		Remarks
<u>0-9</u>	10YR 2/1	<u>98</u>	7.5YR 3/4	2	<u>C</u>	matrix	sandy loam	<u> </u>
9-20	5Y 5/2 & 5Y 4/1	<u>85&10</u>	10YR 4/6	5	<u>C</u>	matrix	loamy sand	ly 2 matrix colors
								
								_
	_		_				-	-
								_
			M=Reduced Matrix,			ed Sand G		ocation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appl	icable to a	II LRRs, unless oth	nerwise n	oted.)		Indica	ators for Problematic Hydric Soils ³ :
Histosol	` '		☐ Sandy Redox					cm Muck (A10)
	pipedon (A2)		☐ Stripped Matr					ed Parent Material (TF2)
Black His	, ,		Loamy Mucky			MLRA 1)		ery Shallow Dark Surface (TF12)
	n Sulfide (A4) d Below Dark Surfa	ce (A11)	☐ Loamy Gleye ☐ Depleted Mat		-2)			ther (Explain in Remarks)
	ark Surface (A12)	CC (A11)	☐ Redox Dark S	. ,	6)		³ Indica	ators of hydrophytic vegetation and
	lucky Mineral (S1)		☐ Depleted Dar	-	-			tland hydrology must be present,
	leyed Matrix (S4)		☐ Redox Depre	ssions (F8	3)		unl	ess disturbed or problematic.
Restrictive	Layer (if present):							
Depth (in	ches):						Hydric S	oil Present? Yes 🛛 No 🗌
Remarks:							•	
HYDROLO	GY							
	drology Indicators	S:						
Primary India	drology Indicators		ed: check all that ar	nnlv)			Sec	condary Indicators (2 or more required)
-	cators (minimum of		ed; check all that ap		aves (R9) (e	xcent MI F		condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1.2)
☐ Surface	cators (minimum of Water (A1)		☐ Water-S	tained Lea		xcept MLF		Water-Stained Leaves (B9) (MLRA 1, 2,
☐ Surface Thigh Wa	cators (minimum of Water (A1) ter Table (A2)		☐ Water-S 1, 2,	tained Lea		xcept MLF	RA 🗆	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
☐ Surface ☐ High Wa	cators (minimum of Water (A1) Iter Table (A2) on (A3)		☐ Water-S 1, 2, ☐ Salt Crus	tained Lea 4A, and 4 st (B11)	IB)	xcept MLF	RA 🗆	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
☐ Surface ☐ High Wa ☐ Saturatio	cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1)		☐ Water-S 1, 2, ☐ Salt Cru: ☐ Aquatic	tained Lea 4A , and 4 st (B11) hvertebra	tes (B13)	xcept MLF	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Surface High Wa Saturatio Water M Sedimen	cators (minimum of Water (A1) Iter Table (A2) on (A3) arks (B1) It Deposits (B2)		☐ Water-S 1, 2, ☐ Salt Cru: ☐ Aquatic ☐ Hydroge	tained Lea 4A, and 4 st (B11) Invertebra n Sulfide	tes (B13) Odor (C1)	-	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Surface ' High Wa Saturatio Water M Sedimen	cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1)		☐ Water-S 1, 2, ☐ Salt Cru: ☐ Aquatic ☐ Hydroge ☐ Oxidized	tained Lea 4A, and 4 st (B11) nvertebra n Sulfide (tes (B13) Odor (C1) neres along	Living Roc	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma	cators (minimum of Water (A1) Iter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3)		☐ Water-S 1, 2, ☐ Salt Crue ☐ Aquatic ☐ Hydroge ☐ Oxidized ☐ Presence	tained Lea 4A, and 4 st (B11) Invertebra n Sulfide (Rhizosph e of Redu	tes (B13) Odor (C1)	Living Roc 1)	RA Outs (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma	cators (minimum of Water (A1) Iter Table (A2) on (A3) arks (B1) Int Deposits (B2) posits (B3) Int or Crust (B4)		☐ Water-S 1, 2, ☐ Salt Crus ☐ Aquatic ☐ Hydroge ☐ Oxidized ☐ Presenc ☐ Recent I	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizosph e of Reduron Reductor	tes (B13) Odor (C1) neres along ced Iron (C	Living Roc 4) d Soils (C6	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep	cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4)	one requir	☐ Water-S 1, 2, ☐ Salt Crus ☐ Aquatic ☐ Hydroge ☐ Oxidized ☐ Presenc ☐ Recent I ☐ Stunted	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide I Rhizosph e of Reduron Reductor	tes (B13) Odor (C1) heres along ced Iron (Cotton in Tille ad Plants (D	Living Roc 4) d Soils (C6	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface :	cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	one requir		tained Lea 4A, and 4 st (B11) Invertebra In Sulfide (I Rhizosphe of Reduction	tes (B13) Odor (C1) heres along ced Iron (Cotton in Tille ad Plants (D	Living Roc 4) d Soils (C6	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface :	cators (minimum of Water (A1) Iter Table (A2) on (A3) arks (B1) In Deposits (B2) posits (B3) In or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial	one requir		tained Lea 4A, and 4 st (B11) Invertebra In Sulfide (I Rhizosphe of Reduction	tes (B13) Odor (C1) heres along ced Iron (Cotton in Tille ad Plants (D	Living Roc 4) d Soils (C6	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface : Inundatio Sparsely	cators (minimum of Water (A1) Iter Table (A2) Iter Table (A2) Iter Table (A2) Iter Table (B1) Iter Deposits (B2) Iter Deposits (B3) Iter Crust (B4) Iter Crust (B4) Iter Crust (B6) Iter Vegetated Concaverations:	Imagery (E		tained Lea 4A, and 4 st (B11) Invertebra In Sulfide In Rhizosphe In Reduction Reduction Reduction Reduction Reports Stresse xplain in F	tes (B13) Odor (C1) neres along ced Iron (Cation in Tille ad Plants (D Remarks)	Living Roc 4) d Soils (C6	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface : Inundatio Sparsely	cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concave vations: eer Present?	Imagery (Eve Surface	Water-S 1, 2, Salt Crus Aquatic Hydroge Oxidized Presenc Recent I Stunted The Company of the Com	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide In Reduction Reduction Reduction Stresse xplain in F	tes (B13) Odor (C1) heres along ced Iron (C- ction in Tille d Plants (D Remarks)	Living Roc 4) d Soils (C6	RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface: Inundatio Sparsely Field Obser Surface Wat	cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concavivations: er Present? Present?	Imagery (Eve Surface Yes	Water-S 1, 2, Salt Crus Aquatic Hydroge Oxidized Presenc Recent I Stunted 37) Other (E	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide In Rhizosphe In Reduction Reduct	tes (B13) Odor (C1) neres along ced Iron (Cotion in Tille ed Plants (D Remarks)	Living Roo 4) d Soils (C6 1) (LRR A	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface: Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap	cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concave vations: ter Present? Present? tresent?	Imagery (Eve Surface Yes	Water-S	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide of Reduction Reduction Reduction Stresse Explain in Ferrores. es): es): es): 7	tes (B13) Odor (C1) neres along ced Iron (C- ction in Tille ad Plants (D Remarks)	Living Roo 4) d Soils (C6 1) (LRR A	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface: Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap	cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concave vations: ter Present? Present? tresent?	Imagery (Eve Surface Yes	Water-S	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide of Reduction Reduction Reduction Stresse Explain in Ferrores. es): es): es): 7	tes (B13) Odor (C1) neres along ced Iron (C- ction in Tille ad Plants (D Remarks)	Living Roo 4) d Soils (C6 1) (LRR A	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface : Inundatio Sparsely Field Obser Surface Water Table Saturation P (includes cap Describe Re	cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concave vations: ter Present? Present? tresent?	Imagery (Eve Surface Yes	Water-S	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide of Reduction Reduction Reduction Stresse Explain in Ferrores. es): es): es): 7	tes (B13) Odor (C1) neres along ced Iron (C- ction in Tille ad Plants (D Remarks)	Living Roo 4) d Soils (C6 1) (LRR A	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface: Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap	cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concave vations: ter Present? Present? tresent?	Imagery (Eve Surface Yes	Water-S	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide of Reduction Reduction Reduction Stresse Explain in Ferrores. es): es): es): 7	tes (B13) Odor (C1) neres along ced Iron (C- ction in Tille ad Plants (D Remarks)	Living Roo 4) d Soils (C6 1) (LRR A	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface : Inundatio Sparsely Field Obser Surface Water Table Saturation P (includes cap Describe Re	cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concave vations: ter Present? Present? tresent?	Imagery (Eve Surface Yes	Water-S	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide of Reduction Reduction Reduction Stresse Explain in Ferrores. es): es): es): 7	tes (B13) Odor (C1) neres along ced Iron (C- ction in Tille ad Plants (D Remarks)	Living Roo 4) d Soils (C6 1) (LRR A	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface ' High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface : Inundatio Sparsely Field Obser Surface Water Table Saturation P (includes cap Describe Re	cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concave vations: ter Present? Present? tresent?	Imagery (Eve Surface Yes	Water-S	tained Lea 4A, and 4 st (B11) Invertebra In Sulfide of Reduction Reduction Reduction Stresse Explain in Ferrores. es): es): es): 7	tes (B13) Odor (C1) neres along ced Iron (C- ction in Tille ad Plants (D Remarks)	Living Roo 4) d Soils (C6 1) (LRR A	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: Cheasty Trail Pilot Project		City/County	y: <u>Seattle, K</u>	(ing	Sampling Date: Oct 19, 2016
Applicant/Owner: City of Seattle Parks				State: WA	Sampling Point: W3-DP4
Investigator(s): Claire Hoffman, Michael Muscari					
Landform (hillslope, terrace, etc.): slope		Local relie	ef (concave,	, convex, none): concave	Slope (%): <u>20</u>
Subregion (LRR): <u>LRR A</u>					
Soil Map Unit Name: na					
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	•		•	ormal Circumstances" pres	ent? Yes⊠ No□
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in	- -
SUMMARY OF FINDINGS – Attach site map				-	•
Hydrophytic Vegetation Present? Yes ☐ No ☒					
Hydrophytic Vegetation Present? Yes ☐ No ☐ Hydric Soil Present? Yes ☐ No ☐			e Sampled		_
Wetland Hydrology Present? Yes ☐ No ☒		with	in a Wetlar	nd? Yes ☐ No) 🛚
Remarks:		<u> </u>			
VEGETATION – Use scientific names of plant	ts.				
Trac Stratum (Plot airo: 20)	Absolute			Dominance Test works	
Tree Stratum (Plot size: 30) 1. Acer macrophylum	% Cover			Number of Dominant Spo That Are OBL, FACW, or	
Prunus laurocerasus					
3				Total Number of Domina Species Across All Strata	
4					
		= Total C		Percent of Dominant Spe That Are OBL, FACW, or	ecies r FAC: <u>20 </u>
Sapling/Shrub Stratum (Plot size: 10)	_				
1. Corylus cornuta				Prevalence Index work	Sneet: Multiply by:
Oemleria cerasiformis Mahonia aquifolium					x 1 =
Inanona aquiolium Hedera helix					x 2 =
5	00		17100	· ·	x 3 =
	65	= Total C	over		x 4 =
Herb Stratum (Plot size: 5)				UPL species	x 5 =
1. Equisetum telmateia	trace		FACW	Column Totals:	(A) (B)
2. Polystichum munitum				Prevalence Index	= B/A =
3				Hydrophytic Vegetation	
4				☐ Rapid Test for Hydro	
6				☐ Dominance Test is >	50%
7				☐ Prevalence Index is :	≤3.0 ¹
8					ations ¹ (Provide supporting or on a separate sheet)
9				☐ Wetland Non-Vascul	'
10				☐ Problematic Hydroph	nytic Vegetation¹ (Explain)
11					and wetland hydrology must
Woody Vine Stratum (Plot size: <u>5</u>)	50	= Total C	ovei	be present, unless distur	bed or problematic.
1. Rubus armeniacus	trace	у	FAC	Ukadaankadia	
2				Hydrophytic Vegetation	
94 Rara Ground in Harb Stratum	trace	= Total C	over		□ No ⊠
% Bare Ground in Herb Stratum Remarks: included RUAR as dominant b/c it's the only vine	e.				
VIII					

	cription: (Describ		depth ne			dicator	or confirm	the abser	nce of indicators.)	
Depth (inches)	Matrix Color (moist)	%	Colo	Redo or (moist)	x Features %	Type ¹	1 oc^2	Texture	Remarks	
0-9	10YR 2/2	100		or (moist)		турс		TOXIGIO	sandy loam	
9-20	10YR 3/3	<u>100</u>						-	gravelly sandy loam	
								-		
	-		_				-			
	Concentration, D=D	_					d Sand Gr		Location: PL=Pore Lining, M=Matrix.	
-	Indicators: (App	licable to				1.)			ators for Problematic Hydric Soils	~:
☐ Histosol	(A1) pipedon (A2)			Sandy Redox (S Stripped Matrix				· 	cm Muck (A10) led Parent Material (TF2)	
	istic (A3)			Suipped Matrix Loamy Mucky N	` '	(evcent	MIRA 1)		ery Shallow Dark Surface (TF12)	
	en Sulfide (A4)			Loamy Gleyed		(схосрі	WILKA I)		Other (Explain in Remarks)	
_ , ,	d Below Dark Surfa	ace (A11)		Depleted Matrix					(2).p.a (2).	
•	ark Surface (A12)	,		, Redox Dark Su	. ,			³ Indic	cators of hydrophytic vegetation and	
☐ Sandy N	lucky Mineral (S1)			Depleted Dark	Surface (F7)			We	etland hydrology must be present,	
	Bleyed Matrix (S4)			Redox Depress	ions (F8)			ur	nless disturbed or problematic.	
	Layer (if present)	:								
Type:										
Depth (in	nches):			-				Hydric S	Soil Present? Yes ☐ No 🏻	
Remarks:										
HYDROLO)GY									
	drology Indicator	·c·								
•	cators (minimum o		uired: ch	eck all that app	lv)			Se	condary Indicators (2 or more require	ed)
-	Water (A1)			☐ Water-Sta		(B9) (e)	cent MI R		Water-Stained Leaves (B9) (MLRA	
	ater Table (A2)				A, and 4B)	(20) (0)	toopt iii.Eit	., Ц	4A, and 4B)	., _,
☐ Saturation				☐ Salt Crust	•				Drainage Patterns (B10)	
	larks (B1)			☐ Aquatic In	` '	(B13)			Dry-Season Water Table (C2)	
	nt Deposits (B2)			☐ Hydrogen		` '			Saturation Visible on Aerial Imagery	(C9)
	posits (B3)				Rhizosphere	` '	_ivina Root	_	Geomorphic Position (D2)	()
	at or Crust (B4)				of Reduced	Ū	•	` ′ =	Shallow Aquitard (D3)	
_ •	posits (B5)				n Reduction				FAC-Neutral Test (D5)	
	Soil Cracks (B6)				Stressed P		` '	_	Raised Ant Mounds (D6) (LRR A)	
	on Visible on Aeria	l Imagery	/ (B7)		olain in Rem		, (-7		Frost-Heave Hummocks (D7)	
	y Vegetated Conca	0,	` '	_ ` '		,			,	
Field Obser										
Surface Wa	ter Present?	Yes 🗌	No 🛛	Depth (inches	s):					
Water Table	Present?	Yes	No ⊠	Depth (inches	-					
Saturation F		Yes 🗌	No 🏻	Depth (inches			Wetla	and Hvdrol	logy Present? Yes ☐ No ⊠	
(includes ca	pillary fringe)									
Describe Re	ecorded Data (strea	am gauge	e, monitor	ring well, aerial	photos, prev	ious ins	pections), i	if available:		
Remarks:										

Project/Site: Cheasty Trail Pilot Project		City/Co	unty: <u>Seattle/K</u>	ing County	_ Sampling l	Date: <u>Oct 19,</u>	2016
Applicant/Owner: City of Seattle				State: WA	_ Sampling l	Point: W4- DF	71
Investigator(s): Claire Hoffman, Michael Muscari			Section, To	ownship, Range: <u>SE-16-2</u>	<u>'</u> 4-4		
Landform (hillslope, terrace, etc.): slope, flat		_Local ı	relief (concave	, convex, none): concave		_ Slope (%):	40
Subregion (LRR): <u>LRR A</u>	Lat: 47.5	63111		Long: -122.299658		Datum: NAD	1983
Soil Map Unit Name: no data available							
Are climatic / hydrologic conditions on the site typical for thi							
Are Vegetation, Soil, or Hydrology sig	-		•	ormal Circumstances" pre		⊠ No □	
Are Vegetation, Soil, or Hydrology natu	-			ed, explain any answers	-		
SUMMARY OF FINDINGS – Attach site map			-		•		s etc
		<u> </u>	9 po		-, po :.ta:		
Hydrophytic Vegetation Present? Yes ☐ No ☒		Is	s the Sampled	l Area			
Hydric Soil Present? Yes ⊠ No ☐		v	vithin a Wetlaı	nd? Yes ⊠	No 🗌		
Wetland Hydrology Present? Yes ⊠ No ☐ Remarks: buffer and southern edge of wetland had been of	diaturbad by	human	activity. The a	roa has been restared an	d raplantad	Diet is on the	odgo
of the wetland boundary, vegetation doesn't meet because					u repianteu.	Plot is on the	euge
VEGETATION Have a longition and a longition	4-						
VEGETATION – Use scientific names of plan	Absolute	Domin	ant Indicator	Dominance Test worl	rohoot:		
Tree Stratum (Plot size: 30)			ant Indicator es? <u>Status</u>	Number of Dominant S			
1. Sorbus aucuparia	5	У	UPL	That Are OBL, FACW,			(A)
2. Prunus laurocerasus	5	У	FACU	Total Number of Domir	ant		
3				Species Across All Stra			(B)
4				Percent of Dominant S	nacios		
Cardina/Charle Charles (Distains 40)	10	= Tota	al Cover	That Are OBL, FACW,		3	(A/B)
Sapling/Shrub Stratum (Plot size: 10) 1. Rubus spectabilis	50	V	FAC	Prevalence Index wo	rkshoot:		
Corylus cornuta			FACU	Total % Cover of:		Aultiply by	
Oemleria cerasiformis			FACU	OBL species			
4. Hedera helix_			FACU	FACW species 15			
5				FAC species 50			
	130	= Tota	al Cover	FACU species90			
Herb Stratum (Plot size: 5)				UPL species	x 5 =	=	_
Equisetum telmateia				Column Totals: 155	(A)	<u>540</u>	_ (B)
Polystichum munitum 3.				Prevalence Index	c = B/A = 3.5	5 <u>.</u>	
4				Hydrophytic Vegetati	on Indicator	s:	
5.				☐ Rapid Test for Hyd	rophytic Vege	etation	
6.				☐ Dominance Test is	>50%		
7.				☐ Prevalence Index i	s ≤3.0¹		
8				☐ Morphological Ada data in Remark			ing
9				☐ Wetland Non-Vasc	ular Plants ¹		
10				☐ Problematic Hydro	phytic Vegeta	ation¹ (Explair	1)
11	20		al Cover	¹ Indicators of hydric so be present, unless dist			nust
Woody Vine Stratum (Plot size: <u>5</u>)	Aug a -	_	EAO				
1. Rubus armeniacus			FAC	Hydrophytic			
2			al Cover	Vegetation Present? Ye	es □ No ⊠	1	
% Bare Ground in Herb Stratum <u>0</u>	trace	- 1018	ai Covei	. 10001111	~40 <u>/</u>	Я	
Remarks: Acer macrophylum is upslope of the plot, rooted in buffer which stretches into the fringe of the wetland) it is							

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.

Profile Desc Depth	Matrix			Redox Features				
(inches)	Color (moist)	%	Color (mo		e ¹ Loc ²	Textur	re	Remarks
0-7	10YR 2/1	100	•	0		silty sa	ndy loam	
7-24	10YR 2/1 & 2.5Y 3/	/1 /58./5	7 5VP 4/3	10 RD	M		ndy loam	_
1-24	1011\ 2/1 & 2.51 5/	1 43043	7.511\4/5	<u>10 KD</u>	<u>IVI</u>	Silly Sai	idy idairi	
-								
	-	· ——						
1Type: C=C	ancontration D-Don	lotion DN	4-Podusod	Matrix, CS=Covered or Co	ooted Sand C	roino	21 continue DI	_=Pore Lining, M=Matrix.
				ess otherwise noted.)	oateu Sanu G			oblematic Hydric Soils ³ :
☐ Histosol				Redox (S5)			2 cm Muck (A	· ·
_	ipedon (A2)		-	ed Matrix (S6)			Red Parent M	,
☐ Black His				/ Mucky Mineral (F1) (exc	ept MLRA 1)			Dark Surface (TF12)
	n Sulfide (A4)			Gleyed Matrix (F2)	,		• - · · · · · · · · · ·	, ,
☐ Depleted	Below Dark Surface	e (A11)		ted Matrix (F3)			, ,	,
☐ Thick Da	rk Surface (A12)		⊠ Redox	Dark Surface (F6)		³ lı	ndicators of hydr	ophytic vegetation and
-	ucky Mineral (S1)			ted Dark Surface (F7)			wetland hydrol	ogy must be present,
	leyed Matrix (S4)		☐ Redox	Depressions (F8)			unless disturbe	ed or problematic.
	Layer (if present):							
Type:								
Depth (inc	ches):					Hydri	ic Soil Present?	? Yes ⊠ No 🏻
Remarks:								
HYDROLO	GY							
Wetland Hyd	drology Indicators:		ed: check al	I that apply)			Secondary India	cators (2 or more required)
Wetland Hyd	drology Indicators: cators (minimum of c) (overt MI E			cators (2 or more required)
Wetland Hyd Primary Indic ☐ Surface \	drology Indicators: cators (minimum of o Water (A1)			Vater-Stained Leaves (B9) (except MLF	RA	☐ Water-Stain	ned Leaves (B9) (MLRA 1, 2,
Wetland Hyd Primary Indic ☐ Surface \ ☐ High Wat	drology Indicators: cators (minimum of c Water (A1) ter Table (A2)		□ V	Vater-Stained Leaves (B9) (except MLF	RA	☐ Water-Stain	ned Leaves (B9) (MLRA 1, 2, I 4B)
Wetland Hyd Primary Indic □ Surface \ □ High Wat □ Saturatio	drology Indicators: cators (minimum of c Water (A1) ter Table (A2) on (A3)		□ V	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) salt Crust (B11)		RA	☐ Water-Stain 4A, and ☐ Drainage Pa	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10)
Wetland Hyd Primary Indic □ Surface \ □ High Wat □ Saturatio □ Water Ma	drology Indicators: cators (minimum of c Water (A1) ter Table (A2) on (A3) arks (B1)		□ V	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) Falt Crust (B11) Aquatic Invertebrates (B13	3)	RA	☐ Water-Stain 4A, and ☐ Drainage Pa ☐ Dry-Season	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2)
Wetland Hyd Primary India □ Surface \ □ High Wat □ Saturatio □ Water Mater	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)		□ V □ S □ A ⊠ H	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13 Hydrogen Sulfide Odor (C	s) 1)		Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9)
Wetland Hyd Primary India Surface N High Wat Saturatio Water Ma Sedimen □ Drift Dep	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3)		□ V □ S □ A □ C	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) Falt Crust (B11) Equatic Invertebrates (B13) Elydrogen Sulfide Odor (C2) Elydrozed Rhizospheres alco	i) 1) ong Living Roo		Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation V Geomorphic	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) to Position (D2)
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma	cators (minimum of control (Mater (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)		□ V □ <i>S</i> □ <i>A</i> □ C □ F	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) salt Crust (B11) equatic Invertebrates (B13 dydrogen Sulfide Odor (C2) Oxidized Rhizospheres alcourses	s) 1) ong Living Roo (C4)	ots (C3)	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation N Geomorphic Shallow Aqu	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3)
Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat	drology Indicators: eators (minimum of control of the control of t		V S A M H C F F	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) salt Crust (B11) equatic Invertebrates (B13 dydrogen Sulfide Odor (C' exidized Rhizospheres alconomics eresence of Reduced Iron Recent Iron Reduction in T	s) 1) ong Living Roo (C4) ïlled Soils (C6	ots (C3)	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aqu FAC-Neutra	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3) al Test (D5)
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depct	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	one requir	□ V □ S □ A □ F □ F	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) Falt Crust (B11) Equatic Invertebrates (B13) Hydrogen Sulfide Odor (C' Exidized Rhizospheres alcoresence of Reduced Iron Recent Iron Reduction in Taltunted or Stressed Plants	s) 1) ong Living Roo (C4) Tilled Soils (C6 s (D1) (LRR A)	ots (C3)	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aq FAC-Neutra Raised Ant	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A)
Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Deput Surface S Inundation	cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial I	one requir	V	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) salt Crust (B11) equatic Invertebrates (B13 dydrogen Sulfide Odor (C' exidized Rhizospheres alconomics eresence of Reduced Ironomics Recent Iron Reduction in T	s) 1) ong Living Roo (C4) Tilled Soils (C6 s (D1) (LRR A)	ots (C3)	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aq FAC-Neutra Raised Ant	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3) al Test (D5)
Wetland Hyderimary Indice Surface N High Water Ma Sedimen Drift Dep Algal Ma Iron Depo Surface S Inundation Sparsely	drology Indicators: cators (minimum of control (Mater (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial I Vegetated Concave	one requir	V	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) Falt Crust (B11) Equatic Invertebrates (B13) Hydrogen Sulfide Odor (C' Exidized Rhizospheres alcoresence of Reduced Iron Recent Iron Reduction in Taltunted or Stressed Plants	s) 1) ong Living Roo (C4) Tilled Soils (C6 s (D1) (LRR A)	ots (C3)	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aq FAC-Neutra Raised Ant	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A)
Wetland Hyderimary Indice Surface Note High Water Mater Mate	drology Indicators: cators (minimum of control of cators (minimum of cators	magery (E Surface	V	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) salt Crust (B11) equatic Invertebrates (B13 dydrogen Sulfide Odor (C' exidized Rhizospheres alce eresence of Reduced Iron elecent Iron Reduction in Tetunted or Stressed Plants other (Explain in Remarks	s) 1) ong Living Roo (C4) Tilled Soils (C6 s (D1) (LRR A)	ots (C3)	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aq FAC-Neutra Raised Ant	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A)
Wetland Hyd Primary India Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depa Surface S Inundatio Sparsely Field Observa	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial I Vegetated Concave vations: er Present?	magery (E e Surface ∕es □ N	V	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) Salt Crust (B11) Equatic Invertebrates (B13) Elydrogen Sulfide Odor (Cresence of Reduced Iron Reduction in Testunted or Stressed Plants Other (Explain in Remarks oth (inches):	b) 1) ong Living Roo (C4) Tilled Soils (C6 s (D1) (LRR A)	ots (C3)	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aq FAC-Neutra Raised Ant	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A)
Wetland Hyderimary Indice Surface Name Saturation Water Maren Sedimen Drift Dept Algal Maren Iron Dept Surface Surface Inundation Sparsely Field Observation Surface Water Table	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial I Vegetated Concave vations: er Present? Y	magery (E e Surface ′es □ N ′es 図 N	V	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) Falt Crust (B11) Equatic Invertebrates (B13) Elydrogen Sulfide Odor (C2) Exidized Rhizospheres alcoresence of Reduced Iron Execent Iron Reduction in Total Stanta (Explain in Remarks Exth (inches): htt (inches): 12, seep at 42	s) 1) 2) 2) 2) 3) 3) 4) 5) 6) 6) 6) 7) 6) 7) 6) 6) 7) 6) 6) 6) 7) 6) 6) 7) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6)	ots (C3)	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation N Geomorphic Shallow Aq FAC-Neutra Raised Ant Frost-Heave	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A) e Hummocks (D7)
Wetland Hyderimary Indice Primary Indice Surface Note High Wate Saturatio Water Mater Mate	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial I Vegetated Concave vations: er Present? Present? Y	magery (E e Surface ′es □ N ′es 図 N	V	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) Salt Crust (B11) Equatic Invertebrates (B13) Elydrogen Sulfide Odor (Cresence of Reduced Iron Reduction in Testunted or Stressed Plants Other (Explain in Remarks oth (inches):	s) 1) 2) 2) 2) 3) 3) 4) 5) 6) 6) 6) 7) 6) 7) 6) 6) 7) 6) 6) 6) 7) 6) 6) 7) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6)	ots (C3)	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation Geomorphic Shallow Aq FAC-Neutra Raised Ant	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A) e Hummocks (D7)
Wetland Hyderimary Indice Primary Indice Surface Note High Wate Saturatio Water Mater Mate	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial I Vegetated Concave vations: er Present? Present? Y resent? Y resent? Y	magery (E e Surface 'es □ N 'es ☑ N	V	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) Falt Crust (B11) Equatic Invertebrates (B13) Elydrogen Sulfide Odor (C2) Exidized Rhizospheres alcoresence of Reduced Iron Execent Iron Reduction in Total Stanta (Explain in Remarks Exth (inches): htt (inches): 12, seep at 42	b) 1) 2) 2) 3) 3) 4) 5) 6) 6) 6) 7) 6) 7) 7) 7 7 8 7 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9	ots (C3) i) land Hyd	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation N Geomorphic Shallow Aq FAC-Neutra Raised Ant Frost-Heave	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A) e Hummocks (D7)
Wetland Hyderimary Indice Primary Indice Surface Note High Wate Saturatio Water Mater Mate	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial I Vegetated Concave vations: er Present? Present? Y resent? Y resent? Y	magery (E e Surface 'es □ N 'es ☑ N	V	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) Falt Crust (B11) Equatic Invertebrates (B13) Elydrogen Sulfide Odor (C' Exidized Rhizospheres alcoresence of Reduced Iron Elecent Iron Reduction in Totunted or Stressed Plants Elth (inches): Enth (inches): Enth (inches): 12, seep at 41 Extra the control of the c	b) 1) 2) 2) 3) 3) 4) 5) 6) 6) 6) 7) 6) 7) 7) 7 7 8 7 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9	ots (C3) i) land Hyd	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation N Geomorphic Shallow Aq FAC-Neutra Raised Ant Frost-Heave	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A) e Hummocks (D7)
Wetland Hyderimary Indice Primary Indice Surface Note High Water Mater Table Saturation Professional Control Contr	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial I Vegetated Concave vations: er Present? Present? Y resent? Y resent? Y	magery (E e Surface 'es □ N 'es ☑ N	V	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) Falt Crust (B11) Equatic Invertebrates (B13) Elydrogen Sulfide Odor (C' Exidized Rhizospheres alcoresence of Reduced Iron Elecent Iron Reduction in Totunted or Stressed Plants Elth (inches): Enth (inches): Enth (inches): 12, seep at 41 Extra the control of the c	b) 1) 2) 2) 3) 3) 4) 5) 6) 6) 6) 7) 6) 7) 7) 7 7 8 7 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9	ots (C3) i) land Hyd	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation N Geomorphic Shallow Aq FAC-Neutra Raised Ant Frost-Heave	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A) e Hummocks (D7)
Wetland Hyderimary Indice Primary Indice Surface Note High Wate Saturatio Water Mater Mate	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial I Vegetated Concave vations: er Present? Present? Y resent? Y resent? Y	magery (E e Surface 'es □ N 'es ☑ N	V	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) Falt Crust (B11) Equatic Invertebrates (B13) Elydrogen Sulfide Odor (C' Exidized Rhizospheres alcoresence of Reduced Iron Elecent Iron Reduction in Totunted or Stressed Plants Elth (inches): Enth (inches): Enth (inches): 12, seep at 41 Extra the control of the c	b) 1) 2) 2) 3) 3) 4) 5) 6) 6) 6) 7) 6) 7) 7) 7 7 8 7 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9	ots (C3) i) land Hyd	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation N Geomorphic Shallow Aq FAC-Neutra Raised Ant Frost-Heave	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A) e Hummocks (D7)
Wetland Hyderimary Indice Primary Indice Surface Note High Water Mater Table Saturation Professional Control Contr	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial I Vegetated Concave vations: er Present? Present? Y resent? Y resent? Y	magery (E e Surface 'es □ N 'es ☑ N	V	Vater-Stained Leaves (B9 1, 2, 4A, and 4B) Falt Crust (B11) Equatic Invertebrates (B13) Elydrogen Sulfide Odor (C' Exidized Rhizospheres alcoresence of Reduced Iron Elecent Iron Reduction in Totunted or Stressed Plants Elth (inches): Enth (inches): Enth (inches): 12, seep at 41 Extra the control of the c	b) 1) 2) 2) 3) 3) 4) 5) 6) 6) 6) 7) 6) 7) 7) 7 7 8 7 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9	ots (C3) i) land Hyd	Water-Stair 4A, and Drainage Pa Dry-Seasor Saturation N Geomorphic Shallow Aq FAC-Neutra Raised Ant Frost-Heave	ned Leaves (B9) (MLRA 1, 2, I 4B) atterns (B10) n Water Table (C2) Visible on Aerial Imagery (C9) c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A) e Hummocks (D7)

Project/Site: Cheasty Trail Pilot Project		City/County	y: <u>Seattle, K</u>	(ing	Sampling Date: Oct 19, 2016
Applicant/Owner: City of Seattle Parks				State: WA	Sampling Point: W4 DP2
Investigator(s): Claire Hoffman, Michael Muscari					
Landform (hillslope, terrace, etc.): slope		Local relie	ef (concave,	, convex, none): none	Slope (%): <u>40</u>
Subregion (LRR): <u>LRR A</u>					
Soil Map Unit Name: none				=	
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	•		•	ormal Circumstances" pres	ent? Yes⊠ No □
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in	- -
SUMMARY OF FINDINGS – Attach site map				-	•
Hydrophytic Vegetation Present? Yes ☐ No ☒					
Hydric Soil Present? Yes ☐ No ☒			e Sampled		- 57
Wetland Hydrology Present? Yes ☐ No ☒		With	in a Wetlar	nd? Yes ☐ No) 🛚
Remarks:		•			
VECETATION . Her exicutific names of plan	40				
VEGETATION – Use scientific names of plan	Absolute	Dominant	Indicator	Dominance Test works	·hoot·
Tree Stratum (Plot size: 30)	% Cover			Number of Dominant Sp	
1. Prunus laurocerasus	20	<u>y</u>	FACU	That Are OBL, FACW, or	
2				Total Number of Domina	ınt
3				Species Across All Strata	
4				Percent of Dominant Spe	ecies
Sapling/Shrub Stratum (Plot size: 10)	20	= Total C	over	That Are OBL, FACW, or	r FAC: <u>0</u> (A/B)
1. Corylus cornuta	70	٧	FACU	Prevalence Index work	sheet:
2. Rubus spectabilis				Total % Cover of:	Multiply by:
3. <u>Ilex aquifolium</u>	<u>15</u>		F <u>ACU</u>	OBL species	x 1 =
4. Hedera helix	80	<u>y</u>	FACU	· ·	x 2 =
5					x 3 =
Herb Stratum (Plot size: 5)	<u>170</u>	= Total C	over		x 4 =
1. Polystichum munitum	65	V	FACU		x 5 =
Equisetum telmateia			FACW	Column Totals:	(A) (B)
3				Prevalence Index	= B/A =
4				Hydrophytic Vegetation	n Indicators:
5				☐ Rapid Test for Hydro	, , ,
6				☐ Dominance Test is >	
7				Prevalence Index is:	
8					ations ¹ (Provide supporting or on a separate sheet)
9				☐ Wetland Non-Vascul	• • • • • • • • • • • • • • • • • • • •
10				☐ Problematic Hydroph	nytic Vegetation¹ (Explain)
11		= Total C			and wetland hydrology must
Woody Vine Stratum (Plot size: 5)	03	- Total C	ovei	be present, unless distur	bed or problematic.
1				Hydrophytic	
2				Vegetation	
% Bare Ground in Herb Stratum		= Total C	over	Present? Yes	□ No ⊠
Remarks: plot on relatively steep slope					

Depth	Matrix			edox Featu				
(inches)	Color (moist)	%	Color (moist)	%_	Type¹	Loc ²	Texture	Remarks
<u>0-14</u>	10YR 2/2	100					sandy loar	<u>m</u>
14-21	2.5Y 4/2	70	7.5YR 4/6	30	RM	M	loamy san	<u> </u>
							-	
							-	
			-					_
							-	
¹Type: C=C	concentration, D=D	epletion, R	M=Reduced Matrix	CS=Cove	red or Coat	ed Sand G	rains. ²	Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appl	icable to a	ıll LRRs, unless o	herwise n	oted.)		Indic	ators for Problematic Hydric Soils ³ :
☐ Histosol	(A1)		☐ Sandy Redo	x (S5)			□ 2	cm Muck (A10)
	oipedon (A2)		☐ Stripped Mat					Red Parent Material (TF2)
☐ Black Hi	` '		Loamy Muck	-		t MLRA 1)		/ery Shallow Dark Surface (TF12)
	en Sulfide (A4)	(444)	☐ Loamy Gleye		-2)			Other (Explain in Remarks)
•	d Below Dark Surfa ark Surface (A12)	ice (A11)	☐ Depleted Ma ☐ Redox Dark	. ,	6)		³ India	cators of hydrophytic vegetation and
	Aucky Mineral (S1)		☐ Depleted Da		•			etland hydrology must be present,
	Gleyed Matrix (S4)		☐ Redox Depre		` '			nless disturbed or problematic.
-	Layer (if present):			`	,			·
Type:								
Depth (in	iches):						Hydric S	Soil Present? Yes ☐ No ☒
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicator	s:						
Primary Indi	cators (minimum o	f one requi	red; check all that a	pply)			Se	econdary Indicators (2 or more required)
Surface	Water (A1)	•	☐ Water-S	Stained Lea	aves (B9) (except MLF	RA 🗆	Water-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A2)			, 4A, and 4		•		4A, and 4B)
☐ Saturation			☐ Salt Cru					Drainage Patterns (B10)
☐ Water M	larks (B1)		☐ Aquatic	Invertebra	tes (B13)			Dry-Season Water Table (C2)
Sedimer	nt Deposits (B2)		☐ Hydrog	en Sulfide	Odor (C1)			Saturation Visible on Aerial Imagery (C9)
☐ Drift Dep	posits (B3)		☐ Oxidize	d Rhizospł	neres along	Living Roc	ots (C3)	Geomorphic Position (D2)
☐ Algal Ma	at or Crust (B4)		☐ Presen	ce of Redu	ced Iron (C	4)		Shallow Aquitard (D3)
☐ Iron Dep	oosits (B5)		☐ Recent	Iron Reduc	ction in Tille	ed Soils (C6	6) 🗆	FAC-Neutral Test (D5)
☐ Surface	Soil Cracks (B6)		☐ Stunted	or Stresse	ed Plants (D	01) (LRR A	.) 🗆	Raised Ant Mounds (D6) (LRR A)
_	on Visible on Aeria	0, 1	, — ,	Explain in F	Remarks)			Frost-Heave Hummocks (D7)
	Vegetated Conca	ve Surface	(B8)					
Field Obser	rvations:							
Surface Wat	ter Present?	Yes 🗌 I	No 🛛 Depth (inc	hes):				
Water Table	Present?	Yes 🗌 1	No 🛛 Depth (inc	hes):				
	Present?	Yes ⊠ I	No Depth (inc	hes): <u>14</u>		Wetl	land Hydro	logy Present? Yes ☐ No ⊠
Saturation P	nillary fringo)							
(includes ca	pillary fringe) ecorded Data (strea	ım gauge, ı	monitoring well, aer	ial photos,	previous in	spections),	, if available:	:
(includes ca Describe Re		ım gauge, ı	monitoring well, aer	ial photos,	previous in	spections),	, if available:	
(includes ca		ım gauge, ı	monitoring well, aer	ial photos,	previous in	spections),	, if available:	:
(includes ca Describe Re		ım gauge, ı	monitoring well, aer	ial photos,	previous in	spections),	, if available:	
(includes ca Describe Re		ım gauge, ı	monitoring well, aer	ial photos,	previous in	spections),	, if available:	

Project/Site: Cheasty Trail Pilot Project	(City/Count	y: <u>Seattle/Ki</u>	ng County	Sampling Date: April 5,	2017
Applicant/Owner: City of Seattle				State: WA	Sampling Point: W4- DF	23
Investigator(s): Claire Hoffman, Michael Muscari			Section, To	wnship, Range: <u>SE-16-24</u> -	-4	
Landform (hillslope, terrace, etc.): slope, flat		Local reli	ef (concave,	convex, none): concave	Slope (%):	40
Subregion (LRR): <u>LRR A</u>	Lat: 47.56	63111		Long: -122.299658	Datum: NAD	1983
Soil Map Unit Name: no data available				=		
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrology sign	•		_ `	ormal Circumstances" pres	ent? Yes⊠ No □	
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in		
SUMMARY OF FINDINGS – Attach site map					•	s, etc.
Hydrophytic Vegetation Present? Yes ☐ No ☒						
Hydric Soil Present? Yes ⊠ No □			e Sampled			
Wetland Hydrology Present? Yes ⊠ No □		with	in a Wetlan	nd? Yes ⊠ No	○ □	
Remarks: buffer and southern edge of wetland had been d	isturbed by	human act	ivity. The ar	ea has been restored and	replanted.	
VEGETATION – Use scientific names of plans				,		
Tree Stratum (Plot size: 30)	Absolute <u>% Cover</u>			Dominance Test works		
1.Alnus rubra				Number of Dominant Spo That Are OBL, FACW, or		(A)
2						()
3				Total Number of Domina Species Across All Strata		(B)
4				Percent of Dominant Spe	ncins	
O and the of Object to the Control of Contro	5	= Total C	over	That Are OBL, FACW, or		(A/B)
Sapling/Shrub Stratum (Plot size: 10)	90	.,	EAC	Prevalence Index work	sheet:	
Rubus spectabilis Oemleria cerasiformis					Multiply by:	
3				OBL species		
4				FACW species		
5				FAC species	x 3 =	_
	80			FACU species	x 4 =	_
Herb Stratum (Plot size: 5)			0.01	UPL species		
1.Lysichiton americanus	trace			Column Totals:	(A)	_ (B)
Equisetum telmateia Athyrium filix-femina				Prevalence Index	= B/A =	
4				Hydrophytic Vegetation		
5				☐ Rapid Test for Hydro		
6.					50%	
7				☐ Prevalence Index is :	≤3.0 ¹	
8				☐ Morphological Adapt		ing
9				data in Remarks ☐ Wetland Non-Vascul	or on a separate sheet)	
10					nytic Vegetation¹ (Explain	n)
11				¹ Indicators of hydric soil	, , ,	,
Woody Vine Stratum (Plot size: 5)	95	= Total C	cover	be present, unless distur		
1. Rubus armeniacus	10	n	FAC			
2. Hedera helix	60			Hydrophytic Vegetation		
	70				⊠ No □	
% Bare Ground in Herb Stratum <u>0</u>						
Remarks:						

Depth	cription: (Describ Matrix		depth ne		nent the indic x Features	ator or confir	m the ab	sence of	indicators.)
(inches)	Color (moist)	%	Colo	or (moist)		pe ¹ Loc ²	Textu	re	Remarks
0-6	10YR 3/2 &10YF	R 4/1 80) & 15 1	0 YR 5/6	5%		sandy	loam	
6-18	10YR 2/1	95		₹ 4/6	5	М	silt loar	n -	
0-10	1011(2/1	- 55	511	(4 /0	<u> </u>		Silt IOai	·· _	
·									
			_		· ———				
					·				
¹Type: C=C	oncentration, D=De	epletion,	RM=Red	luced Matrix, CS	S=Covered or 0	Coated Sand G	Grains.	² Locat	on: PL=Pore Lining, M=Matrix.
	Indicators: (Appl							dicators	for Problematic Hydric Soils ³ :
☐ Histosol	(A1)		□ :	Sandy Redox (S	5)			2 cm M	uck (A10)
☐ Histic Ep	oipedon (A2)		□ ;	Stripped Matrix ((S6)			Red Pa	rent Material (TF2)
☐ Black His	, ,			Loamy Mucky M	, , ,	cept MLRA 1)) [-	nallow Dark Surface (TF12)
_ , ,	n Sulfide (A4)			Loamy Gleyed N				Other (Explain in Remarks)
	Below Dark Surfa	ice (A11)		Depleted Matrix	. ,		31		
	ark Surface (A12)			Redox Dark Sur	. ,		ગ		of hydrophytic vegetation and
-	lucky Mineral (S1) leyed Matrix (S4)			Depleted Dark S Redox Depressi	` '				hydrology must be present, listurbed or problematic.
_	Layer (if present):	3 1		redux Depressi	ons (Fo)			uniess	instanced of problematic.
Type:	Layer (ii present).	•							
Depth (in	ches):			_			Hydr	ic Soil Pr	resent? Yes 🛛 No 🗌
Remarks:	,			•			riyai	10 0011 1 1	caeiti: 163 🖸 140 🖂
rtemants.									
HYDROLO									
Wetland Hy	drology Indicator	s:							
Primary India	cators (minimum of	f one req	uired; ch	eck all that apply	y)			Seconda	ary Indicators (2 or more required)
☐ Surface	Water (A1)			☐ Water-Stair	ned Leaves (B	9) (except ML	RA	☐ Wate	er-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2)			1, 2, 4A	, and 4B)			4	A, and 4B)
	on (A3)			☐ Salt Crust (B11)			☐ Draiı	nage Patterns (B10)
☐ Water M	arks (B1)			☐ Aquatic Inv	ertebrates (B1	3)		☐ Dry-	Season Water Table (C2)
☐ Sedimen	t Deposits (B2)				Sulfide Odor (C	C1)		☐ Satu	ration Visible on Aerial Imagery (C9)
☐ Drift Dep	oosits (B3)			☐ Oxidized R	hizospheres al	long Living Ro	ots (C3)	☐ Geo	morphic Position (D2)
☐ Algal Ma	t or Crust (B4)			☐ Presence o	f Reduced Iron	n (C4)		☐ Shal	low Aquitard (D3)
☐ Iron Dep	osits (B5)			☐ Recent Iron	Reduction in	Tilled Soils (Co	6)	☐ FAC	-Neutral Test (D5)
☐ Surface	Soil Cracks (B6)			☐ Stunted or	Stressed Plant	ts (D1) (LRR A	A)	☐ Rais	ed Ant Mounds (D6) (LRR A)
☐ Inundation	on Visible on Aeria	l Imagery	(B7)	☐ Other (Expl	lain in Remark	s)		☐ Fros	t-Heave Hummocks (D7)
☐ Sparsely	Vegetated Conca	ve Surfac	ce (B8)						
Field Obser	vations:								
Surface Wat	er Present?	Yes 🗌	No 🛛	Depth (inches):	_			
Water Table	Present?	Yes 🛛	No 🗌	Depth (inches): <u>11</u>				
Saturation P	resent?	Yes 🛛	No □	Depth (inches): <u>surface</u>	Wet	tland Hy	drology F	Present? Yes ⊠ No □
Saturation	1000111.								
(includes car	pillary fringe)		.,						
(includes car			, monitor	ring well, aerial p	photos, previou	us inspections)	, if availa	ble:	
(includes cap Describe Re	pillary fringe)		, monitor	ring well, aerial p	photos, previou	us inspections)	, if availa	ble:	
(includes car	pillary fringe)		, monitor	ring well, aerial p	photos, previou	us inspections)	, if availa	ble:	
(includes cap Describe Re	pillary fringe)		, monitor	ing well, aerial μ	photos, previou	us inspections)	ı, if availa	ble:	
(includes cap Describe Re	pillary fringe)		, monitor	ing well, aerial p	ohotos, previou	us inspections)	ı, if availa	ble:	

Project/Site: Cheasty Trail Pilot Project		_City/Coun	ty: <u>Seattle, k</u>	King	Sampling Date: Oct 20, 2016
Applicant/Owner: City of Seattle Parks				State: WA	Sampling Point: W5 DP1
Investigator(s): Claire Hoffman, Jessica Redr	nan		Section, To	ownship, Range: <u>SE-16-2</u>	1-4
Landform (hillslope, terrace, etc.): hillslope		_ Local rel	ief (concave	, convex, none): concave	Slope (%): <u>20</u>
Subregion (LRR): <u>LRR A</u>	Lat: <u>47.</u>	564616		Long: <u>-122.299131</u>	Datum: <u>NAD1983</u>
Cail Mars Linit Names and				NIVA/I - I : 6: -	-tion DEOD in NIMI 11 - 11 ME 9 M
Soil Map Unit Name: na					
Are climatic / hydrologic conditions on the site			•		
Are Vegetation, Soil, or Hydrolo				ormal Circumstances" pre	- -
Are Vegetation, Soil, or Hydrolo			•	ed, explain any answers i	·
SUMMARY OF FINDINGS – Attac	n site map showing	g sampli	ng point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Y	es 🛛 No 🗌	ls f	he Sampled	l Δrea	
	es 🛛 No 🗌		hin a Wetlar		№ П
	es 🛛 No 🗌				
Remarks:					
VECETATION					
VEGETATION – Use scientific nar	•	Danis	A locality at a second	Dominous Test work	ab a at
<u>Tree Stratum</u> (Plot size: <u>30</u>)		Dominar Species	nt Indicator ? Status	Dominance Test work Number of Dominant S	
1.	·			That Are OBL, FACW,	
2				Total Number of Domin	ant
3				Species Across All Stra	
4					
		= Total	Cover	Percent of Dominant Sp That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 10)	40		E4011	Prevalence Index wor	lah sati
1. Corylus cornuta					Multiply by:
2					x 1 =
3 4					x 2 =
5					x 3 =
o		= Total			x 4 =
Herb Stratum (Plot size: 5)			0010.		x 5 =
Athyrium filix-femina	40	<u>y</u>	FAC		(A) (B)
2. Tolmiea menziesii	30	У	FAC		
3. Carex obnupta			OBL		= B/A =
4. <u>Urtica dioica</u>				Hydrophytic Vegetation	
5				Rapid Test for Hydr	
6				☐ Dominance Test is☐ Prevalence Index is☐	
7					otations ¹ (Provide supporting
8					s or on a separate sheet)
^					
9				☐ Wetland Non-Vascu	ılar Plants ¹
10					ular Plants¹ ohytic Vegetation¹ (Explain)
				☐ Problematic Hydrop Indicators of hydric soi	ohytic Vegetation¹ (Explain) I and wetland hydrology must
10				☐ Problematic Hydrop	ohytic Vegetation¹ (Explain) I and wetland hydrology must
10 11	70		Cover	☐ Problematic Hydrop ¹Indicators of hydric soi be present, unless distu	ohytic Vegetation¹ (Explain) I and wetland hydrology must
10	70 60	= Total	Cover FAC	☐ Problematic Hydrop Indicators of hydric soi	ohytic Vegetation¹ (Explain) I and wetland hydrology must
10	70 60	= Total	Cover FAC	Problematic Hydrop ¹Indicators of hydric soi be present, unless disto Hydrophytic Vegetation	ohytic Vegetation¹ (Explain) I and wetland hydrology must

Depth (inches)	Matrix Color (moist)	%	Color	Redo	ox Feature		Loc ²	Toytura			Remarks	
0-9	10YR 2/1	100	COIOI	(IIIOISI)		туре					Remarks	•
		95	7.5YF	1/6				-				
9-18	10YR 2/1	<u>95</u>	7.516	4/0	5			sandy lo	<u>am</u>			
			-					-				
								-				
					_							
								-				
¹Type: C=Co	oncentration, D=D	enletion R	M=Redu	ced Matrix C	S=Covered	d or Coate	ed Sand G	rains	² l oca	tion: PI =	Pore Lining	g, M=Matrix.
	Indicators: (App						o cana c					ydric Soils³:
☐ Histosol				andy Redox (,				/luck (A10		
	ipedon (A2)			ripped Matrix							, erial (TF2)	
☐ Black His				oamy Mucky N			MLRA 1)		-		ark Surface	
	n Sulfide (A4)			oamy Gleyed)			Other	(Explain i	n Remarks)
•	l Below Dark Surfa rk Surface (A12)	ace (A11)		epleted Matrix edox Dark Su	` '			310	dicator	of budro	shytia yaga	etation and
	ucky Mineral (S1)			epleted Dark		7)					y must be	
-	leyed Matrix (S4)			edox Depress	•	• ,				-	or problem	
-	Layer (if present)	:		•	. ,						-	
Type:												
Depth (in	ches):							Hydrid	Soil P	resent?	Yes ⊠	No □
Remarks:								I				
HYDROLO	GY											
-	drology Indicator	's:										
_	cators (minimum o		red: ched	ck all that app	lv)			:	Second	arv Indica	itors (2 or r	nore required)
Surface	•			☐ Water-Sta		es (B9) (e x	xcept MLF					B9) (MLRA 1, 2,
	ter Table (A2)		-		A, and 4B	, , ,				4A, and 4		, (, _,
☐ Saturation			[☐ Salt Crust		,				•	terns (B10))
☐ Water Ma	arks (B1)		[☐ Aquatic In	vertebrates	s (B13)			☐ Dry	Season V	Vater Table	e (C2)
☐ Sedimen	t Deposits (B2)		[Hydrogen	Sulfide Oc	for (C1)			☐ Sati	ıration Vi	sible on Ae	rial Imagery (C9)
☐ Drift Dep	osits (B3)		[Oxidized F	Rhizospher	res along l	Living Roc	ots (C3)	☐ Geo	morphic I	Position (D	2)
☐ Algal Ma	t or Crust (B4)			Presence	of Reduce	d Iron (C4	.)	!	☐ Sha	llow Aquit	ard (D3)	
☐ Iron Dep	osits (B5)		[☐ Recent Iro	n Reduction	on in Tilled	d Soils (C6	6)	☐ FAC	-Neutral	Test (D5)	
☐ Surface :	Soil Cracks (B6)			☐ Stunted or	Stressed	Plants (D	1) (LRR A)	☐ Rais	sed Ant M	ounds (D6) (LRR A)
	on Visible on Aeria		, -	☐ Other (Exp	olain in Re	marks)			☐ Fro	st-Heave	Hummocks	s (D7)
	Vegetated Conca	ve Surface	e (B8)									
Field Obser		=										
Surface Wat			No 🗌	Depth (inche								
Water Table				Depth (inche						_	—	—
Saturation P (includes car		Yes ⊠	No 🗌	Depth (inche	s): <u>surface</u>	!	Wetl	land Hydi	rology	Present?	Yes ⊠	No ∐
Describe Re	corded Data (strea	am gauge,	monitorir	ng well, aerial	photos, pr	evious ins	pections),	if availab	le:			
Remarks: ve	ry rainy night befo	re and mor	ning of fi	eldwork.								

Project/Site: Cheasty Trail Pilot Project			City/Count	y: <u>Seattle, k</u>	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, To	ownship, Range: <u>SE-16-2</u>	4-4
Landform (hillslope, terrace, etc.): slope			_Local reli	ef (concave	, convex, none): concave	Slope (%): <u>20</u>
Subregion (LRR): <u>LRR A</u>		_ Lat: <u>47.5</u>	64615		Long: <u>-122.299161</u>	Datum: <u>NAD 1983</u>
						ation: <u>none</u>
Are climatic / hydrologic conditions on the site type						
Are Vegetation, Soil, or Hydrology		•		,	ormal Circumstances" pre	
Are Vegetation, Soil, or Hydrology				(If need	ed, explain any answers i	n Remarks.)
SUMMARY OF FINDINGS – Attach s				•		
Hydrophytic Vegetation Present? Yes [□ No 🏻					
	_ No ⊠			ne Sampled nin a Wetlar		lo M
Wetland Hydrology Present? Yes [⊠ No 🗆		With	iiii a vvetiai	ilur res 🔲 i	10 🖸
Remarks:						
VEGETATION – Use scientific names	of plan					
Tree Stratum (Plot size: 30)		Absolute % Cover		t Indicator Status	Dominance Test work	
1. Acer macrophyllum					Number of Dominant Sport That Are OBL, FACW, or	
2.						
3.					Total Number of Domin Species Across All Stra	
4					·	、 ,
		30	= Total C	Cover	Percent of Dominant Sp That Are OBL, FACW, of	or FAC: 4 <u>0</u> (A/B)
Sapling/Shrub Stratum (Plot size: 10)		F		540	Prevalence Index wor	kahaati
Alnus rubra Ilex aquifolium						Multiply by:
3.						x 1 =
4.						x 2 =
5.					*	x 3 =
			= Total C		FACU species	x 4 =
Herb Stratum (Plot size: <u>5</u>)						x 5 =
1. Polystichum munitum					Column Totals:	(A) (B)
2					Prevalence Index	= B/A =
4					Hydrophytic Vegetation	
5					☐ Rapid Test for Hydr	
6.					☐ Dominance Test is	>50%
7					☐ Prevalence Index is	i ≤3.0¹
8						otations¹ (Provide supporting s or on a separate sheet)
9					☐ Wetland Non-Vascu	,
10						phytic Vegetation¹ (Explain)
11					1 —	I and wetland hydrology must
Woody Vine Stratum (Plot size: <u>5</u>)		30	= Total C	Cover	be present, unless distu	
1. Rubus armeniacus		70	У	FAC		
2.					Hydrophytic Vegetation	
		70	= Total C	Cover		s □ No ⊠
% Bare Ground in Herb Stratum <u>5</u> Remarks:						
iverilative.						

Denth							
Depth (inches)	Matrix Color (moist)	%	Color (moist)	edox Features %Type¹	Loc ²	Texture	Remarks
0-9	10YR 2/1	100				sandy loam	
	10YR 4/3 & 10YR 2/1	358.65		<u></u>		sandy loam	-
9-10	101K 4/3 & 101K 2/1	33803				Sandy Idain	
							
							
¹Tvpe: C=Co	ncentration. D=Der	oletion. RM	I=Reduced Matrix.	CS=Covered or Coa	ted Sand Gr	rains. ² Loc	cation: PL=Pore Lining, M=Matrix.
	ndicators: (Applic						rs for Problematic Hydric Soils ³ :
☐ Histosol (/	A1)		☐ Sandy Redox	(S5)		☐ 2 cm	Muck (A10)
☐ Histic Epi	pedon (A2)		☐ Stripped Mat	rix (S6)			Parent Material (TF2)
☐ Black Hist	` '			y Mineral (F1) (excer	ot MLRA 1)	•	Shallow Dark Surface (TF12)
Hydrogen		(☐ Loamy Gleye			☐ Othe	er (Explain in Remarks)
-	Below Dark Surface	e (A11)	☐ Depleted Ma			31	af budua ubudia ua watatian and
	k Surface (A12) ucky Mineral (S1)		☐ Redox Dark	rk Surface (F6)			ors of hydrophytic vegetation and nd hydrology must be present,
-	eyed Matrix (S4)		☐ Redox Depre	, ,			s disturbed or problematic.
_	ayer (if present):			(- /			·
Type:							
Depth (inc	hes):					Hydric Soil	Present? Yes □ No ⊠
Remarks: den	oleted matrix is only	/ 35% in se	econd laver not su	fficient to meet criteri	a for A11	1	
HYDROLOG	GY .						
	GY rology Indicators:	:					
Wetland Hyd			ed; check all that a	pply)		Seco	ndary Indicators (2 or more required)
Wetland Hyd	rology Indicators: ators (minimum of d			pply) Stained Leaves (B9) (except MLR		ndary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hyd	rology Indicators: ators (minimum of o Vater (A1)		☐ Water-S		except MLR		
Wetland Hyd Primary Indica ☐ Surface W	Irology Indicators: ators (minimum of o Vater (A1) er Table (A2)		☐ Water-S	stained Leaves (B9) (4A, and 4B)	except MLR	RA W	ater-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hyd Primary Indica ☐ Surface W ☐ High Wate	Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3)		☐ Water-S 1, 2, ☐ Salt Cru	stained Leaves (B9) (4A, and 4B)	except MLR	RA □ W	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hyd Primary Indica □ Surface W ⊠ High Wate □ Saturation □ Water Ma	Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3)		☐ Water-S 1, 2, ☐ Salt Cru ☐ Aquatic	Stained Leaves (B9) (or 4A, and 4B) states (B11)	except MLR	RA	rater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10)
Wetland Hyd Primary Indica □ Surface W ⊠ High Wate ⊠ Saturation □ Water Ma □ Sediment □ Drift Depo	rology Indicators: ators (minimum of of other (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3)		☐ Water-S 1, 2, ☐ Salt Cru ☐ Aquatic ☐ Hydroge ☐ Oxidized	Stained Leaves (B9) (c. 4A, and 4B) ust (B11) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres along	g Living Roo	RA W	rater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)
Wetland Hyd Primary Indica □ Surface W ⊠ High Wate ⊠ Saturation □ Water Ma □ Sediment □ Drift Depo	Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2)		☐ Water-S 1, 2, ☐ Salt Cru ☐ Aquatic ☐ Hydroge ☐ Oxidizer ☐ Presend	Stained Leaves (B9) (c. 4A, and 4B) (stained Leaves (B11) (Invertebrates (B13) (En Sulfide Odor (C1) (In Rhizospheres along the of Reduced Iron (C2) (In Rhizospheres (Iron (C2)) (Iron (C2	g Living Roo	RA	rater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9)
Wetland Hyd Primary Indica □ Surface W □ High Wate □ Saturation □ Water Ma □ Sediment □ Drift Depo	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) esits (B5)		☐ Water-S 1, 2, ☐ Salt Cru ☐ Aquatic ☐ Hydroge ☐ Oxidized ☐ Presend ☐ Recent	Stained Leaves (B9) (c. 4A, and 4B) Inst (B11) Invertebrates (B13) In Sulfide Odor (C1) Ind Rhizospheres along the of Reduced Iron (Cl	g Living Roo (24) ed Soils (C6	RA	rater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9) reomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5)
Wetland Hyd Primary Indica □ Surface W □ High Wate □ Saturation □ Water Ma □ Sediment □ Drift Depo □ Algal Mat □ Iron Depo □ Surface S	rology Indicators: ators (minimum of control of the	one require	☐ Water-S 1, 2, ☐ Salt Cru ☐ Aquatic ☐ Hydroge ☐ Oxidized ☐ Presend ☐ Recent ☐ Stunted	Stained Leaves (B9) (c. 4A, and 4B) (st (B11) Invertebrates (B13) (en Sulfide Odor (C1) (d. Rhizospheres along the of Reduced Iron (C. Iron Reduction in Tille or Stressed Plants (I.	g Living Roo (24) ed Soils (C6	RA	rater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9) reomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A)
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Wetland Hyd Primary Indica Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) soil Cracks (B6) n Visible on Aerial I Vegetated Concave	one require		Stained Leaves (B9) (c. 4A, and 4B) (st (B11) Invertebrates (B13) (en Sulfide Odor (C1) (d. Rhizospheres along the of Reduced Iron (C. Iron Reduction in Tille or Stressed Plants (I.	g Living Roo (24) ed Soils (C6	RA	rater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9) reomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A)
Wetland Hyd Primary Indica ☐ Surface W ☐ High Wate ☐ Saturation ☐ Water Ma ☐ Sediment ☐ Drift Depo ☐ Algal Mat ☐ Iron Depo ☐ Surface S ☐ Inundation ☐ Sparsely W	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) soil Cracks (B6) n Visible on Aerial I Vegetated Concave vations:	one require magery (B e Surface (Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidizer Presence Recent Stunted 7) Other (E	Stained Leaves (B9) (c. 4A, and 4B) Invertebrates (B13) Invertebrates (B13) In Sulfide Odor (C1) In Reduced Iron (Claron Reduced Iron (The Iron Reduced Iron (The Iron Stressed Plants (Interpolation in Remarks)	g Living Roo (24) ed Soils (C6	RA	rater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9) reomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A)
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Wetland Hyd Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely V Field Observ Surface Water Water Table F Saturation Pre	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) in (A3) in (A3) in (A3) in (B1) Deposits (B2) in (B3) or Crust (B4) in (B5) in Visible on Aerial I in Vegetated Concave in Present? in Present? in Present?	magery (B e Surface (∕es □ N ∕es ⊠ N	Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidizer Presence Recent Stunted 7) ○ Other (E	Stained Leaves (B9) (c. 4A, and 4B) Inst (B11) Invertebrates (B13) In Sulfide Odor (C1) In Reduced Iron (C) Iron Reduction in Tille or Stressed Plants (I) Explain in Remarks) Ines):	g Living Room (24) ed Soils (C6 (D1) (LRR A)	AA	rater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9) reomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A)
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Wetland Hyd Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Field Observ Surface Water Water Table F Saturation Pre (includes capi	rology Indicators: ators (minimum of or Vater (A1) er Table (A2) in (A3) in (A3) in (A3) in (A3) in (B1) Deposits (B2) in (B3) in Crust (B4) in Visible on Aerial I Vegetated Concave rations: in Present? in Present? in Present? in Present? in Present? in Yesent?	magery (B e Surface (/es \ N /es \ N	Water-S 1, 2, Salt Cru Aquatic Hydroge Oxidizee Presence Recent Stunted 7) Other (E B8) □ Depth (incl Depth (incl	Stained Leaves (B9) (c. 4A, and 4B) st (B11) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres along te of Reduced Iron (C) Iron Reduction in Tille or Stressed Plants (I) Explain in Remarks) thes): thes): thes): 4	g Living Room (24) ed Soils (C6 (C1) (LRR A)	AA W Di Si ts (C3) G Si Fi Fr	rater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)

Project/Site: Cheasty Trail Pilot Project		City/Co	ounty: <u>Seattle, k</u>	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, To	ownship, Range: <u>SE-16-24</u>	-4
Landform (hillslope, terrace, etc.): hillslope		_ Local	relief (concave	, convex, none): concave	Slope (%): <u>5</u>
Subregion (LRR): LRR A	Lat: <u>47.5</u>	65097		Long: <u>-122.298835</u>	Datum: <u>NAD1983</u>
Soil Map Unit Name: na				NWI classifica	tion: PFOB
Are climatic / hydrologic conditions on the site typical for the	is time of yea	ar? Yes	s⊠ No 🗆 (I	If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology signature.	gnificantly dis	sturbed?	? Are "No	ormal Circumstances" pres	ent? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology na	turally proble	matic?	(If need	ed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samp	oling point l	ocations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes ⊠ No □			s the Sampled		· 🗖
Wetland Hydrology Present? Yes ⊠ No □		'	within a Wetla	nd? Yes⊠ N	7 □
Remarks:					
VEGETATION – Use scientific names of pla					
Tree Stratum (Plot size: 30)			nant Indicator les? Status	Dominance Test works	
1. Salix sitchensis				Number of Dominant Sp That Are OBL, FACW, o	
2					
3.				Total Number of Domina Species Across All Strat	
4.					
	10			Percent of Dominant Sp That Are OBL, FACW, o	ecies r FAC: <u>83</u> (A/B)
Sapling/Shrub Stratum (Plot size: 10)	25		FAC	Prevalence Index work	shoot
Alnus rubra Rubus spectabilis					Multiply by:
Rubus speciabilis 3			<u>FAC</u>		x 1 =
4					x 2 =
5				*	x 3 =
	35			· ·	x 4 =
Herb Stratum (Plot size: 5)				UPL species	x 5 =
1. Athyrium filix-femina	<u>15</u>	У		Column Totals:	(A) (B)
2. Tolmiea menziesii				Provalence Index	= B/A =
3. Polystichum munitum				Hydrophytic Vegetatio	
4				Rapid Test for Hydro	
5				☐ Rapid Test for Hydro	
6				☐ Prevalence Index is	
8				☐ Morphological Adapt	tations ¹ (Provide supporting
9					or on a separate sheet)
10				☐ Wetland Non-Vascu	
11				, ,	nytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 5)	45	= Tot	al Cover	be present, unless distur	and wetland hydrology must rbed or problematic.
Rubus armeniacus	100	У	FAC	Lludra o bustia	
2	<u></u>			Hydrophytic Vegetation	
	100	= Tot	al Cover		⊠ No □
% Bare Ground in Herb Stratum					

				oucu to uccu			0. 00	iii tiic ab	Selice	of indicators.)
Depth	Matrix			Redo	x Feature					
(inches)	Color (moist)	%	Colo	r (moist)	%	Type ¹	Loc ²	Textur	<u>e</u>	Remarks Remarks
0-5	10YR 2/1	100						loam		saturated
5-18	10YR 4/2	93	10YF	₹ 3/6	7			loam		not saturated
<u> </u>	1011111/1/2			. 0,0				ioaiii		not outdrated
					_					
			-							
¹Type: C=C	oncentration, D=De	oletion, F	RM=Red	uced Matrix, C	S=Covere	d or Coate	ed Sand G	Grains.	² Loc	ation: PL=Pore Lining, M=Matrix.
	Indicators: (Applic									rs for Problematic Hydric Soils ³ :
☐ Histosol	(A1)			Sandy Redox (S5)] 2 cm	Muck (A10)
☐ Histic Ep	pipedon (A2)			Stripped Matrix					Red I	Parent Material (TF2)
☐ Black His			□ L	_oamy Mucky N	nineral (F1) (except	MLRA 1)] Very	Shallow Dark Surface (TF12)
☐ Hydroge	n Sulfide (A4)		□ L	oamy Gleyed	Matrix (F2)] Othe	r (Explain in Remarks)
☐ Depleted	Below Dark Surfac	e (A11)	\boxtimes [Depleted Matrix	(F3)					
	ark Surface (A12)		□ F	Redox Dark Su	rface (F6)			³ lr		rs of hydrophytic vegetation and
-	lucky Mineral (S1)			Depleted Dark	•	7)				nd hydrology must be present,
-	leyed Matrix (S4)		☐ F	Redox Depress	ions (F8)				unless	s disturbed or problematic.
	Layer (if present):									
Type:										
Depth (in	ches):							Hydri	ic Soil	Present? Yes ⊠ No 🗌
Remarks:										
HYDROLO										
	GY									
	GY drology Indicators	•								
Wetland Hy			ired; che	eck all that app	ly)				Secon	dary Indicators (2 or more required)
Wetland Hy Primary India	drology Indicators		ired; che		•	es (B9) (e	xcept ML	RA		
Wetland Hy Primary India ☐ Surface	drology Indicators cators (minimum of Water (A1)		ired; che	☐ Water-Sta	ined Leave		xcept ML	RA		ater-Stained Leaves (B9) (MLRA 1, 2
Wetland Hy Primary India ☐ Surface ☐ High Wa	drology Indicators cators (minimum of Water (A1) ter Table (A2)		ired; che	☐ Water-Sta	ined Leave A, and 4B		xcept ML	RA	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Wetland Hy Primary India □ Surface □ High Wa □ Saturatio	drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3)		ired; che	☐ Water-Sta 1, 2, 4	ined Leave A, and 4B (B11))	xcept ML	RA	□ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10)
Wetland Hy Primary India □ Surface □ High Wa ⊠ Saturatic □ Water M	drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1)		ired; che	☐ Water-Sta 1, 2, 4. ☐ Salt Crust ☐ Aquatic In	ined Leave A, and 4B (B11) vertebrates) s (B13)	xcept ML	RA	□ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)
Wetland Hy Primary India □ Surface □ High Wa ⊠ Saturatio □ Water M □ Sedimer	drology Indicators cators (minimum of other (A1) tter Table (A2) on (A3) arks (B1) tt Deposits (B2)		ired; che	Water-Sta 1, 2, 4 Salt Crust Aquatic In	ined Leave A, and 4B (B11) vertebrates Sulfide Oc	s (B13) lor (C1)			☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C
Wetland Hy Primary India □ Surface □ High Wa □ Saturatic □ Water M □ Sedimer □ Drift Dep	drology Indicators cators (minimum of a Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3)		ired; che	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F	ined Leave A, and 4B (B11) vertebrates Sulfide Oc	s (B13) lor (C1) res along	Living Roo		Dr. Dr. Sa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (Ca
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	drology Indicators cators (minimum of external for the cators) Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) cosits (B3) at or Crust (B4)		ired; che	Water-Sta 1, 2, 4. Salt Crust Aquatic In Hydrogen Oxidized F Presence	ined Leave A, and 4B (B11) vertebrate: Sulfide Oc Rhizosphel of Reduce	s (B13) lor (C1) res along d Iron (C4	Living Roo	ots (C3)	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (Ca comorphic Position (D2) allow Aquitard (D3)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	drology Indicators cators (minimum of other (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5)		ired; che	Water-Sta 1, 2, 4. Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	ined Leave A, and 4B (B11) vertebrates Sulfide Oc Rhizospher of Reduce	s (B13) lor (C1) res along d Iron (C4 on in Tilled	Living Roo l) d Soils (C6	ots (C3)	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (Cseomorphic Position (D2) allow Aquitard (D3) tC-Neutral Test (D5)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	drology Indicators cators (minimum of other (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6)	one requ		Water-Sta 1, 2, 4, Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Leave A, and 4B (B11) vertebrate: Sulfide Oc Rhizosphei of Reduce in Reduction	s (B13) lor (C1) res along d Iron (C4 on in Tilled Plants (D	Living Roo l) d Soils (C6	ots (C3)	☐ Wa ☐ Dr ☐ Dr ☐ Sa ☐ Ge ☐ Sh ☐ FA	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (Cseomorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
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Project/Site: Cheasty Trail Pilot Project	City/County: <u>Seattle, King</u> Sampling Date: <u>Oct 31, 2016</u>						
Applicant/Owner: City of Seattle Parks		State: WA	Sampling Point: W6 DP2				
vestigator(s): Claire Hoffman, Jessica Redman Section, Township, Range: SE-16-24-4							
Landform (hillslope, terrace, etc.): slope	elief (concave,	, convex, none): concave	Slope (%): <u>20</u>				
Subregion (LRR): LRR A							
Soil Map Unit Name: none	Map Unit Name: none						
Are climatic / hydrologic conditions on the site typical for this							
Are Vegetation, Soil, or Hydrology sign	•		•	ormal Circumstances" pres	ent? Yes ⊠ No □		
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in			
SUMMARY OF FINDINGS – Attach site map							
Hydrophytic Vegetation Present? Yes ☐ No ☒							
Hydric Soil Present? Yes ☐ No ☒			the Sampled				
Wetland Hydrology Present? Yes ☐ No ☒		W	rithin a Wetlar	nd? Yes ☐ No) 🛚		
Remarks:		•					
VEGETATION – Use scientific names of plant	te						
VEGETATION - Use scientific frames of plant		Domina	ant Indicator	Dominance Test works	heet:		
Tree Stratum (Plot size: 30)			es? Status	Number of Dominant Sp			
Acer macrophyllum	30	У	FACU	That Are OBL, FACW, or			
2				Total Number of Domina	nt		
3				Species Across All Strata	a: <u>4</u> (B)		
4				Percent of Dominant Spe			
Sapling/Shrub Stratum (Plot size: 10)	30 = Total Cover			That Are OBL, FACW, or	r FAC: <u>50</u> (A/B)		
1. Alnus rubra	20	у	FAC	Prevalence Index work	sheet:		
2				Total % Cover of:	Multiply by:		
3				OBL species	x 1 =		
4				· ·	x 2 =		
5					x 3 =		
Herb Stratum (Plot size: 5)	20	= Iota	l Cover		x 4 = x 5 =		
1. Polystichum munitum	10	У	FACU		(A) (B)		
2.				Goldmin Foldis.	(A) (D)		
3					= B/A =		
4				Hydrophytic Vegetation			
5				Rapid Test for Hydro	, , ,		
6							
7					≤3.0° ations¹ (Provide supporting		
8					or on a separate sheet)		
9				☐ Wetland Non-Vascul	ar Plants¹		
10				☐ Problematic Hydroph	nytic Vegetation¹ (Explain)		
	10		l Cover	¹ Indicators of hydric soil be present, unless distur	and wetland hydrology must		
Woody Vine Stratum (Plot size: 5)				be present, unless distur	bed of problematic.		
1. Rubus armeniacus	100	<u>у</u>	FAC	Hydrophytic			
2				Vegetation	□ N- N/		
% Bare Ground in Herb Stratum	100	= Tota	l Cover	Present? Yes	□ No ⊠		
Remarks:				1			

							iii tiic ab	sence of indicators.)
Depth	Matrix			Redox Featu	res			
(inches)	Color (moist)	%	Colo	r (moist) %	Type ¹	Loc ²	<u>Textu</u>	re Remarks
0-5	10YR 3/3	100					loam	
5-18	10YR 3/3	97	10YF	R 3/6 3			clay lo	am, charcoal in layer
0 10	10111070			<u> </u>		-	oldy lot	
				-				 -
				·				
							<u> </u>	
				,			-	
	-			· · · · · · · · · · · · · · · · · · ·				
				·				
¹Type: C=C	oncentration, D=De	epletion, R	RM=Red	uced Matrix, CS=Cove	ed or Coat	ed Sand G	Grains.	² Location: PL=Pore Lining, M=Matrix.
				s, unless otherwise n				dicators for Problematic Hydric Soils ³ :
Histosol	(A1)			Sandy Redox (S5)				2 cm Muck (A10)
_	oipedon (A2)			Stripped Matrix (S6)				Red Parent Material (TF2)
☐ Black Hi			□ L	oamy Mucky Mineral (-1) (excep	t MLRA 1)) [Very Shallow Dark Surface (TF12)
☐ Hydroge	n Sulfide (A4)		□ L	oamy Gleyed Matrix (F	2)	·		Other (Explain in Remarks)
☐ Depleted	d Below Dark Surfac	ce (A11)		Depleted Matrix (F3)				
	ark Surface (A12)		□ F	Redox Dark Surface (F	6)		³	ndicators of hydrophytic vegetation and
-	lucky Mineral (S1)			Depleted Dark Surface	. ,			wetland hydrology must be present,
	Gleyed Matrix (S4)		☐ F	Redox Depressions (F8)			unless disturbed or problematic.
	Layer (if present):							
Type:								
Depth (in	ches):						Hydr	ic Soil Present? Yes ☐ No ☒
Remarks:								
HYDROLO	GY							
	GY drology Indicators	S:						
Wetland Hy			ired; che	eck all that apply)				Secondary Indicators (2 or more required)
Wetland Hy	drology Indicators		ired; che	eck all that apply)	ves (B9) (є	except ML	RA	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary Indi ☐ Surface	drology Indicators cators (minimum of Water (A1)		ired; che			except MLI	RA	· · · · · · · · · · · · · · · · · · ·
Wetland Hy Primary Indi ☐ Surface	drology Indicators cators (minimum of Water (A1) iter Table (A2)		ired; che	☐ Water-Stained Lea		except MLI	RA	☐ Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary India ☐ Surface ☐ High Wa ☐ Saturatio	drology Indicators cators (minimum of Water (A1) uter Table (A2) on (A3)		ired; che	☐ Water-Stained Lea 1, 2, 4A, and 4 ☐ Salt Crust (B11)	В)	except MLI	RA	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10)
Wetland Hy Primary India Surface High Wa Saturatio Water M	drology Indicators cators (minimum of Water (A1) hter Table (A2) on (A3) larks (B1)		ired; che	☐ Water-Stained Lea 1, 2, 4A, and 4 ☐ Salt Crust (B11) ☐ Aquatic Invertebra	B) tes (B13)	except MLI	RA	 □ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer	drology Indicators cators (minimum of Water (A1) her Table (A2) on (A3) larks (B1) ht Deposits (B2)		ired; che	☐ Water-Stained Lea 1, 2, 4A, and 4 ☐ Salt Crust (B11) ☐ Aquatic Invertebra ☐ Hydrogen Sulfide (es (B13) Odor (C1)			 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep	drology Indicators cators (minimum of Water (A1) tter Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)		ired; che	☐ Water-Stained Lea 1, 2, 4A, and 4 ☐ Salt Crust (B11) ☐ Aquatic Invertebra ☐ Hydrogen Sulfide (☐ Oxidized Rhizosph	es (B13) Odor (C1) eres along	Living Roo		 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	drology Indicators cators (minimum of Water (A1) tter Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		ired; che	☐ Water-Stained Lea 1, 2, 4A, and 4 ☐ Salt Crust (B11) ☐ Aquatic Invertebra ☐ Hydrogen Sulfide (☐ Oxidized Rhizosph) ☐ Presence of Reduction	es (B13) Odor (C1) eres along ced Iron (C	Living Roo 4)	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	drology Indicators cators (minimum of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		ired; che	□ Water-Stained Lea 1, 2, 4A, and 4 □ Salt Crust (B11) □ Aquatic Invertebra □ Hydrogen Sulfide 0 □ Oxidized Rhizosph □ Presence of Reduce □ Recent Iron Reduce	es (B13) Odor (C1) eres along ced Iron (C tion in Tille	Living Roo 4) d Soils (C6	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	drology Indicators cators (minimum of Water (A1) Inter Table (A2) In (A3) Iarks (B1) Int Deposits (B2) Into Deposits (B3) Into Trust (B4) Into Trust (B4) Into Trust (B5) Into Trust (B6)	one requi		Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide 0 Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Stunted or Stresses	B) des (B13) Odor (C1) eres along ded Iron (C tion in Tille d Plants (E	Living Roo 4) d Soils (C6	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	drology Indicators cators (minimum of Water (A1) Inter Table (A2) Ion (A3) Iarks (B1) Int Deposits (B2) Ioosits (B3) Int or Crust (B4) Ioosits (B5) Soil Cracks (B6) Ion Visible on Aerial	one requi	(B7)	□ Water-Stained Lea 1, 2, 4A, and 4 □ Salt Crust (B11) □ Aquatic Invertebra □ Hydrogen Sulfide 0 □ Oxidized Rhizosph □ Presence of Reduce □ Recent Iron Reduce	B) des (B13) Odor (C1) eres along ded Iron (C tion in Tille d Plants (E	Living Roo 4) d Soils (C6	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concave	one requi	(B7)	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide 0 Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Stunted or Stresses	B) des (B13) Odor (C1) eres along ded Iron (C tion in Tille d Plants (E	Living Roo 4) d Soils (C6	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely	drology Indicators cators (minimum of Water (A1) ther Table (A2) on (A3) tarks (B1) th Deposits (B2) toosits (B3) at or Crust (B4) toosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concaverations:	Imagery ((B7) e (B8)	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide 0 Oxidized Rhizosph Presence of Reduction Recent Iron Reduction Stunted or Stresse Other (Explain in F	es (B13) Odor (C1) eres along ced Iron (C tion in Tille d Plants (E temarks)	Living Roo 4) d Soils (C6	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser	drology Indicators cators (minimum of Water (A1) Inter Table (A2) Inter Table (A2) Inter Table (A2) Inter Table (B1) Inter Table (B2) Inter Table (B2) Inter Table (B3) Inter Torust (B4) Inter Torust (B4) Inter Torust (B4) Inter Torust (B6) Inter	Imagery (/e Surface	(B7) e (B8) No ⊠	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Stunted or Stresse Other (Explain in F	es (B13) Ddor (C1) eres along ced Iron (C tion in Tille d Plants (C	Living Roo 4) d Soils (C6	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser Surface Water Table	drology Indicators cators (minimum of Water (A1) Inter Table (A2) Inter Table (A2) Inter Table (B1) Int Deposits (B2) Inter Table (B3) Inter Table (B4) Inter T	Imagery (//e Surface Yes Yes Yes	(B7) e (B8) No ⊠ No ⊠	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduction Recent Iron Reduction Stunted or Stressed Other (Explain in F	es (B13) Ddor (C1) eres along ced Iron (C tion in Tille d Plants (C	Living Roo 4) d Soils (Co 11) (LRR A	ots (C3) 6) N	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser Surface Water Table Saturation P	drology Indicators cators (minimum of Water (A1) Inter Table (A2) Inter Table (A2) Inter Table (B1) Int Deposits (B2) Inter Table (B3) Inter Table (B4) Inter T	Imagery (//e Surface Yes Yes Yes	(B7) e (B8) No ⊠	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduct Recent Iron Reduct Stunted or Stresse Other (Explain in F	es (B13) Ddor (C1) eres along ced Iron (C tion in Tille d Plants (C	Living Roo 4) d Soils (Co 11) (LRR A	ots (C3) 6) N	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Water Table Saturation P (includes car	drology Indicators cators (minimum of Water (A1) Inter Table (A2) Inter Table (A2) Inter Table (A2) Inter Table (B1) Inter Table (B2) Inter Ta	Imagery (//e Surface Yes Yes Yes Yes Yes Yes Yes	(B7) e (B8) No ⊠ No ⊡	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduction Recent Iron Reduction Stunted or Stressed Other (Explain in F	es (B13) Odor (C1) eres along ced Iron (C tion in Tille d Plants (C temarks)	Living Roo 4) d Soils (C6 01) (LRR A	ots (C3) 6) N	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Water Table Saturation P (includes car	drology Indicators cators (minimum of Water (A1) Inter Table (A2) Inter Table (A2) Inter Table (A2) Inter Table (B1) Inter Table (B2) Inter Ta	Imagery (//e Surface Yes Yes Yes Yes Yes Yes Yes	(B7) e (B8) No ⊠ No ⊡	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Stunted or Stresse Other (Explain in F	es (B13) Odor (C1) eres along ced Iron (C tion in Tille d Plants (C temarks)	Living Roo 4) d Soils (C6 01) (LRR A	ots (C3) 6) N	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Water Table Saturation P (includes car	drology Indicators cators (minimum of Water (A1) Inter Table (A2) Inter Table (A2) Inter Table (A2) Inter Table (B1) Inter Table (B2) Inter Ta	Imagery (//e Surface Yes Yes Yes Yes Yes Yes Yes	(B7) e (B8) No ⊠ No ⊡	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Stunted or Stresse Other (Explain in F	es (B13) Odor (C1) eres along ced Iron (C tion in Tille d Plants (C temarks)	Living Roo 4) d Soils (C6 01) (LRR A	ots (C3) 6) N	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	drology Indicators cators (minimum of Water (A1) Inter Table (A2) Inter Table (A2) Inter Table (A2) Inter Table (B1) Inter Table (B2) Inter Ta	Imagery (//e Surface Yes Yes Yes Yes Yes Yes Yes	(B7) e (B8) No ⊠ No ⊡	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Stunted or Stresse Other (Explain in F	es (B13) Odor (C1) eres along ced Iron (C tion in Tille d Plants (C temarks)	Living Roo 4) d Soils (C6 01) (LRR A	ots (C3) 6) N	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	drology Indicators cators (minimum of Water (A1) Inter Table (A2) Inter Table (A2) Inter Table (A2) Inter Table (B1) Inter Table (B2) Inter Ta	Imagery (//e Surface Yes Yes Yes Yes Yes Yes Yes	(B7) e (B8) No ⊠ No ⊡	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Stunted or Stresse Other (Explain in F	es (B13) Odor (C1) eres along ced Iron (C tion in Tille d Plants (C temarks)	Living Roo 4) d Soils (C6 01) (LRR A	ots (C3) 6) N	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca Describe Re	drology Indicators cators (minimum of Water (A1) Inter Table (A2) Inter Table (A2) Inter Table (A2) Inter Table (B1) Inter Table (B2) Inter Ta	Imagery (//e Surface Yes Yes Yes Yes Yes Yes Yes	(B7) e (B8) No ⊠ No ⊡	Water-Stained Lea 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Stunted or Stresse Other (Explain in F	es (B13) Odor (C1) eres along ced Iron (C tion in Tille d Plants (C temarks)	Living Roo 4) d Soils (C6 01) (LRR A	ots (C3) 6) N	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)

Project/Site: Cheasty Trail Pilot Project		nty: <u>Seattle, K</u>	King Sampling Date: April 5, 2				
Applicant/Owner: City of Seattle Parks				State: WA	Sampling Point: <u>W8 DP1</u>		
		Section, Township, Range: <u>SE-16-24-4</u>					
Landform (hillslope, terrace, etc.): at base		Local re	elief (concave,	, convex, none): flat	Slope (%): <u>0</u>		
Subregion (LRR): LRR A						3	
Soil Map Unit Name: na				NWI classifica	ation: none		
Are climatic / hydrologic conditions on the							
Are Vegetation, Soil, or Hyd	• •	•		•	ormal Circumstances" pre		
Are Vegetation, Soil, or Hyd					ed, explain any answers i		
SUMMARY OF FINDINGS – Att					-	·	etc.
Hydrophytic Vegetation Present?	Yes ⊠ No □						
Hydric Soil Present?			the Sampled				
Wetland Hydrology Present?		Wi	thin a Wetlar	nd? Yes ⊠ N	10 🗆		
Remarks:							
VEGETATION – Use scientific	names of plant						
VEGETATION – Use scientific	names or plant		Domina	nt Indicator	Dominance Test work	shoot	
Tree Stratum (Plot size: 30)		% Cover			Number of Dominant S		
1. Alnus rubra		1 <u>0</u>	у	FAC		or FAC: <u>4</u> (A)	
2					Total Number of Domin	ant	
3					Species Across All Stra	ta: <u>4</u> (B)	
4					Percent of Dominant Sp		
Sapling/Shrub Stratum (Plot size: 10)	10 = Total Cover			That Are OBL, FACW,	or FAC: 100% (A/B	3)	
Rubus bifrons (R. armeniacus)		20	у	FAC	Prevalence Index wor	ksheet:	
2					Total % Cover of:	Multiply by:	
3					OBL species	x 1 =	
4					*	x 2 =	
5						x 3 =	
Herb Stratum (Plot size: 5)		20 = Total Cover				x 4 = x 5 =	
1.Equisetum hyemale		2	n	FACW			3)
2. Ranunculus repens				_ FAC		(//) (2	-,
3.Agrostis sp		30	У	FAC	Prevalence Index		
4					Hydrophytic Vegetation		
5					☐ Rapid Test for Hydr ☐ Dominance Test is	1 7 0	
6				☐ Prevalence Index is			
7						otations ¹ (Provide supporting	
8 9						s or on a separate sheet)	
10					☐ Wetland Non-Vascu	ılar Plants ¹	
11.					— , ,	ohytic Vegetation¹ (Explain)	
		82			¹ Indicators of hydric soi be present, unless distu	l and wetland hydrology must	
Woody Vine Stratum (Plot size: 5)					po procent, amoso alote	The state of problematic.	
1					Hydrophytic		
2		0		Cover	Vegetation Present? Ye	s⊠ No□	
% Bare Ground in Herb Stratum <u>0</u>		<u>U</u>	- TOTAL	Covei	Tresent:	3 M M M	
Remarks:					•		
1							

Depth	Matrix			ox Features				
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc²	Texture	
0-8	2.5Y 3/1	95	10 YR 6/8	5			sandy loam	<u> </u>
8-16	10YR 5/1	45%	7.5YR 4/6	50%			silt loam	compacted soil layer
	5Y 5/1	5%						_
							-	
					<u></u>			
							-	-
			-					-
			1=Reduced Matrix, C			d Sand G		ocation: PL=Pore Lining, M=Matrix.
-		cable to al	I LRRs, unless other		d.)			ators for Problematic Hydric Soils ³ :
Histosol	(A1) ipedon (A2)		☐ Sandy Redox (☐ Stripped Matrix					cm Muck (A10) ed Parent Material (TF2)
│			☐ Loamy Mucky		(except	MIRA 1)		ery Shallow Dark Surface (TF12)
	n Sulfide (A4)		☐ Loamy Gleyed		(cxocpt	mena i,		ther (Explain in Remarks)
_ , ,	Below Dark Surfac	ce (A11)	☐ Depleted Matri					,
☐ Thick Da	rk Surface (A12)		☐ Redox Dark Su	ırface (F6)				ators of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark	,)			tland hydrology must be present,
	leyed Matrix (S4)		☐ Redox Depress	sions (F8)			unl	ess disturbed or problematic.
	_ayer (if present): compacted silt							
, ,							Usadaia Ca	all Brassant2 - Vas M - Na 🖂
Remarks:				•			nyaric Sc	oil Present? Yes ⊠ No □
Remarks.								
HYDROLO								
1	drology Indicators							
	•	one require	ed; check all that app					condary Indicators (2 or more required)
Surface \			⊠ Water-Sta		s (B9) (ex	cept MLF	RA ∐	Water-Stained Leaves (B9) (MLRA 1, 2,
_	ter Table (A2)			A, and 4B)				4A, and 4B)
☐ Saturation ☐ Water Ma	` '		☐ Salt Crust ☐ Aquatic Ir	` '	(D12)			Drainage Patterns (B10) Dry-Season Water Table (C2)
	t Deposits (B2)		☐ Hydrogen					Saturation Visible on Aerial Imagery (C9)
	. , ,				, ,	iving Roo		Geomorphic Position (D2)
☐ Drift Deposits (B3) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Geomorphic Position (D2) ☐ Algal Mat or Crust (B4) ☐ Presence of Reduced Iron (C4) ☐ Shallow Aquitard (D3)								
☐ Iron Deposits (B5) ☐ Recent Iron Reduction in Tilled Soils (C6)							FAC-Neutral Test (D5)	
-	Soil Cracks (B6)			r Stressed P		`	, –	Raised Ant Mounds (D6) (LRR A)
	on Visible on Aerial	Imagery (B	<u>—</u>	plain in Rem	•	,		Frost-Heave Hummocks (D7)
☐ Sparsely	Vegetated Concav	e Surface ((B8)					
Field Obser	vations:							
Surface Wat	er Present?	Yes ⊠ N	o Depth (inche	s): <u>2 inches</u>	ponding			
Water Table	Present?	Yes ⊠ N	o Depth (inche	s): surface				
Saturation P		Yes ⊠ N	o Depth (inches)	surface		Wetl	and Hydrolo	ogy Present? Yes ⊠ No □
(includes cap		n aguag m	anitaring wall garial	nhotos pro	vious inci	nootions)	if available:	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Damarka								
Remarks:								

Project/Site: Cheasty Trail Pilot Project	King	Sampling Date: April 5, 2017					
Applicant/Owner: City of Seattle Parks				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 ı	relief (concave	, convex, none): <u>flat</u>	Slope (%): <u>0</u>		
Subregion (LRR): LRR A				Long: <u>-122.300669</u>	Datum: <u>NAD1983</u>		
Soil Map Unit Name: <u>na</u>							
Are climatic / hydrologic conditions on the site typical for this							
Are Vegetation, Soil, or Hydrology sign	nificantly dis	turbed?	Are "N	ormal Circumstances" pres	Circumstances" present? Yes ⊠ No □		
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers ir			
SUMMARY OF FINDINGS – Attach site map					•		
Hydrophytic Vegetation Present? Yes ⊠ No □							
Hydric Soil Present? Yes ⊠ No □			s the Sampled	- 🔽			
Wetland Hydrology Present? Yes ☐ No ☒		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	vithin a Wetla	nd? Yes □ N	0 🔯		
Remarks:		•					
VEGETATION – Use scientific names of plan	ts.						
	Absolute		ant Indicator	Dominance Test works	sheet:		
Tree Stratum (Plot size: 30)			es? Status	Number of Dominant Sp			
1. Populus balsamifera				That Are OBL, FACW, o	or FAC: 4 (A)		
2. Alnus rubra				Total Number of Domina			
3				Species Across All Strat	ta: <u>6</u> (B)		
4	60			Percent of Dominant Sp That Are OBL, FACW, o	ecies or FAC: 66% (A/B)		
1. Rubus bifrons (R. armeniacus)	20	٧	FAC	Prevalence Index work	sheet:		
				Total % Cover of:	Multiply by:		
2				OBL species	x 1 =		
3				FACW species	x 2 =		
4				· ·	x 3 =		
5					x 4 =		
Herb Stratum (Plot size: 5)		= 1018	al Cover		x 5 =		
1. Polystichum munitum	2 <u>5</u>	У	FACU	Column Totals:	(A) (B)		
2. Ranunculus repens	10	у	FAC	Prevalence Index	= B/A = 3.05		
3				Hydrophytic Vegetatio	n Indicators:		
4				☐ Rapid Test for Hydro	ophytic Vegetation		
5				□ Dominance Test is >	·50%		
6				☐ Prevalence Index is	≤3.0 ¹		
7					tations¹ (Provide supporting or on a separate sheet)		
8				☐ Wetland Non-Vascu	. ,		
9					hytic Vegetation¹ (Explain)		
10				1	and wetland hydrology must		
11	3 <u>5</u>			be present, unless distu			
Woody Vine Stratum (Plot size: 5)				Hadran bada			
1. Hedera helix			FACU	Hydrophytic Vegetation			
% Bare Ground in Herb Stratum 0	10	= Tota	al Cover		s⊠ No □		
Remarks: POBA – 18+ inches DBH likely 30 years old							
,,							

Depth	Matrix		Red	dox Feature	es es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	<u>e</u>	Remarks
0-4	10YR 3/2	90	10 YR 4/4	10%			silt loan	n	
4-16	10YR 5/1	60	7.5YR 4/6	40%	С	М	silt loam		
4-10	1011(3/1	00	7.011(4/0	4070	O	IVI	Silt loain		
·			- -						
			_						
			_						
									
·	-		_				· -		
			_						
¹Type: C=C	oncentration, D=D	Depletion, F	RM=Reduced Matrix, 0	CS=Covere	ed or Coate	ed Sand (Grains.	² Loc	cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (App	olicable to	all LRRs, unless oth	erwise no	ted.)		In	dicato	ors for Problematic Hydric Soils ³ :
☐ Histosol	(A1)		☐ Sandy Redox	(S5)				2 cm	n Muck (A10)
☐ Histic Ep	ipedon (A2)		Stripped Matri	` '					Parent Material (TF2)
☐ Black His	, ,		☐ Loamy Mucky	Mineral (F	1) (except	MLRA 1			Shallow Dark Surface (TF12)
	n Sulfide (A4)		Loamy Gleyed		2)			Othe	er (Explain in Remarks)
-	Below Dark Surf	ace (A11)	□ Depleted Matr □ Depleted Matr	` ,			2.		
	rk Surface (A12)	`	Redox Dark S				³lr		ors of hydrophytic vegetation and
-	ucky Mineral (S1)		☐ Depleted Dark		-/)				and hydrology must be present,
-	leyed Matrix (S4) Layer (if present		☐ Redox Depres	SIONS (FO)				unies	s disturbed or problematic.
Type:	Layer (II present								
	ches):								
. ,	Ciles)						Hydri	c Soil	Present? Yes ⊠ No □
Remarks:									
HYDROLO	GY								
Wetland Hy	drology Indicato	rs:							
Primary India	cators (minimum	of one requ	ired; check all that ap	ply)				Secor	ndary Indicators (2 or more required)
☐ Surface	Water (A1)		☐ Water-St	ained Leav	es (B9) (e :	xcept ML	-RA	\square W	ater-Stained Leaves (B9) (MLRA 1, 2,
☐ High Wa	ter Table (A2)		1, 2,	4A, and 4E	3)				4A, and 4B)
☐ Saturation	on (A3)		☐ Salt Crus	t (B11)				☐ Di	rainage Patterns (B10)
☐ Water M	arks (B1)		☐ Aquatic I	nvertebrate	es (B13)			☐ Di	ry-Season Water Table (C2)
☐ Sedimen	t Deposits (B2)		☐ Hydroger	n Sulfide O	dor (C1)			☐ Sa	aturation Visible on Aerial Imagery (C9)
☐ Drift Dep	osits (B3)		☐ Oxidized	Rhizosphe	res along	Living Ro	ots (C3)	☐ G	eomorphic Position (D2)
-	t or Crust (B4)			of Reduce	_	_	-	☐ Sh	hallow Aquitard (D3)
-	osits (B5)		☐ Recent Ir	on Reduct	ion in Tille	d Soils (C	6)	☐ FA	AC-Neutral Test (D5)
-	Soil Cracks (B6)		☐ Stunted of	or Stressed	l Plants (D	1) (LRR /	A)		aised Ant Mounds (D6) (LRR A)
☐ Inundation	on Visible on Aeri	al Imagery	(B7)	kplain in Re	emarks)			☐ Fr	rost-Heave Hummocks (D7)
	Vegetated Conc		• • • • • • • • • • • • • • • • • • • •		,				. ,
Field Obser									
Surface Wat	er Present?	Yes 🗌	No Depth (inch	es):					
Water Table		Yes 🗌	No ☑ Depth (inch						
Saturation P		Yes 🗌	No ☑ Depth (inches)		" hut not bol	ow Wa	tland Hvd	Irolog	y Present? Yes □ No ⊠
(includes cap				,. <u></u>	Dat Hot bel			J.Jg	,
Describe Re	corded Data (stre	am gauge,	monitoring well, aeria	l photos, p	revious ins	spections), if availat	ole:	
Remarks:									

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

Project/Site: Cheasty Trail Pilot Project			Sampling Date: Oct 31, 2016			
Applicant/Owner: City of Seattle Parks					State: WA	Sampling Point: W9 DP1
Investigator(s): Claire Hoffman, Jessica Redma						
Landform (hillslope, terrace, etc.): slope			Local re	lief (concave,	, convex, none): concave	Slope (%): <u>10</u>
Subregion (LRR): <u>LRR A</u>						
					NWI classificat	
Are climatic / hydrologic conditions on the site t						
Are Vegetation, Soil, or Hydrolog	•	•		•	ormal Circumstances" pres	ent? Yes⊠ No □
Are Vegetation, Soil, or Hydrology					ed, explain any answers in	- -
SUMMARY OF FINDINGS – Attach						•
Hydrophytic Vegetation Present? Yes	⊠ No □					
	⊠ No □			the Sampled		. \square
Wetland Hydrology Present? Yes	⊠ No □		Wit	thin a Wetlar	nd? Yes ⊠ No) ∐
Remarks:						
VEGETATION – Use scientific name	e of plant	te .				
VEGETATION - Use scientific flame	es or plant		Domina	nt Indicator	Dominance Test works	heet:
Tree Stratum (Plot size: 30)		% Cover			Number of Dominant Sp	
1. Alnus rubra		30	<u>y</u>	FAC	That Are OBL, FACW, o	
2					Total Number of Domina	ınt
3					Species Across All Strate	a: <u>4</u> (B)
4					Percent of Dominant Spo	
Sapling/Shrub Stratum (Plot size: 10)		30	= I otal	Cover	That Are OBL, FACW, o	r FAC: <u>100</u> (A/B)
1.					Prevalence Index work	sheet:
2				_	Total % Cover of:	Multiply by:
3					OBL species	x 1 =
4						x 2 =
5						x 3 =
Herb Stratum (Plot size: 5)			= Total	Cover		x 4 = x 5 =
1. Athyrium filix-femina		20	y	FAC		(A) (B)
2. Equisetum telmateia		15			Goldmin Totals.	(A) (B)
3. <u>Urtica dioica</u>		trace		FAC		= B/A =
4					Hydrophytic Vegetation	
5					Rapid Test for Hydro	. , ,
6					☐ Dominance Test is >	
7					☐ Prevalence Index is:	≤3.01 ations¹ (Provide supporting
8.						or on a separate sheet)
9					☐ Wetland Non-Vascul	ar Plants ¹
10 11					☐ Problematic Hydroph	nytic Vegetation¹ (Explain)
···		35				and wetland hydrology must
Woody Vine Stratum (Plot size: 5)				0010.	be present, unless distur	bed or problematic.
1. Rubus armeniacus		80	у	FAC	Hydrophytic	
2					Vegetation	
% Bare Ground in Herb Stratum		80	= Total	Cover	Present? Yes	No □
Remarks: Willows in buffer at bottom (east) er	nd of wetland				<u> </u>	

Depth	Matrix			Redox	k Feature	S				of indicators.)	
(inches)	Color (moist)	%	Colo	or (moist)	%		Loc ²	Textur	<u>e</u>	Remarks	
0-5	10YR 2/2	100						sandy I	oam,	roots	
5-18	5Y 4/1	85	7.5YR	4/4 & 7/5YR5/6	10&5	С		gravelly	v sandy	/ loam	
									· · · ·		
		_									
								-			
								-			
¹Tvpe: C=C	concentration, D=De	epletion.	RM=Red	uced Matrix. CS	=Covere	d or Coate	ed Sand Gr	rains.	² Loc	ation: PL=Pore Lining, M=Matri	ζ.
	Indicators: (Appl									rs for Problematic Hydric Soils	
☐ Histosol	(A1)			Sandy Redox (S	5)] 2 cm	Muck (A10)	
☐ Histic Ep	oipedon (A2)			Stripped Matrix (S6)] Red I	Parent Material (TF2)	
☐ Black Hi	stic (A3)		□ I	Loamy Mucky M	ineral (F1) (except	MLRA 1)] Very	Shallow Dark Surface (TF12)	
_ , ,	en Sulfide (A4)			Loamy Gleyed M)] Other	r (Explain in Remarks)	
	d Below Dark Surfa	ce (A11)		Depleted Matrix	. ,						
	ark Surface (A12)			Redox Dark Surf	. ,	_,		3lr		rs of hydrophytic vegetation and	
•	Mucky Mineral (S1)			Depleted Dark S	•	7)				nd hydrology must be present,	
-	Gleyed Matrix (S4) Layer (if present):			Redox Depression	ons (F8)			1	uniess	s disturbed or problematic.	
Type:	Layer (ii present).										
,	iches):			_				Hydri	ic Sail	Present? Yes ⊠ No □	
Remarks:				<u> </u>				пуш	ic Soii	Fresent? Tes 🖂 No 🗌	
HYDROLO											
	GY										
	OGY drology Indicator	s:									
Wetland Hy			uired; che	eck all that apply	/)					dary Indicators (2 or more requi	
Wetland Hy Primary India Surface	rdrology Indicators cators (minimum of Water (A1)		uired; che	☐ Water-Stair	ned Leave		xcept MLR	RA		ater-Stained Leaves (B9) (MLR	
Wetland Hy Primary India ☐ Surface ☐ High Wa	rdrology Indicators cators (minimum of Water (A1) ater Table (A2)		uired; che	☐ Water-Stair	ned Leave		xcept MLR	RA	☐ Wa	ater-Stained Leaves (B9) (MLRA	
Wetland Hy Primary India ☐ Surface ☐ High Wa ☐ Saturation	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)		uired; che	☐ Water-Stair 1, 2, 4A ☐ Salt Crust (ned Leave , and 4B B11))	xcept MLR	RA	☐ Wa	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10)	
Wetland Hy Primary India □ Surface □ High Wa □ Saturatio □ Water M	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1)		uired; che	☐ Water-Stair 1, 2, 4A ☐ Salt Crust (☐ Aquatic Invo	ned Leave , and 4B B11) ertebrate) s (B13)	xcept MLR	RA	☐ Wa	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)	1, 2,
Wetland Hy Primary India ☐ Surface ☐ High Wa ☐ Saturatio ☐ Water M ☐ Sedimer	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)		uired; che	Water-Stair 1, 2, 4A Salt Crust (Aquatic Invo	ned Leave , and 4B B11) ertebrate Sulfide Oc	s (B13) lor (C1)			☐ Wa	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imager	1, 2,
Wetland Hy Primary India ☐ Surface ☐ High Wa ☐ Saturatio ☐ Water M ☐ Sedimer ☐ Drift Dep	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)		uired; che	Water-Stair 1, 2, 4A Salt Crust (Aquatic Inv	ned Leave , and 4B B11) ertebrate Sulfide Ochizosphe	s (B13) lor (C1) res along	Living Roo		Dra Dra Sa	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imager comorphic Position (D2)	1, 2,
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep	rdrology Indicator: cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		uired; che	Water-Stair 1, 2, 4A Salt Crust (Aquatic Invo Hydrogen S Oxidized RI Presence o	ned Leave a, and 4B B11) ertebrate Sulfide Ochizosphe f Reduce	s (B13) lor (C1) res along d Iron (C4	Living Roo	ots (C3)	☐ Wa	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imager comorphic Position (D2) allow Aquitard (D3)	1, 2,
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		uired; che	Water-Stair 1, 2, 4A Salt Crust (Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron	ned Leave , and 4B B11) ertebrate Sulfide Oc hizosphe f Reduce	s (B13) lor (C1) res along d Iron (C4 on in Tille	Living Roo l) d Soils (C6	ots (C3)	☐ Wa ☐ Dra ☐ Dra ☐ Sa ☐ Gee ☐ Sh ☐ FA	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imager comorphic Position (D2) allow Aquitard (D3) tC-Neutral Test (D5)	1, 2,
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	f one requ		Water-Stair 1, 2, 4A Salt Crust (Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S	ned Leave and 4B B11) ertebrate Sulfide Ochizospher f Reduction Stressed	s (B13) lor (C1) res along d Iron (C ² on in Tilled Plants (D	Living Roo l) d Soils (C6	ots (C3)	Dra Dra Ge	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imager comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) tised Ant Mounds (D6) (LRR A)	1, 2,
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria	f one requ	(B7)	Water-Stair 1, 2, 4A Salt Crust (Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron	ned Leave and 4B B11) ertebrate Sulfide Ochizospher f Reduction Stressed	s (B13) lor (C1) res along d Iron (C ² on in Tilled Plants (D	Living Roo l) d Soils (C6	ots (C3)	Dra Dra Ge	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imager comorphic Position (D2) allow Aquitard (D3) tC-Neutral Test (D5)	1, 2,
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio	rdrology Indicator: cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concar	f one requ	(B7)	Water-Stair 1, 2, 4A Salt Crust (Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S	ned Leave and 4B B11) ertebrate Sulfide Ochizospher f Reduction Stressed	s (B13) lor (C1) res along d Iron (C ² on in Tilled Plants (D	Living Roo l) d Soils (C6	ots (C3)	Dra Dra Ge	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imager comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) tised Ant Mounds (D6) (LRR A)	1, 2,
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatia Sparsely	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria y Vegetated Concar rvations:	f one required from the requirement of the requirem	(B7) be (B8)	Water-Stair 1, 2, 4A Salt Crust (Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	ned Leave a, and 4B B11) ertebrate Sulfide Oc hizospher f Reduce a Reduction Stressed ain in Re	s (B13) lor (C1) res along d Iron (C ² on in Tilled Plants (D	Living Roo l) d Soils (C6	ots (C3)	Dra Dra Ge	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imager comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) tised Ant Mounds (D6) (LRR A)	1, 2,
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concar rvations: ter Present?	f one required in the second s	e (B7) de (B8) No ⊠	Water-Stair 1, 2, 4A Salt Crust (Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leave a, and 4B B11) ertebrate Sulfide Oc hizosphei f Reduce a Reductio Stressed ain in Re	s (B13) lor (C1) res along d Iron (C ² on in Tilled Plants (D	Living Roo l) d Soils (C6	ots (C3)	Dra Dra Ge	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imager comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) tised Ant Mounds (D6) (LRR A)	1, 2,
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser Surface Water Table	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial y Vegetated Concar rvations: ter Present?	I Imagery ve Surfac Yes ☐ Yes ☑	(B7) te (B8) No \(\textsq	Water-Stair 1, 2, 4A Salt Crust (Aquatic Invi Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	ned Leave a, and 4B B11) ertebrate Sulfide Oc hizospher f Reducte Reduction Stressed ain in Re	s (B13) lor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roo l) d Soils (C6 1) (LRR A)	ots (C3)	☐ Wa	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imager comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)	1, 2,
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely Field Obser Surface Water Table Saturation P	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aeria y Vegetated Concar rvations: ter Present? Present?	f one required in the second s	e (B7) de (B8) No ⊠	Water-Stair 1, 2, 4A Salt Crust (Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leave a, and 4B B11) ertebrate Sulfide Oc hizospher f Reducte Reduction Stressed ain in Re	s (B13) lor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roo l) d Soils (C6 1) (LRR A)	ots (C3)	☐ Wa	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imager comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) tised Ant Mounds (D6) (LRR A)	1, 2,
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Water Table Saturation P (includes ca	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aerial y Vegetated Concar rvations: ter Present?	I Imagery ve Surfac Yes ☐ Yes ⊠ Yes ⊠	No \(\text{No } \cap \) No \(\text{No } \cap \) No \(\text{No } \cap \)	Water-Stair 1, 2, 4A Salt Crust (Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	ned Leave a, and 4B B11) ertebrate Sulfide Ochizosphei f Reduce a Reducti Stressed ain in Re):	s (B13) lor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roo d Soils (C6 1) (LRR A)	ots (C3)	☐ Wa ☐ Dra ☐ Dra ☐ Sa ☐ Gee ☐ Sh ☐ FA ☐ Fro	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imager comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)	1, 2,
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concar rvations: ter Present? Present? pillary fringe) ecorded Data (streat	I Imagery ve Surfac Yes Yes Yes Myes M	(B7) se (B8) No n	Water-Stair 1, 2, 4A Salt Crust (Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	ned Leave a, and 4B B11) ertebrate Sulfide Ochizospher f Reduce a Reductio Stressed ain in Re):	s (B13) lor (C1) res along d Iron (C2 on in Tiller Plants (D marks)	Living Roo d Soils (C6 1) (LRR A) Wetlespections),	ots (C3) i) and Hyc if availal	☐ Wa ☐ Dra ☐ Dra ☐ Ge ☐ Sh ☐ FA ☐ Fro	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imager comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)	y (C9)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concar rvations: ter Present? Present? pillary fringe) ecorded Data (streat	I Imagery ve Surfac Yes Yes Yes Myes M	(B7) se (B8) No n	Water-Stair 1, 2, 4A Salt Crust (Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	ned Leave a, and 4B B11) ertebrate Sulfide Ochizospher f Reduce a Reductio Stressed ain in Re):	s (B13) lor (C1) res along d Iron (C2 on in Tiller Plants (D marks)	Living Roo d Soils (C6 1) (LRR A) Wetlespections),	ots (C3) i) and Hyc if availal	☐ Wa ☐ Dra ☐ Dra ☐ Ge ☐ Sh ☐ FA ☐ Fro	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imager comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ast-Heave Hummocks (D7)	y (C9)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aerial of Vegetated Concar rvations: ter Present? Present? pillary fringe) ecorded Data (streat	I Imagery ve Surfac Yes Yes Yes Myes M	(B7) se (B8) No n	Water-Stair 1, 2, 4A Salt Crust (Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	ned Leave a, and 4B B11) ertebrate Sulfide Ochizospher f Reduce a Reductio Stressed ain in Re):	s (B13) lor (C1) res along d Iron (C2 on in Tiller Plants (D marks)	Living Roo d Soils (C6 1) (LRR A) Wetlespections),	ots (C3) i) and Hyc if availal	☐ Wa ☐ Dra ☐ Dra ☐ Ge ☐ Sh ☐ FA ☐ Fro	ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imager comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ast-Heave Hummocks (D7)	y (C9)

Project/Site: Cheasty Trail Pilot Project		(City/Coun	Sampling Date: Oct 20, 2016		
Applicant/Owner: City of Seattle Parks					State: WA	Sampling Point: WL9 DP2
Investigator(s): Claire Hoffman, Jessica Redm					wnship, Range: <u>SE-16-24</u>	
Landform (hillslope, terrace, etc.): slope			Local rel	ief (concave,	convex, none): slope	Slope (%): <u>20</u>
Subregion (LRR): <u>LRR A</u>		_ Lat: <u>47.56</u>	6806	•	Long: -122.298311	Datum: NAD1983
					=	tion: PFOB
Are climatic / hydrologic conditions on the site						
Are Vegetation, Soil, or Hydrolog	• •	•		•	ormal Circumstances" pres	sent? Yes ⊠ No □
Are Vegetation, Soil, or Hydrolog					ed, explain any answers in	- -
SUMMARY OF FINDINGS – Attach						•
Hydrophytic Vegetation Present? Yes	s⊠ No□				_	
	s □ No □			he Sampled		. 🖂
Wetland Hydrology Present? Yes	s ⊠ No □		Wit	hin a Wetlar	nd? Yes □ N	o 🔀
Remarks:			•			
VECETATION Lies esigntific nom	os of plant	ho.				
VEGETATION – Use scientific nam	es or plant		Dominan	nt Indicator	Dominance Test works	shoot:
Tree Stratum (Plot size: 30)		% Cover			Number of Dominant Sp	
1. Alnus rubra		20	У	FAC	That Are OBL, FACW, o	
Acer macrophyllum		<u>20</u>	У	FACU	Total Number of Domina	ant
3					Species Across All Strat	a: <u>5</u> (B)
4					Percent of Dominant Sp	ecies
Sapling/Shrub Stratum (Plot size: 10)		40	= lotal (Cover	That Are OBL, FACW, o	or FAC: <u>60</u> (A/B)
1.					Prevalence Index work	sheet:
2					Total % Cover of:	Multiply by:
3						x 1 =
4						x 2 =
5						x 3 =
Herb Stratum (Plot size: 5)			= Total (Cover		x 4 = x 5 =
1. Equisetum telmateia		7	У	FACW		(A) (B)
2. Polystichum munitum		5	у	FACU		
3						= B/A =
4					Hydrophytic Vegetatio	
5					Rapid Test for Hydro	. , .
6					☑ Dominance Test is >☐ Prevalence Index is	
7					=	tations ¹ (Provide supporting
8.						or on a separate sheet)
9 10					☐ Wetland Non-Vascu	lar Plants ¹
11.					—	hytic Vegetation¹ (Explain)
		12			¹ Indicators of hydric soil be present, unless distu	and wetland hydrology must rbed or problematic.
Woody Vine Stratum (Plot size: <u>5</u>)		0.5		540	1 /	
1. Rubus armeniacus		85		FAC	Hydrophytic	
2		85		Cover	Vegetation Present? Yes	s⊠ No□
% Bare Ground in Herb Stratum						
Remarks:	_					
1						

	-	e to the d	epth ne				or confi	rm the al	bsence of indicators.)
Depth (inches)	Matrix Color (moist)	%	Colo	Redo r (moist)	ox Feature %	<u>s</u> Tvpe ¹	Loc ²	Textu	ure Remarks
0-11	10YR 2/2	100		- (/ loam
11-16	10YR2/2 & 10YR3/		100	R 4/6	trace				/ loam
<u>16-18</u>	10YR4/2 & 10YR2/	2 77&20	_ /.5Y	R 4/6	3	<u>C</u>		loamy	y sand
	-		-						
	-								
¹Type: C=C	oncentration, D=De	pletion, R	M=Red	uced Matrix, C	S=Covere	d or Coat	ed Sand (Grains.	² Location: PL=Pore Lining, M=Matrix.
	Indicators: (Appl								Indicators for Problematic Hydric Soils ³ :
☐ Histosol	(A1)			Sandy Redox (S5)				☐ 2 cm Muck (A10)
	pipedon (A2)			Stripped Matrix	` '				Red Parent Material (TF2)
☐ Black Hi	` '			oamy Mucky l			t MLRA 1	_	☐ Very Shallow Dark Surface (TF12)
	n Sulfide (A4)	(0.4.4)		oamy Gleyed	-)		L	☐ Other (Explain in Remarks)
	d Below Dark Surfa ark Surface (A12)	ce (A11)		Depleted Matrix Redox Dark Su	. ,			3	Indicators of hydrophytic vogotation and
	lucky Mineral (S1)		_	Redox Dark Su Depleted Dark	` ,				³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
	Gleyed Matrix (S4)			Redox Depress	•	')			unless disturbed or problematic.
_	Layer (if present):				()				
Type:				-					
Depth (in	ches):							Hyd	Iric Soil Present? Yes □ No ⊠
Remarks:									
	·CV								
HYDROLO									
_	drology Indicators cators (minimum of		rod: cha	ack all that ann	Jv/)				Secondary Indicators (2 or more required)
	Water (A1)	one requi	ieu, ciie	<u>عدد عاا נוاعد عpp</u> Water-Sta		os (B0) (s	vcont MI	DΛ	☐ Water-Stained Leaves (B9) (MLRA 1, 2,
	iter Table (A2)				A, and 4B		xcept wit	-NA	4A, and 4B)
☐ Saturation	, ,			☐ Salt Crust	•	,			☐ Drainage Patterns (B10)
	arks (B1)			Aquatic In	` '	s (B13)			☐ Dry-Season Water Table (C2)
	nt Deposits (B2)			☐ Hydrogen		, ,			☐ Saturation Visible on Aerial Imagery (C9)
	posits (B3)			Oxidized F			Living Ro	nots (C3)	
-	at or Crust (B4)			☐ Presence		_		7010 (OO)	☐ Shallow Aquitard (D3)
_	oosits (B5)			☐ Recent Iro			•	:6)	FAC-Neutral Test (D5)
-	Soil Cracks (B6)			☐ Stunted or			`	,	Raised Ant Mounds (D6) (LRR A)
	on Visible on Aerial	Imagery (B7)	Other (Exp			., (=::::	-,	☐ Frost-Heave Hummocks (D7)
	Vegetated Concav		-	_ ` ` .		,			
Field Obser	vations:								
Surface Wat	ter Present?	Yes 🔲 I	No 🛛	Depth (inche	s):				
Water Table	Present?	Yes ⊠ I	No 🗌	Depth (inche					
Saturation P			No 🗌	Depth (inche	,		We	tland Hv	ydrology Present? Yes ⊠ No □
(includes ca	pillary fringe)			. ,	· —			-	
Describe Re	corded Data (strea	m gauge, i	monitor	ing well, aerial	photos, pr	evious in	spections), if availa	able:
Remarks: he	eavy rain overnight,	until abou	ıt mid-m	norning.					
Ĩ									

Project/Site: Cheasty Trail Pilot Project		City/County	Sampling Date: Oct 20, 2016		
Applicant/Owner: City of Seattle Parks				State: WA	Sampling Point: W11 DP1
Investigator(s): Claire Hoffman, Jessica Redman			Section, To	wnship, Range: <u>SE-16-24-</u>	4
Landform (hillslope, terrace, etc.): slope		Local relie	ef (concave,	convex, none): none	Slope (%): <u>3</u>
Subregion (LRR): <u>LRR A</u>	Lat: 47.56	3888		Long: <u>-122.300541</u>	Datum: <u>NAD 1983</u>
Soil Map Unit Name: na				NWI classificat	ion: none
Are climatic / hydrologic conditions on the site typical for this	time of yea	ır? Yes ⊠	No ☐ (I	f no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology sign	ificantly dist	turbed?	Are "No	ormal Circumstances" pres	ent? Yes ☐ No ☒
Are Vegetation, Soil, or Hydrology natur	rally probler	natic?	(If neede	ed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS – Attach site map s			g point le	ocations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes ⊠ No □					
Hydric Soil Present? Yes ⊠ No □			e Sampled in a Wetlar		
Wetland Hydrology Present? Yes ⊠ No □		With	iii a vvetiai	iu! ies 🖂 inc	'
Remarks: Downslope/east of the delineated portion has been disturp reviously extended to the east. To the east and south east of the the delineated area, both as sheet flow and a small newly forming or present and some of the upland vegetation planted is not healthy. It wetland (normal circumstances in delineated portion). Eastern of VEGETATION — Use scientific names of plant	delineated por channel. Soil of A stream cha extent of wetla	rtion restorat does not dis nnel or wetla	tion and repla play wetland and may form	nting primarily with upland plan characteristics east of the delir over time. There was no distu	nts has occurred. Water flows from leated portion but hydric herbs are
	Absolute	Dominant	Indicator	Dominance Test works	heet:
<u>Tree Stratum</u> (Plot size: <u>30</u>)	% Cover			Number of Dominant Sp	
1				That Are OBL, FACW, o	r FAC: <u>3</u> (A)
2				Total Number of Domina	
3				Species Across All Strat	a: <u>4</u> (B)
4		= Total C		Percent of Dominant Spe That Are OBL, FACW, o	
Sapling/Shrub Stratum (Plot size: 10) 1. Rubus spectabilis	90	V	FAC	Prevalence Index work	sheet:
Complete Complet	trace	-			Multiply by:
3					x 1 =
4.				· ·	x 2 =
5				FAC species	x 3 =
	90	= Total C	over	FACU species	x 4 =
Herb Stratum (Plot size: <u>5</u>)	E	.,	FAC	UPL species	
Athyrium filix-femina Polystichum munitum	<u>5</u>		FACU	Column Totals:	(A) (B)
Lysichiton americanus		-	OBL	Prevalence Index	= B/A =
4. Hedera helix	trace			Hydrophytic Vegetation	n Indicators:
5				☐ Rapid Test for Hydro	
6				□ Dominance Test is > □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	
7				☐ Prevalence Index is	
8					ations ¹ (Provide supporting or on a separate sheet)
9				☐ Wetland Non-Vascul	ar Plants ¹
10				☐ Problematic Hydroph	nytic Vegetation¹ (Explain)
11	10	= Total C	over	¹ Indicators of hydric soil present, unless disturbed	and wetland hydrology must be d or problematic.
Woody Vine Stratum (Plot size: <u>5</u>) 1. Rubus armeniacus	<u>15</u>	V	FΔC		
2	10	<u>y</u>	1 10	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum 0	<u>15</u>	= Total C	over		⊠ No □
Remarks:					

Depth	Matrix				<u>ox Feature</u>					
(inches)	Color (moist)	%	Color	(moist)	%	Type ¹	Loc ²	<u>Texture</u>	_	Remarks
0-9	10YR 2/1	100						sandy lo	am_	
9-16	2.5Y 3/1	97	7.5Y	3/4	3			loamy sa	and_	
								-		
	-	_								
			_					-		
	-									
	-									
¹Type: C=C	oncentration, D=D	epletion, R	RM=Redu	ced Matrix, C	S=Covere	d or Coate	ed Sand G	rains.	² Location: PL=	Pore Lining, M=Matrix.
	Indicators: (App									olematic Hydric Soils ³ :
☐ Histosol	(A1)		☐ Sa	andy Redox (S5)				2 cm Muck (A10))
	oipedon (A2)			tripped Matrix					Red Parent Mat	, ,
☐ Black Hi	, ,			oamy Mucky I			MLRA 1)		•	ark Surface (TF12)
	en Sulfide (A4)	(844)		oamy Gleyed)			Other (Explain in	n Remarks)
	d Below Dark Surfa ark Surface (A12)	ace (A11)		epleted Matrix edox Dark Su	. ,			3Inc	licators of budge	phytic vegetation and
	lucky Mineral (S1)			edox Dark Su epleted Dark		7)				gy must be present,
	Gleyed Matrix (S4)		_	edox Depress	,	.,			unless disturbed	•
-	Layer (if present)			<u>'</u>	, ,					<u> </u>
Type:										
Depth (in	ches):							Hydric	Soil Present?	Yes ⊠ No □
Remarks:										
Wetland Hy	drology Indicator									
Wetland Hy Primary Indi	drology Indicator								-	ators (2 or more required)
Wetland Hy Primary Indi ☐ Surface	drology Indicator cators (minimum o Water (A1)			☐ Water-Sta	ined Leave		xcept MLF		☐ Water-Staine	d Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary Indi ☐ Surface ☐ High Wa	drology Indicator cators (minimum o Water (A1) ater Table (A2)		[☐ Water-Sta	ined Leave		xcept MLF	RA [☐ Water-Staine	d Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary Indi ☐ Surface ☑ High Wa ☐ Saturation	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3)]	□ Water-Sta 1, 2, 4 □ Salt Crust	ined Leave A, and 4B (B11))	xcept MLF	RA [Water-Staine 4A, and 4 Drainage Pat	d Leaves (B9) (MLRA 1, 2, IB) terns (B10)
Wetland Hy Primary Indi ☐ Surface ☐ High Wa ☐ Saturatio ☐ Water M	rdrology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) larks (B1)]]]	Water-Sta 1, 2, 4 Salt Crust Aquatic In	ined Leave A, and 4B (B11) vertebrate) s (B13)	xcept MLF	RA [Water-Staine 4A, and 4 Drainage Pat Dry-Season V	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer	cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2)]]]	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen	A, and 4B (B11) vertebrate Sulfide Oc	s (B13) lor (C1)		A []]]	Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vis	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9)
Wetland Hy Primary Indi ☐ Surface ☐ High Wa ☐ Saturatio ☐ Water M ☐ Sedimer ☐ Drift Dep	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3)]]]	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F	A, and 4B (B11) vertebrate Sulfide Oc	s (B13) lor (C1) res along	Living Roo	A []]]	Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vis Geomorphic I	d Leaves (B9) (MLRA 1, 2, BB) terns (B10) Vater Table (C2) sible on Aerial Imagery (C9) Position (D2)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) cosits (B3) at or Crust (B4)]]]	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence	ined Leave A, and 4B (B11) vertebrate Sulfide Oc Rhizosphel of Reduce	s (B13) lor (C1) res along d Iron (C4	Living Roo 1)	RA [[[ots (C3) [Water-Stained 4A, and 4 Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3)
Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)]]]	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	A, and 4B (B11) vertebrate Sulfide Oc Rhizospher of Reduce on Reduction	s (B13) for (C1) res along d Iron (C4 on in Tille	Living Roo 4) d Soils (C6	RA [[[[[[[[[[[[[Water-Stainer 4A, and 4 Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	cators (minimum of water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	of one requi]]] [] []	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction	s (B13) lor (C1) res along d Iron (C ² on in Tille Plants (D	Living Roo 4) d Soils (C6	RA [[[[[[[[[[[[[Water-Stainer 4A, and 4 Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	of one requi	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction	s (B13) lor (C1) res along d Iron (C ² on in Tille Plants (D	Living Roo 4) d Soils (C6	RA [[[[[[[[[[[[[Water-Stainer 4A, and 4 Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	cators (minimum of water (A1) ater Table (A2) on (A3) larks (B1) on Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria	of one requi	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction	s (B13) lor (C1) res along d Iron (C ² on in Tille Plants (D	Living Roo 4) d Soils (C6	RA [[[[[[[[[[[[[Water-Stainer 4A, and 4 Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria v Vegetated Conca	of one requi	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc	A, and 4B (B11) vertebrate Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re	s (B13) lor (C1) res along d Iron (C ² on in Tille Plants (D	Living Roo 4) d Soils (C6	RA [[[[[[[[[[[[[Water-Stainer 4A, and 4 Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely	drology Indicator cators (minimum of water (A1) ater Table (A2) on (A3) darks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria v Vegetated Concarvations:	of one requi	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	A, and 4B (B11) vertebrate Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re	s (B13) lor (C1) res along d Iron (C ² on in Tille Plants (D	Living Roo 4) d Soils (C6	RA [[[[[[[[[[[[[Water-Stainer 4A, and 4 Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Water M Sedimer Drift Dep Algal Mater Inon Dep Surface Inundation Sparsely Field Obsert	drology Indicator cators (minimum of water (A1) ater Table (A2) on (A3) ater (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria (Vegetated Concators: ter Present?	of one requi	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	A, and 4B (B11) vertebrate Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re s):	s (B13) lor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Roo 4) d Soils (C6 1) (LRR A	RA [[[[] ots (C3) [[]]] []	Water-Stained 4A, and 4 Drainage Pate Dry-Season Vector Saturation Vise Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)
Wetland Hy Primary Indi Surface High Water M Sedimer Drift Dep Algal Mater Inon Dep Surface Inundation Sparsely Field Obser Surface Water Table Saturation P (includes ca	rdrology Indicator cators (minimum of water (A1) ater Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria v Vegetated Concator vations: ter Present? Present? Present? Present? pillary fringe)	al Imagery (ave Surface Yes Yes Yes Yes Yes Yes	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphel of Reduce on Reduction r Stressed plain in Re s):s): 5s): surface	s (B13) lor (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Roo 4) d Soils (C6 1) (LRR A	RA [Water-Stainer 4A, and 4 Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)
Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	drology Indicator cators (minimum of water (A1) ater Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria v Vegetated Concator veget	al Imagery (ave Surface Yes Yes Yes Yes Yes Yes	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphel of Reduce on Reduction r Stressed plain in Re s):s): 5s): surface	s (B13) lor (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Roo 4) d Soils (C6 1) (LRR A	RA [Water-Stainer 4A, and 4 Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	rdrology Indicator cators (minimum of water (A1) ater Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria v Vegetated Concator vations: ter Present? Present? Present? Present? pillary fringe)	al Imagery (ave Surface Yes Yes Yes Yes Yes Yes	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphel of Reduce on Reduction r Stressed plain in Re s):s): 5s): surface	s (B13) lor (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Roo 4) d Soils (C6 1) (LRR A	RA [Water-Stainer 4A, and 4 Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)
Wetland Hy Primary Indi Surface High Water M Sedimer Drift Dep Algal Mater Inon Dep Surface Inundation Sparsely Field Obser Surface Water Table Saturation P (includes ca	rdrology Indicator cators (minimum of water (A1) ater Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria v Vegetated Concator vations: ter Present? Present? Present? Present? pillary fringe)	al Imagery (ave Surface Yes Yes Yes Yes Yes Yes	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphel of Reduce on Reduction r Stressed plain in Re s):s): 5s): surface	s (B13) lor (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Roo 3) d Soils (C6 1) (LRR A	RA [Water-Stainer 4A, and 4 Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes ca	rdrology Indicator cators (minimum of water (A1) ater Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria v Vegetated Concator vations: ter Present? Present? Present? Present? pillary fringe)	al Imagery (ave Surface Yes Yes Yes Yes Yes Yes	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphel of Reduce on Reduction r Stressed plain in Re s):s): 5s): surface	s (B13) lor (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Roo 3) d Soils (C6 1) (LRR A	RA [Water-Stainer 4A, and 4 Drainage Pat Dry-Season V Saturation Vis Geomorphic I Shallow Aquit FAC-Neutral Raised Ant M Frost-Heave	d Leaves (B9) (MLRA 1, 2, IB) terns (B10) Water Table (C2) sible on Aerial Imagery (C9) Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)

Project/Site: Cheasty Trail Pilot Project		City/Co	ounty: <u>Seattl</u>	e, King		
Applicant/Owner: City of Seattle Parks				State: WA	Sampling Point: W11 DP2	
Investigator(s): Claire Hoffman, Jessica Redman			Section	ı, Township, Range: <u>SE-16-2</u>	4-4	
Landform (hillslope, terrace, etc.):hillslope		Local	relief (conca	ave, convex, none): <u>none</u>	Slope (%): <u>10</u>	
Subregion (LRR): LRR A NAD1983	_ Lat: <u>47.5</u>	63803		Long: <u>-122.300527</u>	Datum:	
Soil Map Unit Name: na				NWI classifica	ation: <u>none</u>	
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Ye	s⊠ No 🗆] (If no, explain in Remarks.))	
Are Vegetation, Soil, or Hydrology sign	ificantly dis	turbed'	? Are	"Normal Circumstances" pre	sent? Yes ⊠ No □	
Are Vegetation, Soil, or Hydrology natu				eeded, explain any answers i	n Remarks.)	
SUMMARY OF FINDINGS – Attach site map				nt locations, transects	, important features, etc.	
Hydrophytic Vegetation Present? Yes ☐ No ☒						
Hydric Soil Present? Yes ☐ No ☒			Is the Samp		. 🖂	
Wetland Hydrology Present? Yes ☐ No ☒		'	within a We	etland? Yes 🗌 N	10 🕅	
Remarks:						
VEGETATION – Use scientific names of plan	ts.					
			nant Indicat		sheet:	
Tree Stratum (Plot size: <u>30</u>)			ies? Statu	- Number of Dominant S		
1. Ilex aquifolium					or FAC: <u>2</u> (A)	
2. Alnus rubra				I Total Number of Domin		
3				Species Across All Stra	ata: <u>2</u> (B)	
	105			Percent of Dominant Sp That Are OBL, FACW, o		
Sapling/Shrub Stratum (Plot size: 10)						
1. Oemleria cerasiformis						
2. Rubus spectabilis			<u>FAC</u>		Multiply by:	
3. Hedera helix			FACU		x 1 = x 2 =	
4					x 3 = <u>165</u>	
5	20				x 4 = <u>360</u>	
Herb Stratum (Plot size: 5)			00101		x 5 =	
1. Polystichum munitum	30	<u>y</u>	FACU		(A) <u>525</u> (B)	
2						
3					= B/A = <u>3.62</u>	
4				Hydrophytic Vegetation □ Rapid Test for Hydromath		
5				_	. , .	
6				- 🗒 🛫		
7				- 二	otations ¹ (Provide supporting	
8 9					s or on a separate sheet)	
10				─		
11.				•	phytic Vegetation¹ (Explain)	
Woody Vine Stratum (Plot size: 5)	30			¹ Indicators of hydric soi be present, unless distu	l and wetland hydrology must urbed or problematic.	
1. Rubus ursinus	trace		FACU			
2.				Hydrophytic Vegetation		
	trace	= Tot	tal Cover		s □ No ⊠	
% Bare Ground in Herb Stratum <u>5</u> Remarks:						
. Condition						

Depth Matrix (inches) Color (moist) %	Color (moist)	<u>x Features</u> % Type¹	Loc ²	Texture	Remarks
0-12 10YR 3/2 100	_			oam	
12-18 <u>10YR4/3 & 10YR3/2</u> 80&20) 10YR 3/6	trace	le	oam	
1011(1/0 0 1011(0)2 0002(10111070				
	_				
	_				_
¹ Type: C=Concentration, D=Depletion,	PM-Poduood Matrix CS	S=Covered or Costs	d Sand Crai	ina 2l contin	on: DI -Doro Lining M-Matrix
Hydric Soil Indicators: (Applicable to			d Sand Grai		on: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol (A1)	☐ Sandy Redox (S			2 cm Mu	•
☐ Histic Epipedon (A2)	☐ Stripped Matrix				rent Material (TF2)
☐ Black Histic (A3)		lineral (F1) (except	MLRA 1)		allow Dark Surface (TF12)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed N	Matrix (F2)		Other (E	xplain in Remarks)
☐ Depleted Below Dark Surface (A11)	-	· ,			
Thick Dark Surface (A12)	Redox Dark Sur				of hydrophytic vegetation and
☐ Sandy Mucky Mineral (S1)☐ Sandy Gleyed Matrix (S4)	☐ Depleted Dark S☐ Redox Depressi	` '			nydrology must be present, sturbed or problematic.
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):	☐ Redox Deplessi	ons (Fo)		uniess u	sturbed of problematic.
Type:					
Depth (inches):				Hydric Soil Pre	esent? Yes 🗌 No 🛛
Remarks:				Tryunc con Tre	Jacin: 163 🗆 140 🖂
Nemarks.					
HYDROLOGY					
Wetland Hydrology Indicators:	donal abanda all Mark and			0	
Primary Indicators (minimum of one requ					ry Indicators (2 or more required)
Surface Water (A1)		ned Leaves (B9) (ex	KCEPT MILKA		
☐ High Water Table (A2) ☐ Saturation (A3)	1. Z. 4 <i>F</i>				r-Stained Leaves (B9) (MLRA 1, 2,
		A, and 4B)		4	A, and 4B)
_	☐ Salt Crust	(B11)		4 / ☐ Drain	A, and 4B) age Patterns (B10)
☐ Water Marks (B1)	☐ Salt Crust (☐ Aquatic Inv	(B11) vertebrates (B13)		4. □ Drain □ Dry-S	A, and 4B) age Patterns (B10) leason Water Table (C2)
☐ Water Marks (B1) ☐ Sediment Deposits (B2)	☐ Salt Crust (☐ Aquatic Inv	(B11) rertebrates (B13) Sulfide Odor (C1)	living Poots	4 / ☐ Drain ☐ Dry-S ☐ Satur	A, and 4B) age Patterns (B10) leason Water Table (C2) ation Visible on Aerial Imagery (C9)
☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3)	☐ Salt Crust ☐ Aquatic Inv ☐ Hydrogen S ☐ Oxidized R	(B11) rertebrates (B13) Sulfide Odor (C1) hizospheres along	•	4.	A, and 4B) age Patterns (B10) season Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2)
☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4)	☐ Salt Crust ☐ Aquatic Inv☐ Hydrogen S☐ Oxidized R☐ Presence o	(B11) rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4	.)	4./	A, and 4B) age Patterns (B10) leason Water Table (C2) lation Visible on Aerial Imagery (C9) loorphic Position (D2) low Aquitard (D3)
 Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) 	☐ Salt Crust ☐ Aquatic Inv☐ Hydrogen S☐ Oxidized R☐ Presence C☐ Recent Iron	(B11) rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4 n Reduction in Tilled	d Soils (C6)	4.7	A, and 4B) age Patterns (B10) leason Water Table (C2) lation Visible on Aerial Imagery (C9) loorphic Position (D2) low Aquitard (D3) Neutral Test (D5)
☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4)	☐ Salt Crust ☐ Aquatic Inv ☐ Hydrogen S☐ Oxidized R☐ Presence G☐ Recent Irol☐ Stunted or	(B11) rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4	d Soils (C6)	4.7	A, and 4B) age Patterns (B10) leason Water Table (C2) lation Visible on Aerial Imagery (C9) loorphic Position (D2) low Aquitard (D3)
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	☐ Salt Crust ☐ Aquatic Inv ☐ Hydrogen S☐ Oxidized R☐ Presence C☐ Recent Iron☐ Stunted or ☐ Other (Exp	rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4 n Reduction in Tilled Stressed Plants (D	d Soils (C6)	4.7	A, and 4B) age Patterns (B10) leason Water Table (C2) ation Visible on Aerial Imagery (C9) horphic Position (D2) low Aquitard (D3) Neutral Test (D5) led Ant Mounds (D6) (LRR A)
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	☐ Salt Crust ☐ Aquatic Inv ☐ Hydrogen S☐ Oxidized R☐ Presence C☐ Recent Iron☐ Stunted or ☐ Other (Exp	rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4 n Reduction in Tilled Stressed Plants (D	d Soils (C6)	4.7	A, and 4B) age Patterns (B10) leason Water Table (C2) ation Visible on Aerial Imagery (C9) horphic Position (D2) low Aquitard (D3) Neutral Test (D5) led Ant Mounds (D6) (LRR A)
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 Sparsely Vegetated Concave Surface	☐ Salt Crust ☐ Aquatic Inv ☐ Hydrogen S☐ Oxidized R☐ Presence C☐ Recent Iron ☐ Stunted or ☐ (B7) ☐ Other (Expect (B8)	rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4 n Reduction in Tilled Stressed Plants (D lain in Remarks)	d Soils (C6)	4.7	A, and 4B) age Patterns (B10) leason Water Table (C2) ation Visible on Aerial Imagery (C9) horphic Position (D2) low Aquitard (D3) Neutral Test (D5) led Ant Mounds (D6) (LRR A)
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 Sparsely Vegetated Concave Surface Field Observations:	☐ Salt Crust ☐ Aquatic Inv ☐ Hydrogen S☐ Oxidized R☐ Presence C☐ Recent Irol☐ Stunted or ☐ Other (Expect (B8)) No ☑ Depth (inchest	rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4 n Reduction in Tilled Stressed Plants (D lain in Remarks)	d Soils (C6)	4.7	A, and 4B) age Patterns (B10) leason Water Table (C2) ation Visible on Aerial Imagery (C9) horphic Position (D2) low Aquitard (D3) Neutral Test (D5) led Ant Mounds (D6) (LRR A)
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 Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes □	Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence c Recent Iron Stunted or (B7) Other (Exp se (B8) No ⊠ Depth (inches	(B11) Pertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4 in Reduction in Tilled Stressed Plants (D lain in Remarks)	d Soils (C6)	4./	A, and 4B) age Patterns (B10) leason Water Table (C2) ation Visible on Aerial Imagery (C9) horphic Position (D2) low Aquitard (D3) Neutral Test (D5) led Ant Mounds (D6) (LRR A)
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 Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes □ Saturation Present? Yes □ (includes capillary fringe)	Salt Crust (rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4 n Reduction in Tilled Stressed Plants (D lain in Remarks)	Wetlar	4./	A, and 4B) age Patterns (B10) beason Water Table (C2) ation Visible on Aerial Imagery (C9) borophic Position (D2) bow Aquitard (D3) Neutral Test (D5) bd Ant Mounds (D6) (LRR A) believe Hummocks (D7)
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 Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes □ Saturation Present? Yes □	Salt Crust (rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4 n Reduction in Tilled Stressed Plants (D lain in Remarks)	Wetlar	4./	A, and 4B) age Patterns (B10) beason Water Table (C2) ation Visible on Aerial Imagery (C9) borophic Position (D2) bow Aquitard (D3) Neutral Test (D5) bd Ant Mounds (D6) (LRR A) believe Hummocks (D7)
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 Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes □ Water Table Present? Yes □ Saturation Present? Yes □ (includes capillary fringe) Describe Recorded Data (stream gauge	Salt Crust of Aquatic Inv. Aquatic Inv. Hydrogen Signs of Crust o	rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4 n Reduction in Tilled Stressed Plants (D lain in Remarks)	Wetlar	4./	A, and 4B) age Patterns (B10) beason Water Table (C2) ation Visible on Aerial Imagery (C9) borophic Position (D2) bow Aquitard (D3) Neutral Test (D5) bd Ant Mounds (D6) (LRR A) believe Hummocks (D7)
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 Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes □ Saturation Present? Yes □ (includes capillary fringe)	Salt Crust of Aquatic Inv. Aquatic Inv. Hydrogen Signs of Crust o	rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4 n Reduction in Tilled Stressed Plants (D lain in Remarks)	Wetlar	4./	A, and 4B) age Patterns (B10) beason Water Table (C2) ation Visible on Aerial Imagery (C9) borophic Position (D2) bow Aquitard (D3) Neutral Test (D5) bd Ant Mounds (D6) (LRR A) believe Hummocks (D7)
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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 Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes □ Water Table Present? Yes □ Saturation Present? Yes □ (includes capillary fringe) Describe Recorded Data (stream gauge	Salt Crust of Aquatic Inv. Aquatic Inv. Hydrogen Signs of Crust o	rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C4 n Reduction in Tilled Stressed Plants (D lain in Remarks)	Wetlar	4./	A, and 4B) age Patterns (B10) beason Water Table (C2) ation Visible on Aerial Imagery (C9) borophic Position (D2) bow Aquitard (D3) Neutral Test (D5) bd Ant Mounds (D6) (LRR A) believe Hummocks (D7)

Project/Site: Cheasty Trail Pilot Project		City/Coun	ty: <u>Seattle, K</u>	(ing	Sampling Date: April 5, 2017	
Applicant/Owner: City of Seattle Parks					State: WA	Sampling Point: W12 DP1
Investigator(s): Claire Hoffman, Michael Musca	ri			Section, To	ownship, Range: <u>SE-16-24</u>	-4
Landform (hillslope, terrace, etc.): at base of slo	ре		Local rel	ief (concave	, convex, none): <u>flat</u>	Slope (%): 0
Subregion (LRR): <u>LRR A</u>						
					=	tion: none
Are climatic / hydrologic conditions on the site t						
Are Vegetation, Soil, or Hydrology	•	•		•	ormal Circumstances" pres	ent? Yes 🕅 No 🗍
Are Vegetation, Soil, or Hydrolog					ed, explain any answers in	
SUMMARY OF FINDINGS – Attach				•		
Hydrophytic Vegetation Present? Yes	⊠ No □		ls t	he Sampled	Area	
	□ No ⊠			hin a Wetlar		o □
	⊠ No □					
Remarks: likely disturbed in the past						
VEGETATION . He a seion ('G' a resure						
VEGETATION – Use scientific name	es of plan					
Tree Stratum (Plot size: 30)		% Cover		nt Indicator ? <u>Status</u>	Dominance Test works Number of Dominant Sp	
1. Populus balsamifera		trace	n	FAC	That Are OBL, FACW, o	
2. Thuja plicata		trace	<u>n</u>	FAC	Total Number of Domina	ant
3. Alnus rubra		5	У	FAC	Species Across All Strat	
4					Percent of Dominant Sp	ecies
Sapling/Shrub Stratum (Plot size: 10)		5	= Total	Cover		r FAC: <u>80</u> (A/B)
1. <u>Spiraea douglasi</u>		50	У	FACW	Prevalence Index work	
2. Rubus spectabilis		10	<u>n</u>	FAC		Multiply by:
3						x 1 =
4					•	x 2 =
5						x 3 =
Herb Stratum (Plot size: 5)		60	= Total	Cover		x 4 = x 5 =
1. Juncus effusus		20	У	FACW		(A) (B)
2. Polystichum munitum					Goldmin Foldio.	(1)
3.Juncus ensifolius		5	У	FACW	Prevalence Index	= B/A = 3.05
4. Ranuanculus repens		trace	<u>n</u>	FAC	Hydrophytic Vegetation	
5. Agrostis sp.		5	<u>n</u>		Rapid Test for Hydro	. ,
6. <u>Taraxacum officinale</u>					☐ Dominance Test is >	
7					☐ Prevalence Index is	
8						tations ¹ (Provide supporting or on a separate sheet)
9					☐ Wetland Non-Vascul	ar Plants ¹
10					☐ Problematic Hydroph	nytic Vegetation¹ (Explain)
11		35				and wetland hydrology must
Woody Vine Stratum (Plot size: <u>5</u>)			iolai		be present, unless distu	bed or problematic.
1. Rubus armeniacus		trace	<u>у</u>	FAC	Hydrophytic	
2					Vegetation	
% Bare Ground in Herb Stratum 30		trace	= Total	Cover	Present? Yes	No □
Remarks: restoration (tree planting) nearby ar	nd part of the	wetland wa	ıs tramnle	d as path do	es right along the edge of t	the wetland.
	,			r 30	J 2.1.3 1.1.2 2 1 3 2 1 1	

Depth	Matrix				ox Featur		_			
(inches)	Color (moist)	%	Colc	or (moist)	%	Type ¹	Loc ²	<u>Textur</u>	<u>e</u> _	<u>Remarks</u>
0-9	2.5Y 2.5/1	<u>95</u>	7.5Y	'R 4/6	5	<u>C</u>		sandy l	oam	
9-16	2.5Y 2.5/1	60	10Y	'R 3/6	40	<u>C</u>	_ M	sandy l	oam_	
			_							
								-		
1Typo: C=C	oncentration D-D	lonlotion	DM-Dad	uood Matrix C			nd Sand C	roino	21.00	ation: DL -Dara Lining M-Matrix
	oncentration, D=D Indicators: (App						ed Sand G			ation: PL=Pore Lining, M=Matrix. rs for Problematic Hydric Soils ³ :
Histosol				Sandy Redox (,				Muck (A10)
	oipedon (A2)			Stripped Matrix					_	Parent Material (TF2)
☐ Black His			□ I	_oamy Mucky	Mineral (F	1) (except	MLRA 1) [] Very	Shallow Dark Surface (TF12)
☐ Hydroge	en Sulfide (A4)		□ I	₋oamy Gleyed	Matrix (F	2)] Othe	r (Explain in Remarks)
	d Below Dark Surfa	ace (A11)	□ I	Depleted Matri	x (F3)					
	ark Surface (A12)			Redox Dark Su	•			3lı		rs of hydrophytic vegetation and
	lucky Mineral (S1)			Depleted Dark	`	,				nd hydrology must be present,
	Gleyed Matrix (S4)			Redox Depres	sions (F8)				unless	s disturbed or problematic.
Type:	Layer (if present)									
, <u> </u>	ches):			_				I localed		December Van M. Na 🗆
Remarks:								Hyar	ic Soii	Present? Yes ⊠ No □
		re:								
Wetland Hy	drology Indicator		uired: ch	eck all that app	olv)				Secon	dary Indicators (2 or more required)
Wetland Hy Primary Indi	drology Indicator		uired; ch			/es (B9) (e	xcept ML	RA		dary Indicators (2 or more required)
Wetland Hy Primary Indio	drology Indicator cators (minimum o Water (A1)		uired; ch	Water-Sta	ained Leav	, , ,	xcept ML	RA		ater-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary Indio ☐ Surface ☑ High Wa	cators (minimum c Water (A1) ater Table (A2)		uired; che		ained Leav	, , ,	xcept ML	.RA	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hy Primary Indio ☐ Surface ☑ High Wa ☑ Saturatio	cators (minimum c Water (A1) hter Table (A2) on (A3)		uired; che	✓ Water-Sta 1, 2, 4 ☐ Salt Crust	ained Leav I A, and 4I I (B11)	3)	xcept ML	RA	□ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 , 4A, and 4B) ainage Patterns (B10)
Wetland Hy Primary India ☐ Surface ☑ High Wa ☑ Saturatio ☐ Water M	cators (minimum o Water (A1) ater Table (A2) on (A3) larks (B1)		uired; cho	Water-Sta 1, 2, 4 ☐ Salt Crusi Aquatic Ir	ained Leav A, and 4 t (B11) nvertebrate	B) es (B13)	xcept ML	.RA	□ Wa	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)
Wetland Hy Primary India □ Surface □ High Wa □ Saturatio □ Water M □ Sedimer	cators (minimum o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)		uired; che	Water-Sta 1, 2, 4 ☐ Salt Crusi Aquatic Ir Hydrogen	ained Leaver A. A. and 48 to (B11) Invertebrate Sulfide C	es (B13)			☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 , 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9
Wetland Hy Primary India □ Surface □ High Wa □ Saturatio □ Water M □ Sedimer □ Drift Dep	cators (minimum o Water (A1) ater Table (A2) on (A3) larks (B1)		uired; ch	Water-Sta 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized	ained Leaver A.	es (B13) dor (C1) eres along	Living Ro		☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)
Wetland Hy Primary Indie Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) on Deposits (B2) cosits (B3)		uired; chi	Water-Sta 1, 2, 4 Salt Crust Aquatic Ir Hydrogen Oxidized Presence	ained Leaver A, and 4I to (B11) invertebrate Sulfide C Rhizosphe of Reduce	es (B13)	Living Ro	ots (C3)	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) oosits (B3) at or Crust (B4)		uired; cho	Water-Sta 1, 2, 4 \[\] Salt Crusi \[\] Aquatic Ir \[\] Hydrogen \[\] Oxidized \[\] Presence \[\] Recent Ira	ained Leaver A.A., and 48 to (B11) invertebrate a Sulfide Control Reduction	es (B13) dor (C1) eres along ed Iron (C4	Living Ro	ots (C3)	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	rdrology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	of one req		Water-Sta 1, 2, 4 \[\] Salt Crusi \[\] Aquatic Ir \[\] Hydrogen \[\] Oxidized \[\] Presence \[\] Recent Ira	ained Leav A, and 4B t (B11) overtebrate Sulfide C Rhizosphe of Reduct on Reduct r Stressed	es (B13) dor (C1) eres along ed Iron (C4 ion in Tilled I Plants (D	Living Ro	ots (C3)	☐ Wa ☐ Dr ☐ Dr ☐ Sa ☐ Ge ☐ Sh ☐ FA	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 eomorphic Position (D2) allow Aquitard (D3) tC-Neutral Test (D5)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundation	cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6)	of one req	· (B7)	Water-Star 1, 2, 4 \[\] Salt Crusi \[\] Aquatic Ir \[\] Hydrogen \[\] Oxidized \[\] Presence \[\] Recent Ira \[\] Stunted o	ained Leav A, and 4B t (B11) overtebrate Sulfide C Rhizosphe of Reduct on Reduct r Stressed	es (B13) dor (C1) eres along ed Iron (C4 ion in Tilled I Plants (D	Living Ro	ots (C3)	☐ Wa ☐ Dr. ☐ Dr. ☐ Sa ☐ Ge ☐ Sh ☐ FA	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 emorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio	cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Conca	of one req	· (B7)	Water-Star 1, 2, 4 \[\] Salt Crusi \[\] Aquatic Ir \[\] Hydrogen \[\] Oxidized \[\] Presence \[\] Recent Ira \[\] Stunted o	ained Leav A, and 4B t (B11) overtebrate Sulfide C Rhizosphe of Reduct on Reduct r Stressed	es (B13) dor (C1) eres along ed Iron (C4 ion in Tilled I Plants (D	Living Ro	ots (C3)	☐ Wa ☐ Dr. ☐ Dr. ☐ Sa ☐ Ge ☐ Sh ☐ FA	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 emorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria v Vegetated Conca	of one req	· (B7)	Water-Star 1, 2, 4 \[\] Salt Crusi \[\] Aquatic Ir \[\] Hydrogen \[\] Oxidized \[\] Presence \[\] Recent Ira \[\] Stunted o	ained Leav IA, and 4II t (B11) overtebrate Sulfide C Rhizosphe of Reduct on Reduct r Stressed plain in Re	es (B13) dor (C1) eres along ed Iron (C4 ion in Tilled I Plants (D	Living Ro	ots (C3)	☐ Wa ☐ Dr. ☐ Dr. ☐ Sa ☐ Ge ☐ Sh ☐ FA	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser	cators (minimum of water (A1) ater Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Conca	of one req	r (B7) ce (B8)	Water-Sta 1, 2, 4 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex	ained Leav IA, and 4B I (B11) nvertebrate I Sulfide O Rhizosphe of Reduct on Reduct r Stressed plain in Re	es (B13) dor (C1) eres along ed Iron (C4 ion in Tilled I Plants (D emarks)	Living Ro	ots (C3)	☐ Wa ☐ Dr. ☐ Dr. ☐ Sa ☐ Ge ☐ Sh ☐ FA	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 emorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio	cators (minimum of Water (A1) Inter Table (A2) Inter Table (A2) Inter Table (A2) Inter Table (B2) Inter Tabl	of one requal Imagery ave Surface Yes □	v (B7) ce (B8) No ⊠	Water-Sta 1, 2, 4 \[\] Salt Crusi \[\] Aquatic Ir \[\] Hydrogen \[\] Oxidized \[\] Presence \[\] Recent Ir \[\] Stunted o \[\] Other (Ex	ained Leaven A, and 4B (B11) invertebrate Sulfide Con Reduction Re	es (B13) dor (C1) eres along ed Iron (C4) ion in Tilled I Plants (Demarks)	Living Ro	ots (C3) 6) A)	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 emorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Water Table Saturation P (includes cal	rdrology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concar covations: ter Present? Present? Present? pillary fringe)	al Imagery ave Surface Yes □ Yes ⊠ Yes ⊠	v (B7) ce (B8) No	Water-Sta 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex	ained Leav A, and 4B (B11) nvertebrate Sulfide C Rhizosphe of Reduct on Reduct or Stressed plain in Re es): 2 inches (s): to surf	es (B13) dor (C1) eres along ed Iron (C4 ion in Tilled I Plants (D emarks)	Living Ro	ots (C3) 6) A) tland Hyd	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Water Table Saturation P (includes cal	cators (minimum of water (A1) ater Table (A2) on (A3) larks (B1) on Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concar of vations: ter Present? Present?	al Imagery ave Surface Yes □ Yes ⊠ Yes ⊠	v (B7) ce (B8) No	Water-Sta 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex	ained Leav A, and 4B (B11) nvertebrate Sulfide C Rhizosphe of Reduct on Reduct or Stressed plain in Re es): 2 inches (s): to surf	es (B13) dor (C1) eres along ed Iron (C4 ion in Tilled I Plants (D emarks)	Living Ro	ots (C3) 6) A) tland Hyd	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (CS comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Water Table Saturation P (includes cal	rdrology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concator ter Present? Present? pillary fringe) ecorded Data (streat	al Imagery ave Surfac Yes ☐ Yes ⊠ Yes ⊠ am gauge	No \(\begin{array}{c} \ (B7) \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Water-Sta 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex	ained Leaver A, and 4R, and and an architecture of Reduction Reductor Stressed plain in Reductor Stressed pl	es (B13) dor (C1) eres along ed Iron (C4 ion in Tiller I Plants (D emarks) es ace	Living Ro	ots (C3) 6) A) tland Hyd	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Water Table Saturation P (includes cal Describe Re	rdrology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) on Visible on Aeria of Vegetated Concator ter Present? Present? pillary fringe) ecorded Data (streat	al Imagery ave Surface Yes Yes Yes Yes Amagery And Amagery	No Solution No No No No No No no nonitor	Water-Sta 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex	ained Leaver A, and 4R, and and an architecture of Reduction Reductor Stressed plain in Reductor Stressed pl	es (B13) dor (C1) eres along ed Iron (C4 ion in Tiller I Plants (D emarks) es ace	Living Ro	ots (C3) 6) A) tland Hyd	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ast-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P (includes cal Describe Re	cators (minimum of cators (minimum of cators (minimum of water (A1)) ater Table (A2) on (A3) ater Table (A2) on (A3) ater Table (B2) on (B3) at or Crust (B4) on Visible on Aeria of Vegetated Concators ater Present? ater Present? bresent? pillary fringe) ecorded Data (streat	al Imagery ave Surface Yes Yes Yes Yes Amagery And Amagery	No Solution No No No No No No no nonitor	Water-Sta 1, 2, 4 Salt Crusi Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex	ained Leaver A, and 4R, and and an architecture of Reduction Reductor Stressed plain in Reductor Stressed pl	es (B13) dor (C1) eres along ed Iron (C4 ion in Tiller I Plants (D emarks) es ace	Living Ro	ots (C3) 6) A) tland Hyd	☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 comorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ast-Heave Hummocks (D7)

Project/Site: Cheasty Trail Pilot Project		City/Coun	nty: <u>Seattle, K</u>	ing	Sampling Date: April 5, 2017
Applicant/Owner: City of Seattle Parks				State: WA	Sampling Point: W12 DP2
Investigator(s): Claire Hoffman, Michael Muscari					
Landform (hillslope, terrace, etc.): at base of slope					
Subregion (LRR): LRR A					
Soil Map Unit Name: na				=	
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	•		`	ormal Circumstances" pres	ent? Yes⊠ No□
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in	- -
SUMMARY OF FINDINGS – Attach site map			•		·
Hydrophytic Vegetation Present? Yes ☐ No ☐					
Hydric Soil Present? Yes ☐ No ☒			the Sampled		- 57
Wetland Hydrology Present? Yes ☐ No ☐		Wit	thin a Wetlan	nd? Yes ☐ No) <u> </u>
Remarks: likely disturbed in the past		L			-
VEGETATION – Use scientific names of plant	ts.				
		Dominar	nt Indicator	Dominance Test works	heet:
Tree Stratum (Plot size: <u>30</u>)	% Cover			Number of Dominant Sp	
1. Populus balsamifera		-	FAC FAC	That Are OBL, FACW, o	r FAC: <u>2</u> (A)
2. Thuja plicata (Planted)				Total Number of Domina	
Alnus rubra 4. Tsuga heterophylla (planted)			FAC	Species Across All Strate	a: <u>6</u> (B)
4. Isuga neteropriyila (planteu)	55			Percent of Dominant Spe	
Sapling/Shrub Stratum (Plot size: 10)	55	- Total	Cover	That Are OBL, FACW, o	r FAC: 33% (A/B)
1.Ribes sanguineum	15	У	FACU	Prevalence Index work	sheet:
Oemleria cerasiformis	5	У	FACU	Total % Cover of:	Multiply by:
3. Ribes lacustre (planted)	trace			OBL species	x 1 =
4. Mahonia nervosa	5	У	FACU	· ·	x 2 =
5					x 3 =
Herb Stratum (Plot size: 5)	<u>25</u>	= Total	Cover		x 4 =
1. Polystichum munitum	5	V	FACU		x 5 =
2				Column Totals:	(A) (B)
3				Prevalence Index	= B/A = 3.05
4				Hydrophytic Vegetation	n Indicators:
5				☐ Rapid Test for Hydro	phytic Vegetation
6				☐ Dominance Test is >	50%
7				☐ Prevalence Index is:	≤3.0 ¹
8					tations ¹ (Provide supporting or on a separate sheet)
9				☐ Wetland Non-Vascul	ar Plants ¹
10				☐ Problematic Hydroph	nytic Vegetation¹ (Explain)
11	5				and wetland hydrology must
Woody Vine Stratum (Plot size: <u>5</u>)	<u>J</u>	- Total	Cover	be present, unless distur	bed or problematic.
1. Rubus armeniacus	trace	У	FAC	Undrambutia	
2				Hydrophytic Vegetation	
0/ Para Craund in Harb Stratium 20	trace	= Total	Cover		□ No ⊠
% Bare Ground in Herb Stratum 20 Remarks: restoration (tree planting) nearby and part of the	wetland wa	ıs tramnle	ed as path go	es right along the edge of t	the wetland
The state of the s			paar go	g a.o.i.g allo oago of t	

				D . E .			
Depth (inches)	Matrix Color (moist)	%	Colc	Redox Features or (moist) % Type ¹	Loc ²	Texture	Remarks
0-12	10YR 2/2	100		<u> </u>		sandy loar	<u> </u>
12-18	10YR 3/2	50	1000	R 4/6 &10YR 5/4 50	M	sandy loar	
12-10	101K 3/2	50	1011	<u> </u>	IVI	Salluy loai	"_
				<u> </u>			_
				,			
		_					
1 0 0						. 2	
, , , , , , , , , , , , , , , , , , ,	·			uced Matrix, CS=Covered or Coat s, unless otherwise noted.)	ed Sand Gr		Location: PL=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
☐ Histosol		icable ic					cm Muck (A10)
	pipedon (A2)			Sandy Redox (S5) Stripped Matrix (S6)		· 	ed Parent Material (TF2)
	istic (A3)			Loamy Mucky Mineral (F1) (excep	f MI RA 1)		ery Shallow Dark Surface (TF12)
	en Sulfide (A4)			Loamy Gleyed Matrix (F2)	·		ory challes Earl Carlage (11 12)
_ , ,	d Below Dark Surfa	ce (A11)		Depleted Matrix (F3)			(
•	ark Surface (A12)	,		Redox Dark Surface (F6)		³ Indic	ators of hydrophytic vegetation and
☐ Sandy N	Mucky Mineral (S1)			Depleted Dark Surface (F7)		We	etland hydrology must be present,
	Gleyed Matrix (S4)			Redox Depressions (F8)		un	less disturbed or problematic.
	Layer (if present):	:					
Type:							
Depth (in	nches):			-		Hydric S	oil Present? Yes 🗌 No 🛛
Remarks:						•	
HYDROLC	JGT						
wetiand Hy							
Drimon, Indi	drology Indicator		uirod: ob	ook all that apply)		So	condens Indicators (2 or more required)
-	icators (minimum of		uired; che		MI D		condary Indicators (2 or more required)
Surface	icators (minimum of Water (A1)		uired; che		except MLR		Water-Stained Leaves (B9) (MLRA 1, 2,
Surface High Wa	icators (minimum of Water (A1) ater Table (A2)		uired; cho	☑ Water-Stained Leaves (B9) (€ 1, 2, 4A, and 4B)	except MLR	RA 🗆	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Surface High Wa	icators (minimum of Water (A1) ater Table (A2) on (A3)		uired; ch	✓ Water-Stained Leaves (B9) (€1, 2, 4A, and 4B)☐ Salt Crust (B11)	except MLR	RA 🗆	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Surface High Wa Saturatio	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1)		uired; cho	 Water-Stained Leaves (B9) (€ 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) 	except MLR	Α	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Surface High Wa Saturatio Water M	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)		uired; cho	Water-Stained Leaves (B9) (c 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)		RA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Surface High Wa Saturatio Water M Sedimer Drift Dep	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		uired; che	Water-Stained Leaves (B9) (c 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along	Living Root	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Surface High Wa Saturatio Water M Sedimet Drift Dep Algal Ma	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		uired; che	Water-Stained Leaves (B9) (e 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C	Living Root 4)	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		uired; ch	Water-Stained Leaves (B9) (e 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille	Living Root 4) d Soils (C6)	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	f one req		Water-Stained Leaves (B9) (6 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille Stunted or Stressed Plants (D	Living Root 4) d Soils (C6)	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria	f one req	v (B7)	Water-Stained Leaves (B9) (e 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille	Living Root 4) d Soils (C6)	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Surface High Wa Saturatio Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati Sparsely	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concar	f one req	v (B7)	Water-Stained Leaves (B9) (6 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille Stunted or Stressed Plants (D	Living Root 4) d Soils (C6)	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Surface High Wa Saturatio Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati Sparsely	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Concar rvations:	f one req	/ (B7) ce (B8)	Water-Stained Leaves (B9) (6 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille Stunted or Stressed Plants (C	Living Root 4) d Soils (C6)	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wa	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerially Vegetated Concarvations:	I Imagery ve Surfac	v (B7) ce (B8) No ⊠	Water-Stained Leaves (B9) (e 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille Stunted or Stressed Plants (D Other (Explain in Remarks)	Living Root 4) d Soils (C6)	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Surface High Wa Saturatio Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati Sparsely Field Obser Surface Wa Water Table	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concarrvations: ater Present?	I Imagery ve Surface Yes ☐ Yes ☐	v (B7) ce (B8) No ⊠ No □	Water-Stained Leaves (B9) (6 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille Stunted or Stressed Plants (C Other (Explain in Remarks) Depth (inches): Depth (inches): 15 inches	Living Roof 4) d Soils (C6) 11) (LRR A)	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obsel Surface Wa Water Table Saturation F	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerially Vegetated Concarvations: ater Present? Present?	I Imagery ve Surfac	v (B7) ce (B8) No ⊠	Water-Stained Leaves (B9) (e 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille Stunted or Stressed Plants (D Other (Explain in Remarks)	Living Roof 4) d Soils (C6) 11) (LRR A)	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wa Water Table Saturation F (includes ca	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Concar rvations: ater Present? Present? apillary fringe)	I Imagery ve Surfac Yes Yes Yes Yes Yes Yes	v (B7) ce (B8) No ⊠ No □ No □	Water-Stained Leaves (B9) (6 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille Stunted or Stressed Plants (C Other (Explain in Remarks) Depth (inches): Depth (inches): 15 inches	Living Roof 4) d Soils (C6) 1) (LRR A)	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wa Water Table Saturation F (includes ca	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Concar rvations: ater Present? Present? apillary fringe)	I Imagery ve Surfac Yes Yes Yes Yes Yes Yes	v (B7) ce (B8) No ⊠ No □ No □	Water-Stained Leaves (B9) (e 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille Stunted or Stressed Plants (C Other (Explain in Remarks) Depth (inches): Depth (inches): 15 inches Depth (inches): 12 inches	Living Roof 4) d Soils (C6) 1) (LRR A)	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface High Wa Saturatio Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati Sparsely Field Obser Surface Water Table Saturation F (includes can Describe Re	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Concar rvations: ater Present? be Present? Present? apillary fringe) ecorded Data (streat	I Imagery ve Surfac Yes Yes Yes Myes M	v (B7) ce (B8) No No No No No No a, monitor	Water-Stained Leaves (B9) (e 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille Stunted or Stressed Plants (C Other (Explain in Remarks) Depth (inches): Depth (inches): 15 inches Depth (inches): 12 inches	Living Roof 4) d Soils (C6) 1) (LRR A) Wetla spections),	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wa Water Table Saturation F (includes ca Describe Re	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concar rvations: ater Present? Present? politically fringe) ecorded Data (streat	I Imagery ve Surface Yes Yes Yes Yes m gauge	v (B7) ce (B8) No No No No o, monitor	Water-Stained Leaves (B9) (e 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille Stunted or Stressed Plants (C Other (Explain in Remarks) Depth (inches): Depth (inches): 15 inches Depth (inches): 12 inches	Living Roof 4) d Soils (C6) 1) (LRR A) Wetla spections),	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wa Water Table Saturation F (includes ca Describe Re	icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Concar rvations: ater Present? be Present? Present? apillary fringe) ecorded Data (streat	I Imagery ve Surface Yes Yes Yes Yes m gauge	v (B7) ce (B8) No No No No o, monitor	Water-Stained Leaves (B9) (e 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille Stunted or Stressed Plants (C Other (Explain in Remarks) Depth (inches): Depth (inches): 15 inches Depth (inches): 12 inches	Living Roof 4) d Soils (C6) 1) (LRR A) Wetla spections),	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: Cheasty Trail Pilot Project		City/Count	y: <u>Seattle, K</u>	ling	Sampling Date: Oct 31, 2016	6
Applicant/Owner: City of Seattle Parks	State: <u>WA</u> Sampling Point: <u>t</u>					
Investigator(s): Claire Hoffman, Jessica Redman			Section, To	ownship, Range: <u>SE-16-24</u>	-4	
Landform (hillslope, terrace, etc.): <u>flat</u>		Local reli	ef (concave,	convex, none): flat	Slope (%): <u>0</u>	
Subregion (LRR): <u>LRR A</u>	Lat: 47.75	525		Long: -122.3002	Datum: NAD1983	3
Soil Map Unit Name: na						
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrology sign	-		-	ormal Circumstances" pres	ent? Yes⊠ No□	
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in		
SUMMARY OF FINDINGS – Attach site map			`	, ,	,	tc.
Hydrophytic Vegetation Present? Yes ⊠ No □						
Hydric Soil Present? Yes ☐ No ☒			ne Sampled nin a Wetlar		- M	
Wetland Hydrology Present? Yes ☐ No ☒		with	iin a wetiar	nd? Yes □ No	2 🕅	
Remarks: restoration on north side of Spirea patch, blackb	erries cleare	ed and rep	lanting has	occurred, large patch of Sp	oiraea.	
VEGETATION – Use scientific names of plan	ts.					
	Absolute			Dominance Test works	heet:	
Tree Stratum (Plot size: <u>30</u>)	% Cover			Number of Dominant Sp		
1. Populus balsamifera				That Are OBL, FACW, o	r FAC: <u>3</u> (A)	
2				Total Number of Domina		
3				Species Across All Strat	a: <u>4</u> (B)	
4	25			Percent of Dominant Sp		
Sapling/Shrub Stratum (Plot size: 10)	<u>23</u>	- Total C	over	That Are OBL, FACW, o	r FAC: <u>75</u> (A/B))
1. Spiraea douglasii	90	у	FACW	Prevalence Index work	sheet:	
2. Ilex aquifolium	trace			Total % Cover of:	Multiply by:	
3				OBL species	x 1 =	
4				FACW species	x 2 =	
5				FAC species	x 3 =	
	90	= Total C	Cover		x 4 =	
Herb Stratum (Plot size: 5)	F		FAOU		x 5 =	
1. Polystichum munitum	5			Column Totals:	(A) (B)	3)
2				Prevalence Index	= B/A =	
3				Hydrophytic Vegetation		
4. 5.				☐ Rapid Test for Hydro		
6.				☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐		
7				☐ Prevalence Index is	≤3.0¹	
8.					tations ¹ (Provide supporting or on a separate sheet)	
9				□ Wetland Non-Vascul	' '	
10				<u> </u>	nytic Vegetation¹ (Explain)	
11					and wetland hydrology must	
Woody Vine Stratum (Plot size: 5)	5	= Total C	Cover	be present, unless distu		
1. Rubus armeniacus	10	у	FAC	Lludron butto		
2. Hedera helix	trace		FACU_	Hydrophytic Vegetation		
0/ Para Craund in Harb Stratum 10	10	= Total C	Cover	Present? Yes	No □	
% Bare Ground in Herb Stratum 10 Remarks:						

Depth	Matrix				ox Feature		12	T			D	
(inches)	Color (moist)	<u>%</u>	Color	(moist)	%	Type'	Loc ²	<u>Texture</u>			Remarks	
<u>0-11</u>	10YR 2/2	100			_			sandy loa	<u> </u>			
<u>11-16</u>	10YR 2/2	<u>85</u>	<u>10YR</u>	3/6	<u> 15</u>			<u>loamy sa</u>	nd			
16-19	10YR 4/4	100						sand				
	-		_									
·												
	oncentration, D=D						ed Sand G					g, M=Matrix.
_	Indicators: (App	licable to a				ted.)						ydric Soils³:
Histosol (. ,			andy Redox (2 cm Mu			
	ipedon (A2)			tripped Matrix pamy Mucky I		1) (avaant	MI DA 1\				rial (TF2) k Surface	(TE12)
	n Sulfide (A4)			parny Mucky i pamy Gleyed			WILKA I)		-		Remarks	, ,
	Below Dark Surfa	ace (A11)		epleted Matrix		-)			Other (E	(pidiii iii	rtomanto	,
	rk Surface (A12)	,		edox Dark Su	` '			³ Ind	icators of	hydropl	nytic vege	tation and
	ucky Mineral (S1)		_	epleted Dark	,	7)					must be	
•	leyed Matrix (S4)		☐ R	edox Depress	sions (F8)			ι	ınless dis	turbed o	r problem	natic.
_	_ayer (if present)											
	-1											_
Depth (inc	ches):							Hydric	Soil Pre	sent?	Yes 🗌	No ⊠
Remarks:												
HYDROLO	GY											
	GY drology Indicator	rs:										
Wetland Hyd			ired; chec	ck all that app	oly)				econdary	/ Indicat	ors (2 or r	more required)
Wetland Hyd	drology Indicator					es (B9) (e	xcept MLF					more required) B9) (MLRA 1, 2,
Wetland Hyd Primary Indic ☐ Surface \	drology Indicator			☐ Water-Sta			xcept MLF] Water		Leaves (I	_
Wetland Hyd Primary Indic ☐ Surface \	drology Indicator eators (minimum o Water (A1) ter Table (A2)		[☐ Water-Sta	ined Leav A, and 4B		xcept MLF	RA [Water-	Stained , and 4	Leaves (I	B9) (MLRA 1, 2,
Wetland Hyd Primary Indic Surface \ High Wat	drology Indicator eators (minimum o Water (A1) ter Table (A2) n (A3)]	☐ Water-Sta	ined Leav A, and 4B (B11)	3)	xcept MLF	RA [Water- 4A Draina	Stained , and 4E ge Patte	Leaves (I	B9) (MLRA 1, 2,
Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma	drology Indicator eators (minimum o Water (A1) ter Table (A2) n (A3)]]]	☐ Water-Sta 1, 2, 4 ☐ Salt Crust	ined Leav A, and 4B (B11) vertebrate	s (B13)	xcept MLF	RA [Water. 4A Draina Dry-Se	Stained, and 4E ge Patte eason W	Leaves (I B) erns (B10) ater Table	B9) (MLRA 1, 2,
Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma	drology Indicator eators (minimum o Water (A1) ter Table (A2) in (A3) arks (B1)]]]	Water-Sta 1, 2, 4 Salt Crust Aquatic In	ined Leav A, and 4B (B11) vertebrate Sulfide O	es (B13) dor (C1)		RA [Water. 4A Draina Dry-Se Satura	Stained , and 4E ge Patte eason W tion Visi	Leaves (I B) erns (B10) ater Table	B9) (MLRA 1, 2, e (C2) rial Imagery (C9)
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep	drology Indicator cators (minimum o Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2)]]]	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen	A, and 4B (B11) vertebrate Sulfide Od Rhizosphe	es (B13) dor (C1) eres along	Living Roo	RA C	Water. 4A Draina Dry-Se Satura	Stained, and 4E ge Patte eason Wition Vision P	Leaves (IB) erns (B10) ater Table ble on Ae osition (D	B9) (MLRA 1, 2, e (C2) rial Imagery (C9)
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat	drology Indicator eators (minimum o Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3)]]]	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	A, and 4B (B11) vertebrate Sulfide Oo Rhizosphe of Reduce	es (B13) dor (C1) res along ed Iron (C4 on in Tille	Living Roo I) d Soils (C6	RA C	Water 4A Draina Dry-Se Satura	Stained, and 4E ge Patte eason W tion Visiorphic P w Aquita	Leaves (IB) erns (B10) eater Table ble on Ae osition (D ard (D3)	B9) (MLRA 1, 2, e (C2) rial Imagery (C9)
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo	drology Indicator cators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	f one requi]]]]]]	Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence	A, and 4B (B11) vertebrate Sulfide Oo Rhizosphe of Reduce	es (B13) dor (C1) res along ed Iron (C4 on in Tille	Living Roo I) d Soils (C6	RA C	Water- 4A Draina Dry-Se Satura Geome Shallo FAC-N Raisee	Stained , and 4E ge Patte eason W tion Visi orphic P w Aquita leutral T d Ant Mo	Leaves (IB) erns (B10) ater Table ble on Ae osition (D ard (D3) est (D5) unds (D6	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2)
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio	drology Indicator cators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria	f one requi	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed	es (B13) dor (C1) res along ed Iron (C4 on in Tiller Plants (D	Living Roo I) d Soils (C6	RA C	Water- 4A Draina Dry-Se Satura Geome Shallo FAC-N Raisee	Stained , and 4E ge Patte eason W tion Visi orphic P w Aquita leutral T d Ant Mo	Leaves (I B) erns (B10) ater Table ble on Ae osition (D ard (D3) est (D5)	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2)
Wetland Hyd Primary India Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depa Surface S Inundatio Sparsely	drology Indicator cators (minimum o Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca	f one requi	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed	es (B13) dor (C1) res along ed Iron (C4 on in Tiller Plants (D	Living Roo I) d Soils (C6	RA C	Water- 4A Draina Dry-Se Satura Geome Shallo FAC-N Raisee	Stained , and 4E ge Patte eason W tion Visi orphic P w Aquita leutral T d Ant Mo	Leaves (IB) erns (B10) ater Table ble on Ae osition (D ard (D3) est (D5) unds (D6	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2)
Wetland Hyderimary Indice Surface Name High Water Mater	drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca	f one requi	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed plain in Re	es (B13) dor (C1) ares along ed Iron (C2 on in Tiller Plants (D emarks)	Living Roo I) d Soils (C6	RA C	Water- 4A Draina Dry-Se Satura Geome Shallo FAC-N Raisee	Stained , and 4E ge Patte eason W tion Visi orphic P w Aquita leutral T d Ant Mo	Leaves (IB) erns (B10) ater Table ble on Ae osition (D ard (D3) est (D5) unds (D6	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2)
Wetland Hyderimary Indice Surface Naturatio Water Mater	drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca	f one requi	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed plain in Re	es (B13) dor (C1) ares along ed Iron (C4 on in Tilled Plants (D emarks)	Living Roo I) d Soils (C6	RA C	Water- 4A Draina Dry-Se Satura Geome Shallo FAC-N Raisee	Stained , and 4E ge Patte eason W tion Visi orphic P w Aquita leutral T d Ant Mo	Leaves (IB) erns (B10) ater Table ble on Ae osition (D ard (D3) est (D5) unds (D6	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2)
Wetland Hyd Primary Indice Surface N High Wat Saturatio Water Ma Sediment Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Table	drology Indicator cators (minimum o Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca vations: er Present? Present?	I Imagery (ve Surface Yes Yes Yes	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed plain in Re ss):	es (B13) dor (C1) ares along ed Iron (C4 on in Tille Plants (D emarks)	Living Roo I) d Soils (C6	RA C	Water- 4A Draina Dry-Se Satura Geome Shallo FAC-N Raisee	Stained , and 4E ge Patte eason W tion Visi orphic P w Aquita leutral T d Ant Mo	Leaves (IB) erns (B10) ater Table ble on Ae osition (D ard (D3) est (D5) unds (D6	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2)
Wetland Hyderimary Indice Primary Indice Surface Note High Water Mater M	drology Indicator eators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca vations: er Present? Present?	I Imagery (ve Surface Yes Yes Yes	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed plain in Re ss):	es (B13) dor (C1) ares along ed Iron (C4 on in Tille Plants (D emarks)	Living Roo l) d Soils (C6 1) (LRR A)	RA C	Water- 4A Draina Dry-Se Satura Geom Shallo FAC-N Raisec Frost-I	Stained , and 4E ge Patte eason W tion Visi orphic P w Aquita leutral T d Ant Mo Heave H	Leaves (I B) erns (B10) ater Table ble on Ae osition (D ard (D3) est (D5) aunds (D6 ummocks	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2)
Wetland Hyderimary Indice Primary Indice Surface Note High Water Mater M	drology Indicator eators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca vations: er Present? Present?	I Imagery (ve Surface Yes Yes Yes Yes Yes Yes Yes	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed plain in Re s):	es (B13) dor (C1) eres along ed Iron (C4 on in Tillee Plants (D emarks)	Living Roo I) d Soils (C6 1) (LRR A)	RA C	Water- 4A Draina Dry-Se Satura Geom Shallo FAC-N Raised Frost-I	Stained , and 4E ge Patte eason W tion Visi orphic P w Aquita leutral T d Ant Mo Heave H	Leaves (I B) erns (B10) ater Table ble on Ae osition (D ard (D3) est (D5) aunds (D6 ummocks	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2) (LRR A) 6 (D7)
Wetland Hyderimary Indice Primary Indice Surface Note High Water Mater M	drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca vations: er Present? Present? resent?	I Imagery (ve Surface Yes Yes Yes Yes Yes Yes Yes	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	A, and 4B (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed plain in Re s):	es (B13) dor (C1) eres along ed Iron (C4 on in Tillee Plants (D emarks)	Living Roo I) d Soils (C6 1) (LRR A)	RA C	Water- 4A Draina Dry-Se Satura Geom Shallo FAC-N Raised Frost-I	Stained , and 4E ge Patte eason W tion Visi orphic P w Aquita leutral T d Ant Mo Heave H	Leaves (I B) erns (B10) ater Table ble on Ae osition (D ard (D3) est (D5) aunds (D6 ummocks	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2) (LRR A) 6 (D7)
Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Table Saturation Pr (includes cap Describe Rec	drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Conca vations: er Present? Present? resent?	I Imagery (ve Surface Yes Yes Yes Yes am gauge,	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp Depth (inche Depth (inche Depth (inche	A, and 4B (B11) vertebrate Sulfide Or Rhizosphe of Reduce on Reducti r Stressed plain in Re s): s):	es (B13) dor (C1) res along ed Iron (C2 on in Tille Plants (D emarks)	Living Roo I) d Soils (C6 1) (LRR A) Wetl	ots (C3) [Water- 4A Draina Dry-Se Satura Geom Shallo FAC-N Raised Frost-I	Stained , and 4E ge Patte eason W tion Visi orphic P w Aquita leutral T d Ant Mo Heave H	Leaves (I B) erns (B10) ater Table ble on Ae osition (D ard (D3) est (D5) aunds (D6 ummocks	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2) (LRR A) 6 (D7)
Wetland Hyderimary Indice North Mater Mate	drology Indicator cators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Concal vations: er Present? Present? present? corded Data (streat	I Imagery (ve Surface Yes Yes Yes Yes am gauge,	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp Depth (inche Depth (inche Depth (inche	A, and 4B (B11) vertebrate Sulfide Or Rhizosphe of Reduce on Reducti r Stressed plain in Re s): s):	es (B13) dor (C1) res along ed Iron (C2 on in Tille Plants (D emarks)	Living Roo I) d Soils (C6 1) (LRR A) Wetl	ots (C3) [Water- 4A Draina Dry-Se Satura Geom Shallo FAC-N Raised Frost-I	Stained , and 4E ge Patte eason W tion Visi orphic P w Aquita leutral T d Ant Mo Heave H	Leaves (I B) erns (B10) ater Table ble on Ae osition (D ard (D3) est (D5) aunds (D6 ummocks	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2) (LRR A) 6 (D7)
Wetland Hyderimary Indice North Mater Mate	drology Indicator cators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aeria Vegetated Concal vations: er Present? Present? present? corded Data (streat	I Imagery (ve Surface Yes Yes Yes Yes am gauge,	[Water-Sta 1, 2, 4 Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp Depth (inche Depth (inche Depth (inche	A, and 4B (B11) vertebrate Sulfide Or Rhizosphe of Reduce on Reducti r Stressed plain in Re s): s):	es (B13) dor (C1) res along ed Iron (C2 on in Tille Plants (D emarks)	Living Roo I) d Soils (C6 1) (LRR A) Wetl	ots (C3) [Water- 4A Draina Dry-Se Satura Geom Shallo FAC-N Raised Frost-I	Stained , and 4E ge Patte eason W tion Visi orphic P w Aquita leutral T d Ant Mo Heave H	Leaves (I B) erns (B10) ater Table ble on Ae osition (D ard (D3) est (D5) aunds (D6 ummocks	B9) (MLRA 1, 2, e (C2) rial Imagery (C9) 2) (LRR A) 6 (D7)

		Oity/ Oou	inty. Ocatile, i	ung	Sampling Date: Oct 20, 2016
Applicant/Owner: City of Seattle Parks				_ Sampling Point: test plot B	
Investigator(s): Claire Hoffman, Jessica Redman			_ Section, To	ownship, Range: <u>SE-16-2</u>	4-4
Landform (hillslope, terrace, etc.):flat		_Local re	elief (concave	, convex, none): <u>flat</u>	Slope (%): 0
Subregion (LRR): <u>LRR A</u>	Lat: 47.7	'548		_ Long:122.2997	Datum: NAD1983
Soil Map Unit Name: <u>na</u>				NWI classific	ation: none
Are climatic / hydrologic conditions on the site typical for	r this time of yea	ar? Yes [⊠ No	f no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly dis	turbed?	Are "No	ormal Circumstances" pre	esent? Yes 🗌 No 🛛
Are Vegetation, Soil, or Hydrology			(If need	ed, explain any answers	in Remarks.)
SUMMARY OF FINDINGS – Attach site ma			`		,
Hydrophytic Vegetation Present? Yes ⊠ No					
Hydric Soil Present? Yes ☐ No			the Sampled		. =
Wetland Hydrology Present? Yes ⊠ No		Wi	ithin a Wetlai	nd? Yes ☐ I	No 🗵
Remarks: Test plot B is just east of the eastern/lower of previously extended to the east. To the east and south plants, has occurred.	n east of the deli	that had ineated p	been excava ortion of Wetl	ted/disturbed and restore and 11 restoration and re	d. Wetland 11 may have planting, primarily with upland
VEGETATION – Use scientific names of p		Domino	nt Indicator	Dominance Test work	rehoot:
<u>Tree Stratum</u> (Plot size: <u>30</u>)			s? Status	Number of Dominant S	pecies
1				That Are OBL, FACW,	or FAC: <u>2</u> (A)
2				Total Number of Domir	nant
3				Species Across All Stra	ata: <u>3</u> (B)
4				Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: 10)		rotar	COVCI	That Are OBL, FACW,	or FAC: <u>67</u> (A/B)
1. Hedera helix	10	У	FACU	Prevalence Index wor	
2				Total % Cover of:	
3					x 1 =
4	<u> </u>				x 2 =
5					x 3 =
Herb Stratum (Plot size: 5)	10	_ = Total	Cover	·	x 4 =
1. Ranucus repens	40	٧	FAC	UPL species	X 5 = (A) (B)
2				Column Totals.	(A) (D)
3				Prevalence Index	c = B/A =
4				Hydrophytic Vegetati	
5				☐ Rapid Test for Hyd	. , .
6				□ Dominance Test is □	
7				☐ Prevalence Index is	
8					ptations¹ (Provide supporting s or on a separate sheet)
9				☐ Wetland Non-Vasc	
10					ohytic Vegetation¹ (Explain)
11	40				il and wetland hydrology must
Woody Vine Stratum (Plot size: 5)				- Freezen, amoos diot	p or or or or
Rubus armeniacus		У	<u>FAC</u>	Hydrophytic Vegetation	
	60	= Total	Cover		es 🛛 No 🗌
% Bare Ground in Herb Stratum 0					

Depth	Matrix				ox Features	J. JJ		osence of indicators.)
(inches)	Color (moist)	%	Cold	or (moist)		Loc ²	Textu	re Remarks
0-12	10YR 2/2	100					gravel	ly <u>loamy sand</u>
12-18	2.5Y 4/3 & 10YR 2/2	80&20	<u>10Y</u>	′R 3/6	trace		gravell	y <u>loamy sand, some cobbles</u>
		•			S=Covered or Coate	ed Sand G		² Location: PL=Pore Lining, M=Matrix.
-	Indicators: (Appli	cable to						ndicators for Problematic Hydric Soils ³ :
☐ Histosol	(A1) pipedon (A2)			Sandy Redox (S Stripped Matrix	·		L] 2 cm Muck (A10)] Red Parent Material (TF2)
☐ Black Hi					մineral (F1) (except	MI DA 1)		☐ Very Shallow Dark Surface (TF12)
	n Sulfide (A4)			Loamy Gleyed I		WILKA I)		☐ Other (Explain in Remarks)
☐ Depleted	d Below Dark Surfac	ce (A11)		Depleted Matrix				,
☐ Thick Da	ark Surface (A12)			Redox Dark Su	rface (F6)		3	Indicators of hydrophytic vegetation and
	lucky Mineral (S1)			Depleted Dark S	, ,			wetland hydrology must be present,
	Gleyed Matrix (S4)			Redox Depress	ions (F8)		1	unless disturbed or problematic.
Type:	Layer (if present):							
· · ·	ches):						Listali	via Sail Brasant? Vac 🗆 Na M
Remarks:	01100)			=			нуа	ric Soil Present? Yes 🗌 No 🛛
HYDROLO	GY							
•	drology Indicators							
	cators (minimum of	one requ	iired; ch		**			Secondary Indicators (2 or more required)
	Water (A1)				ined Leaves (B9) (e A, and 4B)	xcept ML	₹ A	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
•	iter Table (A2)				,			•
☐ Saturation	arks (B1)			☐ Salt Crust	` '			☐ Drainage Patterns (B10)
_	nt Deposits (B2)				vertebrates (B13) Sulfide Odor (C1)			☐ Dry-Season Water Table (C2)☐ Saturation Visible on Aerial Imagery (C9)
	posits (B3)				Rhizospheres along	Living Poo	tc (C3)	Geomorphic Position (D2)
	at or Crust (B4)				of Reduced Iron (C4	_	is (C3)	Shallow Aguitard (D3)
_	oosits (B5)				n Reduction in Tille	•	:\	FAC-Neutral Test (D5)
	Soil Cracks (B6)				Stressed Plants (D	`	,	Raised Ant Mounds (D6) (LRR A)
	on Visible on Aerial	Imagery	(B7)		olain in Remarks)	1) (L IXIX A)	Frost-Heave Hummocks (D7)
	Vegetated Concav		-	□ Other (EXP	nam m rtomanto)			Trest rieuve riuminosio (57)
Field Obser								
Surface Wat	ter Present?	Yes 🛛	No 🗌	Depth (inches	s): <1 inch			
Water Table	Present?	Yes 🗌	No 🛛	Depth (inches	s):			
Saturation F		Yes ⊠	No 🗌	Depth (inches	s): <u>2</u>	Wetl	and Hy	drology Present? Yes ⊠ No □
	pillary fringe) corded Data (strear	n gauge	monito	ring well, aerial	photos, previous ins	spections),	if availa	able:
Remarks: \M	ater flowing on surf	ace see	nina a fa	w inches helow	/ surface but no wat	er tahle pr	esent F	excessively raining night before and morning of
	neet flow on surface					or table ble	oociil. E	Acceptively raining highl before and monthly of
This is just s	outh-east of the are	a disturb	ed and	restored, and ju	ıst south-east of the	area that i	may pot	entially form into wetland 11.

Project/Site: Cheasty Trail Pilot Project		City/Cou	nty: <u>Seattle, K</u>	(ing	Sampling Date: Oct 31, 2016
Applicant/Owner: City of Seattle Parks				Sampling Point: PW7 DP1	
Investigator(s): Claire Hoffman, Jessica Redman			_ Section, To	ownship, Range: <u>SE-16-24</u>	-4
Landform (hillslope, terrace, etc.): slope		Local re	elief (concave,	, convex, none): concave	Slope (%): <u>10</u>
Subregion (LRR): <u>LRR A</u>	Lat: <u>47.5</u> 6	66058		Long: -122.298413	Datum: NAD1983
Soil Map Unit Name: na				=	
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sign	•		•	ormal Circumstances" pres	ent? Yes⊠ No □
Are Vegetation, Soil, or Hydrology natu				ed, explain any answers in	
SUMMARY OF FINDINGS – Attach site map			•		·
Hydrophytic Vegetation Present? Yes ☐ No ☒					
Hydric Soil Present? Yes ☐ No ☒			the Sampled		- 57
Wetland Hydrology Present? Yes ⊠ No □		W	ithin a Wetlar	nd? Yes ☐ No) <u> </u>
Remarks:					
VEGETATION – Use scientific names of plan	te				
VEGETATION OSC SCIENTING HAITES OF Plan		Domina	nt Indicator	Dominance Test works	sheet:
Tree Stratum (Plot size: 30)			s? Status	Number of Dominant Spe	
1. Acer macrophyllum				That Are OBL, FACW, or	r FAC: <u>2</u> (A)
2				Total Number of Domina	
3				Species Across All Strata	a: <u>5</u> (B)
4				Percent of Dominant Spe	
Sapling/Shrub Stratum (Plot size: 10)	85	= Total	Cover	That Are OBL, FACW, or	r FAC: <u>40</u> (A/B)
1. Corylus cornuta	20	У	FACU	Prevalence Index work	sheet:
2				Total % Cover of:	Multiply by:
3					x 1 =
4				1	x 2 = 40
5				· · · · · · · · · · · · · · · · · · ·	x 3 = 180
Herb Stratum (Plot size: 5)	20	= Total	Cover		x 4 = 520 x 5 =
1. Polystichum munitum	25	У	FACU	Column Totals: 210	
Equisetum telmateia			FACW	Goldmin Totals. 210	(A) 140 (B)
3				Prevalence Index	= B/A = <u>3.52</u>
4				Hydrophytic Vegetation	
5				Rapid Test for Hydro	. ,
6				☐ Dominance Test is >	
7				☐ Prevalence Index is:	sations¹ (Provide supporting
8					or on a separate sheet)
9				☐ Wetland Non-Vascul	ar Plants ¹
10 11				☐ Problematic Hydroph	nytic Vegetation¹ (Explain)
	45		Cover		and wetland hydrology must
Woody Vine Stratum (Plot size: 5)	<u></u>			be present, unless distur	bed or problematic.
1. Rubus armeniacus	60	У	FAC	Hydrophytic	
2				Vegetation	
% Bare Ground in Herb Stratum	60		l Cover	Present? Yes	s □ No ⊠
Remarks:				1	

Depth	cription: (Describe Matrix	to the de		dox Features	tor or con	firm the ab	sence of Indi	cators.)	
(inches)	Color (moist)	%	Color (moist)	<u>%</u> Type	e ¹ Loc ²	Textu	re	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			loam w	// cobble mixe	ed matrix	
	10111 0/10 2.01 1/0	00000	7.0110 1/0			<u>louin v</u>	111111	34 Hathx	_
				<u> </u>					
	-								
	-								
	_		-						
¹Type: C=C	oncentration, D=Dep	oletion, RM	=Reduced Matrix,	CS=Covered or Co	oated Sand	d Grains.	² Location:	PL=Pore Lining, M	=Matrix.
Hydric Soil	Indicators: (Applic	able to al	l LRRs, unless otl	nerwise noted.)		Ir	dicators for F	Problematic Hydri	c Soils³:
Histosol	• •		☐ Sandy Redox				2 cm Muck	` '	
. —	pipedon (A2)		☐ Stripped Matr	, ,				Material (TF2)	-10)
☐ Black Hi☐ Hydroge	stic (A3) n Sulfide (A4)		☐ Loamy Mucky	/ Mineral (F1) (exc o	ept MLRA	_	•	w Dark Surface (TF ain in Remarks)	-12)
	d Below Dark Surface	≏ (Δ11)	☐ Depleted Mat	, ,		L	」 Other (Expla	alli ili Remarks)	
	ark Surface (A12)	<i>(</i> , (,)	☐ Redox Dark S	, ,		3	ndicators of hy	drophytic vegetation	on and
	lucky Mineral (S1)			k Surface (F7)			-	ology must be pres	
	Bleyed Matrix (S4)		☐ Redox Depre	ssions (F8)			unless distur	bed or problematic	.
	Layer (if present):								
Type:	-t\								_
Depth (in						Hydr	ic Soil Preser	nt? Yes ☐ No	
Remarks: lo	wer layer doesn't sta	rt within 12	2 inches						
HYDROLO	GY								
Wetland Hy	drology Indicators:								
Primary Indi	cators (minimum of o	one require	ed; check all that ap	oply)			Secondary In	dicators (2 or more	e required)
☐ Surface	Water (A1)		☐ Water-S	tained Leaves (B9)	(except l	VILRA	☐ Water-Sta	ained Leaves (B9)	(MLRA 1, 2,
_	iter Table (A2)			4A, and 4B)			•	nd 4B)	
Saturation Saturation			Salt Cru	` '			-	Patterns (B10)	
	arks (B1)			Invertebrates (B13)				on Water Table (C	
	nt Deposits (B2)			n Sulfide Odor (C1	•			n Visible on Aerial	Imagery (C9)
	posits (B3)			Rhizospheres alo		Roots (C3)		hic Position (D2)	
_	at or Crust (B4)			e of Reduced Iron		(00)	☐ Shallow A		
-	oosits (B5) Soil Cracks (B6)		_	ron Reduction in Ti or Stressed Plants		` ,		tral Test (D5) nt Mounds (D6) (Li	DD A)
	on Visible on Aerial I	magery (R		xplain in Remarks)		(A)		ave Hummocks (D7	•
	Vegetated Concave	0 , (, — `	Apiairi ir remarks)	'		☐ 1103t-11ct	ave Hammooks (D7	,
Field Obser									
Surface Wat		′es □ N	o 🛛 Depth (inch	nes):					
Water Table			o ☐ Depth (inch	,					
Saturation P			o Depth (inch	, 	l v	Vetland Hv	drology Prese	ent? Yes⊠ No	
(includes ca	pillary fringe)								
Describe Re	corded Data (stream	n gauge, m	onitoring well, aeri	al photos, previous	inspection	ns), if availa	ble:		
Remarks: ra	iny October on recor	d, heavy r	ain 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.

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 multip	le HGM classes? ☑ `	Yes □No
	ot complete with out the figures requested (figures can of base aerial photo/map Google Earth	be combined).	
OVERALL WETLAND CA	TEGORY III (based on functions ⊡or specia	al characteristics \square)	
1. Category of wetland	l based on FUNCTIONS		
	Category I - Total score = 23 - 27	Score for each	
	Category II - Total score = 20 - 22	function based	
X	Category III - Total score = 16 - 19	on three	
	Category IV - Total score = 9 - 15	ratings	

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

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

Slope Wetlands

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

2

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 uni	t 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 dur	ing periods of annual low flow below 0.5 ppt (parts per thousand)?
	ied as a Freshwater Tidal Fringe use the forms for Riverine wetlands. t is an Estuarine wetland and is not scored. This method cannot be
2. The entire wetland unit is flat and pre Groundwater and surface water runoff	ecipitation is the only source (>90%) of water to it. are NOT sources of water to the unit.
☑ NO - go to 3 If your wetland can be classif	☐ YES - The wetland class is Flats ied as a Flats wetland, use the form for Depressional wetlands.
plants on the surface at any ti	I of the following criteria? tland is on the shores of a body of permanent open water (without any time of the year) at least 20 ac (8 ha) in size; ar area is deeper than 6.6 ft (2 m).
☑ NO - go to 4	☐ YES - The wetland class is Lake Fringe (Lacustrine Fringe)
<u> </u>	ope can be very gradual), wetland in one direction (unidirectional) and usually comes from seeps. eetflow, or in a swale without distinct banks.
☑ NO - go to 5	\square YES - The wetland class is Slope
•	these type of wetlands except occasionally in very small and shallow pressions are usually <3 ft diameter and less than 1 ft deep).
5. Does the entire wetland unit meet al☐ The unit is in a valley, or streaform that stream or river,☐ The overbank flooding occurs	am channel, where it gets inundated by overbank flooding
☑ NO - go to 6	☐ YES - The wetland class is Riverine
NOTE: The Riverine unit can contain do	epressions that are filled with water when the river is not flooding.

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

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

☐ YES - The wetland class is **Depressional**

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

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

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

NOTES and FIELD OBSERVATIONS: wetland is depressional / slope

Wetland name or number 1

✓ NO - go to 8

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	1	
☑ 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	points - 1		
a permanently flowing ditch.	points = 1		
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic	Vac = 4 Na = 0	0	
(use NRCS definitions).	Yes = 4 No = 0		
D 1.3. <u>Characteristics and distribution of persistent plants</u> (Emergent, Scrub-sh Forested Cowardin classes):	irub, ariu/oi		
Wetland has persistent, ungrazed, plants > 95% of area	points = 5		
Wetland has persistent, ungrazed, plants > ½ of area	points = 3	3	
Wetland has persistent, ungrazed plants > $^{1}/_{10}$ of area	points = 1		
l e e e e e e e e e e e e e e e e e e e	points = 0		
Wetland has persistent, ungrazed plants < 1/10 of area	points – o		
D 1.4. Characteristics of seasonal ponding or inundation:	in manual		
This is the area that is ponded for at least 2 months. See description		4	
Area seasonally ponded is > ½ total area of wetland	points = 4	4	
Area seasonally ponded is > 1/4 total area of wetland	points = 2		
Area seasonally ponded is < 1/4 total area of wetland Total for D 1 Add the points	points = 0	8	
Rating of Site Potential If score is: $\Box 12 - 16 = H \boxdot 6 - 11 = M \Box 0 - 5 = L$	in the boxes above Record the rating on		
	Trootia the rating on	the met page	
D 2.0. Does the landscape have the potential to support the water quality functi	on 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		1	
generate pollutants?	Yes = 1 No = 0	ı	
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0	
D 2.4. Are there other sources of pollutants coming into the wetland that are			
not listed in questions D 2.1 - D 2.3?		0	
Source	Yes = 1 No = 0		
ļ ·	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 2.1 Doos the wetland discharge directly (i.e. within 1 mi) to a stream river		•	
1D 3. 1. Does the wettand discharge directly (i.e., within 1 hill) to a stream, fiver,			
	Yes = 1 No = 0	0	
lake, or marine water that is on the 303(d) list?			
lake, or marine water that is on the 303(d) list?		1	
lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the	ne 303(d) list?		
lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the sub-basin water an aquatic resource is on the basin in a water and a sub-basin water an aquatic resource is on the basin in the basi	ne 303(d) list?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 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)?	ne 303(d) list?	1	
lake, or marine water that is on the 303(d) list? D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the sub-basin water an aquatic resource is on the basin 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)?	ne 303(d) list? Yes = 1 No = 0	1	

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

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 3 structures: points = 2 ☐ Emergent ☐ 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 \(\frac{1}{4} \) ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☑ Seasonally flooded or inundated 3 types present: points = 2 1 ☐ Occasionally flooded or inundated 2 types present: points = 1 1 types present: points = 0 Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 2 None = 0 points **Low** = 1 point Moderate = 2 points All three diagrams in this row are **HIGH** = 3 points

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

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

Record the rating on the first page

WDFW Priority Habitats

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

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

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

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

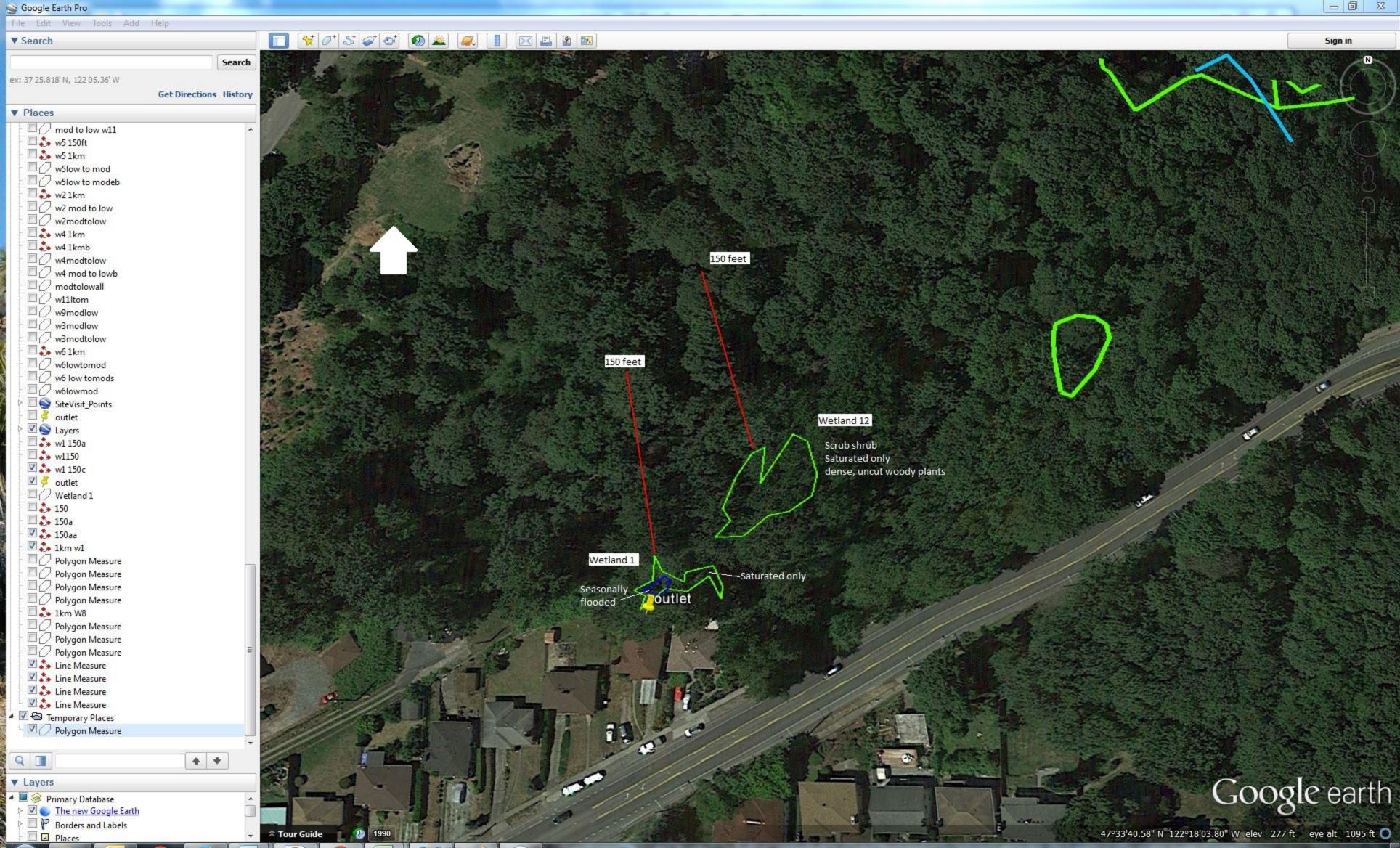
√	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.
	Old-growth/Mature forests: Old-growth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

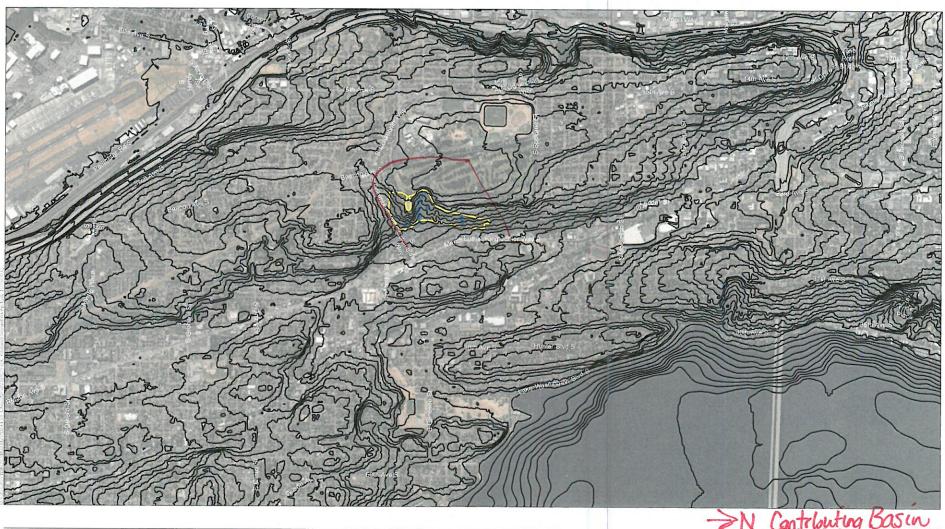
Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
SC 1.0. E	Estuarine Wetlands Does the wetland most the following criteria for Estuarine wetlands?	
	Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
	☐ Yes = Category I ☐ No = Category II	
	Wetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list	
	of Wetlands of High Conservation Value? ☐ Yes - Go to SC 2.2 ☐ No - Go to SC 2.3	
SC 2.2.		
30 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?	
00 2.3.	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☐ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
00 2.1.	Value and listed it on their website?	
	☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. E		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation	
	in bogs? Use the key below. If you answer YES you will still need to rate the	
	wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
	that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☑ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	☐ Yes - Go to SC 3.3 ☑ No = Is not a bog	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4?	
	Yes = Is a Category I bog	
	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,	
55 5.7.	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	

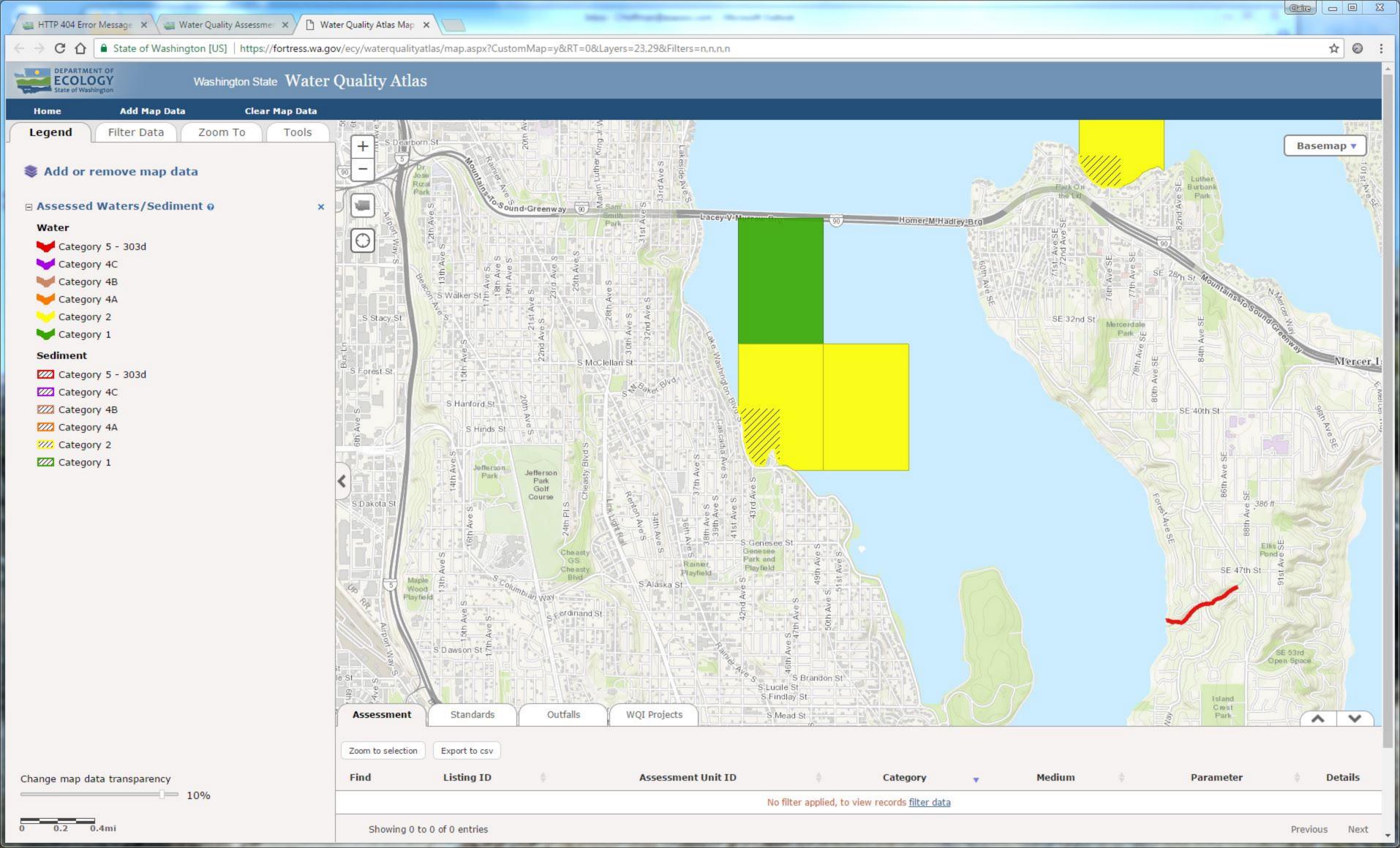
SC 4.0. Foreste	nd Wetlands	
	the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these	
	a for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	er YES you will still need to rate the wetland based on its functions. rowth forests (west of Cascade crest): Stands of at least two tree species,	
	· · · · · · · · · · · · · · · · · · ·	
	g a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
•	es/ha) that are at least 200 years of age OR have a diameter at breast height	
	of 32 in (81 cm) or more.	
	e forests (west of the Cascade Crest): Stands where the largest trees are 80-	
1	ears old OR the species that make up the canopy have an average diameter (dbh)	
excee	ding 21 in (53 cm).	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0. Wetland	ds in Coastal Lagoons	
	the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	etland lies in a depression adjacent to marine waters that is wholly or partially	
	ated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
rocks	accumon marine waters by sandbanks, graver banks, shingle, or, less nequently,	
	goon in which the wetland is located contains ponded water that is saline or	
	sh (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>	
	asured near the bottom)	
De me	☐ Yes - Go to SC 5.1 ☑ No = Not a wetland in a coastal lagoon	
SC 5.1 Does th	e wetland meet all of the following three conditions?	
	etland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing),	
	as less than 20% cover of aggressive, opportunistic plant species (see list of	
	es on p. 100).	
	st ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	d or un-mowed grassland.	
	etland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
☐ I'ne w	, ,	
	☐ Yes = Category I ☐ No = Category II	
SC 6.0. Interdu		
	wetland west of the 1889 line (also called the Western Boundary of Upland	
	rship or WBUO)? If you answer yes you will still need to rate the wetland	
	I on its habitat functions.	
	ctical terms that means the following geographic areas:	
	Beach Peninsula: Lands west of SR 103	
	and-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	
	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)?	
	$\square \text{ Yes} = \textbf{Category I} \qquad \square \text{ No - Go to } \textbf{SC 6.2}$	
SC 6.2. Is the	wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?	
	☐ Yes = Category II ☐ No - Go to SC 6.3	
	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	
	tland based on Special Characteristics	
If you answered	No for all types, enter "Not Applicable" on Summary Form	





SOURCE: ESA 2013 (aerial), ESA 2016, OSM 2014

ronmental Review. 140744.01 Figure 2 Wetland Delineation



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		WASHINGTON LAKE	Dieldrin	Tissue
76479		WASHINGTON LAKE	Dieldrin	Tissue
77049		WASHINGTON LAKE	Chlordane	Tissue
77050		WASHINGTON LAKE	Chlordane	Tissue
77064		WASHINGTON LAKE	Chlordane	Tissue
500009		WASHINGTON LAKE	Sediment Bioassay	Sediment
500010		WASHINGTON LAKE	Sediment Bioassay	Sediment
8078		WASHINGTON LAKE	Lead	Water
11960		WASHINGTON LAKE	Ammonia-N	Water
11963	2	WASHINGTON LAKE	Ammonia-N	Water

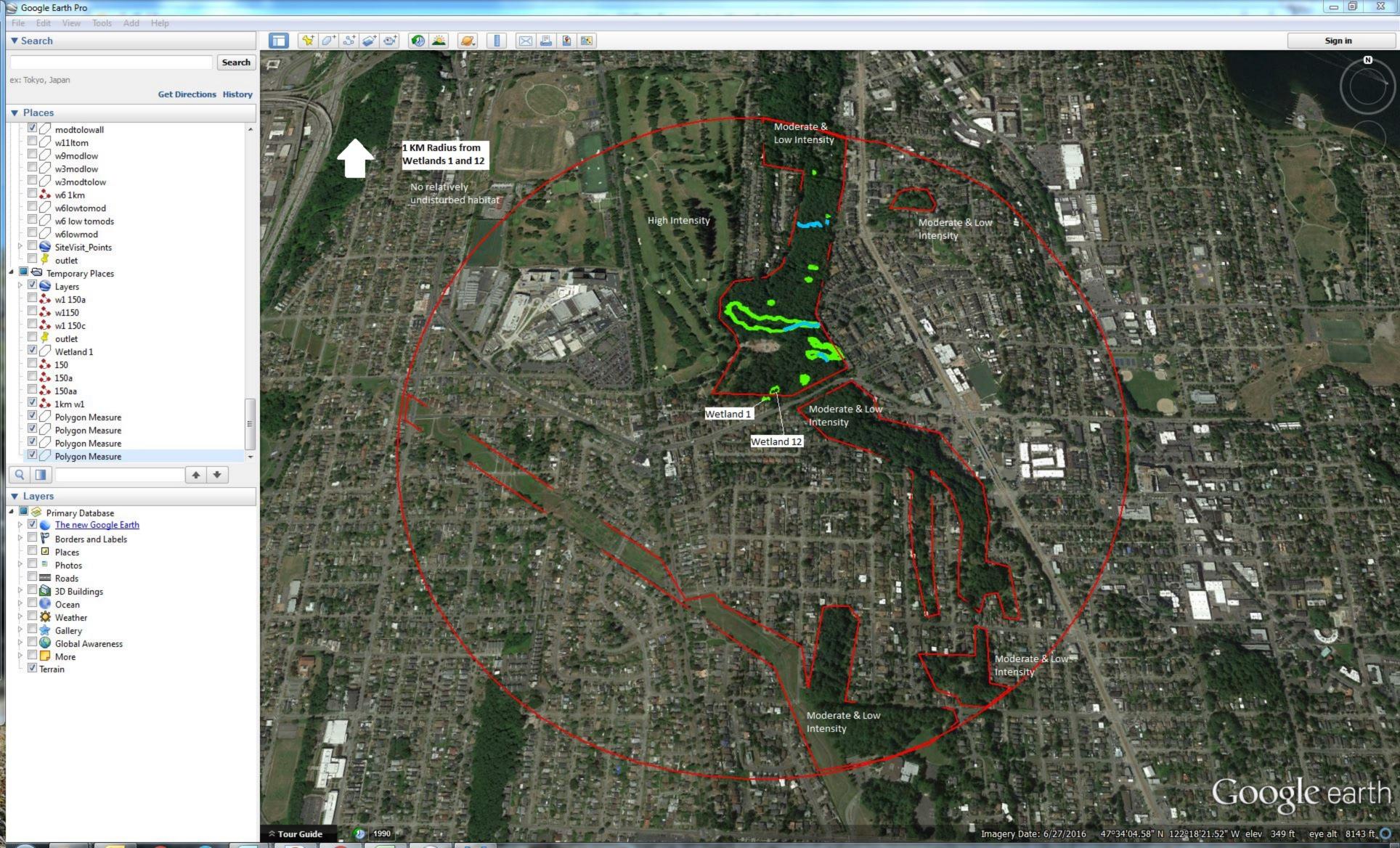
Figure 4. TMDL List, Page 1

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
	1 WASHINGTON LAKE	Total Phosphorus	Water
52863	1 WASHINGTON LAKE	Total Phosphorus	Water
52864	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
75309	1 WASHINGTON LAKE	Endrin	Tissue

Figure 4. TMDL List, Page 3

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



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 multip	le 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 CA	TEGORY (based on functions ⊡or specia	al characteristics $\ \Box$)			
1. Category of wetland	l based on FUNCTIONS				
	Category I - Total score = 23 - 27	Score for each			
Category II - Total score = 20 - 22		function based			
Category III - Total score = 16 - 19		on three			
X Category IV - Total score = 9 - 15		ratings			
		(order of ratings			

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	ropriate rating	g (H, M, L)	
Site Potential	L	L	L	
Landscape Potential	L	L	L	
Value	Н	М	М	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	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	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	S 4.1	1
(can be added to another figure)		'
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	2
polygons for accessible habitat and undisturbed habitat		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 wa	ter levels in the entire unit usual	ly controlled by tides	except during floods?
□ NO ·	- go to 2	☐ YES - the wetlar	nd class is Tidal Fringe - go to 1.1
1.1 Is th	e salinity of the water during per	riods of annual low fl	ow below 0.5 ppt (parts per thousand)?
If yo If it i		a Freshwater Tidal F Estuarine wetland a	☐ YES - Freshwater Tidal Fringe Fringe use the forms for Riverine wetlands. and is not scored. This method cannot be
	wetland unit is flat and precipitat and surface water runoff are NC		
	- go to 3 our wetland can be classified as	a Flats wetland, use	☐ YES - The wetland class is Flats the form for Depressional wetlands.
☐ The plan	ntire wetland unit meet all of the vegetated part of the wetland is its on the surface at any time of east 30% of the open water area	on the shores of a b the year) at least 20	
☑ NO ·	- go to 4	☐ YES - The wetla	and class is Lake Fringe (Lacustrine Fringe)
✓ The✓ TheIt ma	ntire wetland unit meet all of the wetland is on a slope (<i>slope call</i> water flows through the wetland ay flow subsurface, as sheetflow water leaves the wetland witho	n be very gradual), d in one direction (un v, or in a swale witho	
□ NO ·	- go to 5		☑ YES - The wetland class is Slope
			ept occasionally in very small and shallow iameter and less than 1 ft deep).
☐ The from	ntire wetland unit meet all of the unit is in a valley, or stream cha n that stream or river, overbank flooding occurs at lea	nnel, where it gets ir	
□ NO ·	- go to 6		☐ YES - The wetland class is Riverine
NOTE : The Ri	iverine unit can contain depress	ions that are filled wi	th water when the river is not flooding.

6. Is the entire wetland unit in a topographic depression some time during the year? This means that any outlet,	·
□ NO - go to 7	\square YES - The wetland class is Depressional
7. Is the entire wetland unit located in a very flat area with The unit does not pond surface water more than a few in groundwater in the area. The wetland may be ditched, but the surface water may be disched.	nches. The unit seems to be maintained by high

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

☐ YES - The wetland class is **Depressional**

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

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

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

Wetland name or number

 \square NO - go to 8

SLOPE WETLANDS			
Water Quality Functions - Indicators that the site functions to in	prove 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 dr	op in	
elevation for every 100 ft of horizontal distance)			
Slope is 1% or less	poii	nts = 3	1
Slope is > 1% - 2%	poii	nts = 2	ı
Slope is > 2% - 5%	poii	nts = 1	
Slope is greater than 5%	poiı	nts = 0	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic			0
(use NRCS definitions):	Yes = 3	No = 0	U
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollu	itants:		
Choose the points appropriate for the description that best fits the plants in the			
means you have trouble seeing the soil surface (>75% cover), and uncut mean	ns not grazed	l or	
mowed and plants are higher than 6 in.			
Dense, uncut, herbaceous plants > 90% of the wetland area	•	nts = 6	3
Dense, uncut, herbaceous plants > ½ of area		nts = 3	
Dense, woody, plants > ½ of area	•	nts = 2	
Dense, uncut, herbaceous plants > ½ of area		nts = 1	
Does not meet any of the criteria above for plants	<u> </u>	nts = 0	
Total for S 1 Add the points			4
Rating of Site Potential If score is: $\Box 12 = H$ $\Box 6 - 11 = M$ $\Box 0 - 5 = L$	Record the ra	ating on	the first page
	6.0		
S 2.0. Does the landscape have the potential to support the water quality funct	on of the site	97	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in			0
land uses that generate pollutants?	Yes = 1	No = 0	
S 2.2. Are there other sources of pollutants coming into the wetland that are			
not listed in question S 2.1?			•
l au a			0
Other Sources		No = 0	
Total for S 2 Add the points	in the boxes	above	0
	in the boxes	above	
Total for S 2 Add the points	in the boxes Record the ra	above	0
Total for S 2 Rating of Landscape Potential If score is: □1 - 2 = M	in the boxes Record the ra	above	0 the first page
Total for S 2 Rating of Landscape Potential If score is: □1 - 2 = M	in the boxes Record the re	above	0
Total for S 2 Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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?	in the boxes Record the ra	above ating on	0 the first page
Total for S 2 Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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,	in the boxes Record the re ? Yes = 1	above ating on	0 the first page
Total for S 2 Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue?	in the boxes Record the ra ? Yes = 1 Yes = 1	above ating on No = 0	0 the first page
Total for S 2 Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? 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. S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the basin in	in the boxes Record the ra ? Yes = 1 Yes = 1	above ating on No = 0	0 the first page
Total for S 2 Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? 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. S 3.3. Has the site been identified in a watershed or local plan as important for	in the boxes Record the re ? Yes = 1 Yes = 1	above ating on No = 0	the first page 0 1
Total for S 2 Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? 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. S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the basin in	in the boxes Record the ra ? Yes = 1 Yes = 1	above ating on No = 0 No = 0	the first page 0 1

5

SLOPE WETLANDS Hydrologic Functions - Indicators that the site functions to reduce floor	oding and stream erg	osion
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	samg and stream on	90.011
S 4.1. Characteristics of plants that reduce the velocity of surface flows during the points appropriate for the description that best fits conditions in the wetland		
should be thick enough (usually > $^{1}/_{8}$ in), or dense enough, to remain erect du		0
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	
Rating of Site Potential If score is: 1 = M 0 = L	Record the rating on	the first page
S 5.0. Does the landscape have the potential to support hydrologic functions of	f the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land		0
uses or cover that generate excess surface runoff?	Yes = 1 No = 0	O
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.,		1
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	
S 6.2. Has the site been identified as important for flood storage or flood		0
conveyance in a regional flood control plan?	Yes = 2 No = 0	U
Total for S 6 Add the points	in the boxes above	1
Rating of Value If score is: $\square 2 - 4 = H \square 1 = M \square 0 = L$	Record the rating on	the first page

NOTES and FIELD OBSERVATIONS:

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 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 3 structures: points = 2 ☑ Emergent ☐ 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 \(\frac{1}{4} \) ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☐ Seasonally flooded or inundated 3 types present: points = 2 1 ☑ Occasionally flooded or inundated 2 types present: points = 1 1 types present: points = 0 ☑ Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 1 None = 0 points **Low** = 1 point Moderate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number	
of points.	
☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)	
☐ Standing snags (dbh > 4 in) within the wetland	
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends	
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at	4
least 33 ft (10 m)	1
Stable steep banks of fine material that might be used by beaver or muskrat for denning	
(> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees</i>	
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 (<i>structures for egg-laying by amphibians</i>)	
☑ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)	
Total for H 1 Add the points in the boxes above	the first need
Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 - 6 = L Record the rating on	tne 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:	0
	U
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20 - 33% of 1 km Polygon points = 2	
10 - 19% of 1 km Polygon points = 1	
< 10 % of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate:	
0 % undisturbed habitat + (22 % moderate & low intensity land uses / 2) = 11%	
	1
Undisturbed habitat > 50% of Polygon points = 3	
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2	
Undisturbed habitat 10 - 50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3 Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-2)	-2
≤ 50% of 1km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above	-1
Rating of Landscape Potential If Score is:	the first page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose</i>	
only the highest score that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
☐ It has 3 or more priority habitats within 100 m (see next page)	
☐ It provides habitat for Threatened or Endangered species (any plant	
or animal on the state or federal lists)	
☐ It is mapped as a location for an individual WDFW priority species	_
☐ It is a Wetland of High Conservation Value as determined by the	1
Department of Natural Resources	
☐ It has been categorized as an important habitat site in a local or	
regional comprehensive plan, in a Shoreline Master Plan, or in a	
watershed plan	
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1	
Site does not meet any of the criteria above points = 0	
Rating of Value If Score is: \square 2 = H \square 1 = M \square 0 = L Record the rating on	the first page

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

WDFW Priority Habitats

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

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

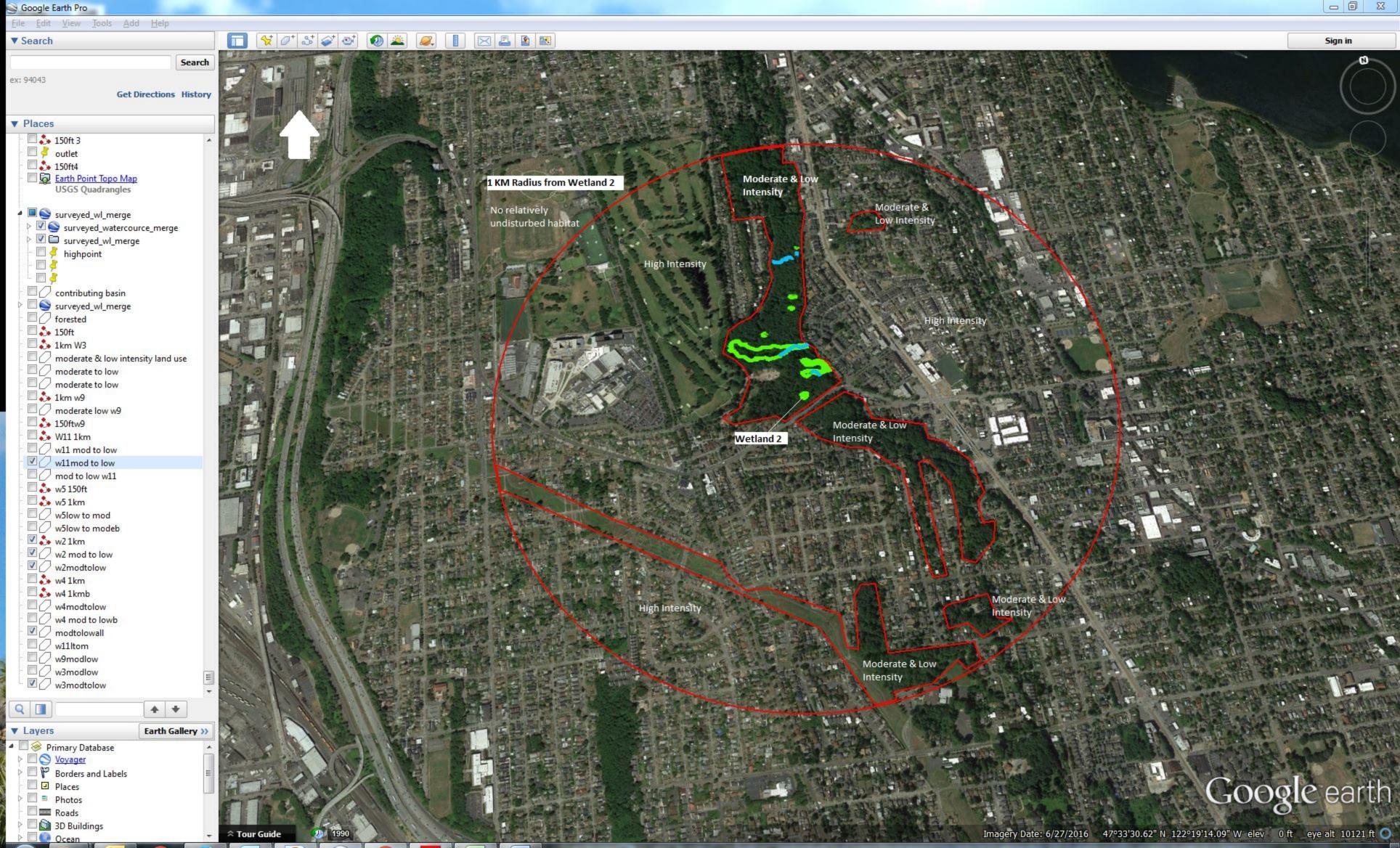
Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: NOTE: This question is independent of the land use between the wetland unit and the priority habitat. Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha). ☑ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (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.

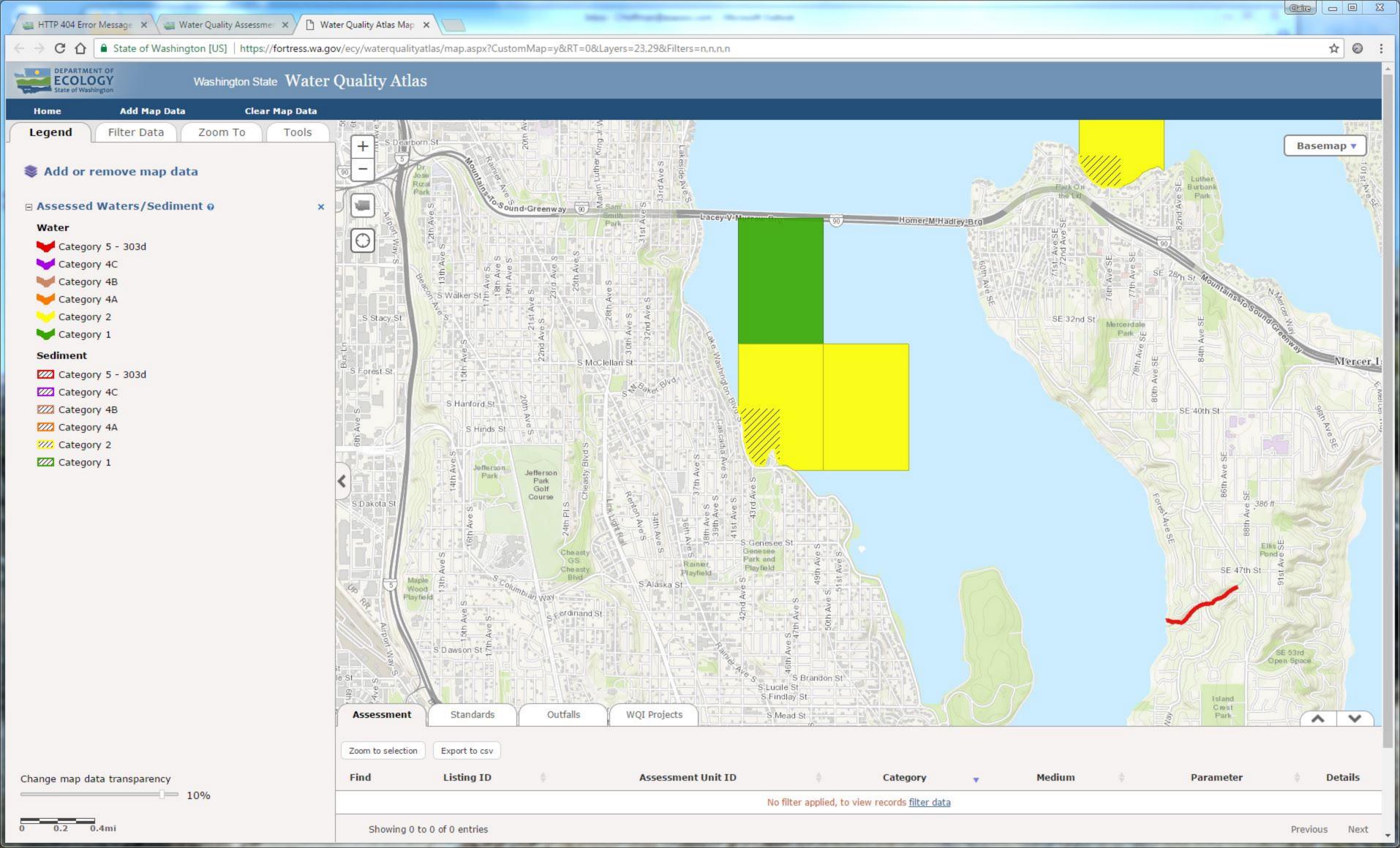
Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
SC 1.0. E	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
	☐ Yes = Category I ☐ No = Category II	
	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.		
30 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?	
00 2.3.	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ✓ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
00 2.1.	Value and listed it on their website?	
	☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. E		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation	
	in bogs? Use the key below. If you answer YES you will still need to rate the	
	wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
	that compose 16 in or more of the first 32 in of the soil profile?	
	\square Yes - Go to SC 3.3 \square 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	
	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,	
55 5.7.	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann	
	spruce, or western white pine, AND any of the species (or combination of species) listed	
	in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

SC 4.0. Forested Wetlands						
Does the wetland have at least 1 contiguous acre of forest that meets one of these						
criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If year</i>	ou					
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 (c						
exceeding 21 in (53 cm).						
☐ Yes = Category I ☑ No = Not a forested wetland for this sec	tion					
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 frequen	tly,					
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 lage	oon					
SC 5.1. Does the wetland meet all of the following three conditions?	,					
☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazi	ng),					
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.						
\Box The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)						
☐ Yes = Category I ☐ No = Category	y 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 rate	•					
SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form	n					
(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						
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 a	and					
1 ac?	137					
☐ Yes = Category III ☐ No = Category	y 1 V					
Category of wetland based on Special Characteristics						
If you answered No for all types, enter "Not Applicable" on Summary Form						





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		WASHINGTON LAKE	Dieldrin	Tissue
76479		WASHINGTON LAKE	Dieldrin	Tissue
77049		WASHINGTON LAKE	Chlordane	Tissue
77050		WASHINGTON LAKE	Chlordane	Tissue
77064		WASHINGTON LAKE	Chlordane	Tissue
500009		WASHINGTON LAKE	Sediment Bioassay	Sediment
500010		WASHINGTON LAKE	Sediment Bioassay	Sediment
8078		WASHINGTON LAKE	Lead	Water
11960		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		WASHINGTON LAKE	Bacteria	Water
12196		WASHINGTON LAKE	Bacteria	Water
12197		WASHINGTON LAKE	Bacteria	Water
12200		WASHINGTON LAKE	Bacteria	Water
12201		WASHINGTON LAKE	Bacteria	Water
12202		WASHINGTON LAKE	Bacteria	Water
43481		WASHINGTON LAKE	Toxaphene	Tissue
43483		WASHINGTON LAKE	Mercury	Tissue
43484		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
	1 WASHINGTON LAKE	Total Phosphorus	Water
52863	1 WASHINGTON LAKE	Total Phosphorus	Water
52864	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
75309	1 WASHINGTON LAKE	Endrin	Tissue

Figure 4. TMDL List, Page 3

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

RATING SUMMARY – Western Washington

Name of wetland (d	or ID #): _	Wetland 3				Date of site visit:	20-Oct-16
Rated by Claire H	offman		_ Tr	ained by E	cology? ☑ Yes ☐ No	Date of training	2008
HGM Class used	for rating	Slope			Wetland has multip	ole 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 CATEGORYIII(based on functions ⊡or special characteristics □)							
1. Category of	f wetland	based or	FUNCTION	IS			
	(Category 1	I - Total score	= 23 - 27		Score for each	
		Category	II - Total score	e = 20 - 22		function based	
	X	Category	III - Total sco	re = 16 - 19)	on three	
		ratings					
						(order of ratings	
FUNCTION	Impr	oving	Hydrologic	Habitat		is not	
FUNCTION	Water	Quality				important)	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	propriate rating	g (H, M, L)	
Site Potential	L	М	М	
Landscape Potential	L	L	L	
Value	Н	Н	М	Total
Score Based on Ratings	5	6	5	16

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	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	S 4.1	1
(can be added to another figure)		'
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	2
polygons for accessible habitat and undisturbed habitat		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 un	it usually controlled by tides except during floods?
☑ NO - go to 2	\square YES - the wetland class is Tidal Fringe - go to 1.1
1.1 Is the salinity of the water du	ring periods of annual low flow below 0.5 ppt (parts per thousand)?
	fied as a Freshwater Tidal Fringe use the forms for Riverine wetlands. it is an Estuarine wetland and is not scored. This method cannot be
The entire wetland unit is flat and pr Groundwater and surface water runoff	ecipitation is the only source (>90%) of water to it. are NOT sources of water to the unit.
☑ NO - go to 3 If your wetland can be classi	☐ YES - The wetland class is Flats ified as a Flats wetland, use the form for Depressional wetlands.
plants on the surface at any	II of the following criteria? Itland is on the shores of a body of permanent open water (without any time of the year) at least 20 ac (8 ha) in size; Iter area is deeper than 6.6 ft (2 m).
☑ NO - go to 4	☐ YES - The wetland class is Lake Fringe (Lacustrine Fringe)
•	lope can be very gradual), wetland in one direction (unidirectional) and usually comes from seeps. neetflow, or in a swale without distinct banks.
\square NO - go to 5	☑ YES - The wetland class is Slope
•	n these type of wetlands except occasionally in very small and shallow pressions are usually <3 ft diameter and less than 1 ft deep).
from that stream or river,	II of the following criteria? cam channel, where it gets inundated by overbank flooding cs at least once every 2 years.
☑ NO - go to 6	☐ YES - The wetland class is Riverine
NOTE: The Riverine unit can contain of	depressions that are filled with water when the river is not flooding.

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

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

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

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

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

SLODE WETLANDS			
SLOPE WETLANDS			
Water Quality Functions - Indicators that the site functions to im	prove wate	er 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 o	drop in	
elevation for every 100 ft of horizontal distance)			
Slope is 1% or less	po	oints = 3	0
Slope is > 1% - 2%	po	oints = 2	O
Slope is > 2% - 5%	po	oints = 1	
Slope is greater than 5%	po	oints = 0	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic			0
(use NRCS definitions):	Yes = 3	No = 0	U
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollu	tants:		
Choose the points appropriate for the description that best fits the plants in the	wetland. <i>D</i>	ense	
means you have trouble seeing the soil surface (>75% cover), and uncut mean	s not graze	ed or	
mowed and plants are higher than 6 in.			
Dense, uncut, herbaceous plants > 90% of the wetland area	•	oints = 6	2
Dense, uncut, herbaceous plants > ½ of area	po	oints = 3	
Dense, woody, plants > ½ of area	po	oints = 2	
Dense, uncut, herbaceous plants > 1/4 of area	po	oints = 1	
Does not meet any of the criteria above for plants	po	oints = 0	
Total for S 1 Add the points	in the boxe	s 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	on of the si	te?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in			0
land uses that generate pollutants?	Yes = 1	No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are			
not listed in question S 2.1?			0
Other Sources	Yes = 1	No = 0	
Total for S 2 Add the points	in the boxe	s 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,			0
lake, or marine water that is on the 303(d) list?	Yes = 1	No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue?			1
At least one aquatic resource in the basin is on the 303(d) list.	Yes = 1	No = 0	1
S 3.3. Has the site been identified in a watershed or local plan as important for			
maintaining water quality? Answer YES if there is a TMDL for the basin in			2
which the unit is found?	Yes = 2	No = 0	
Total for S 3 Add the points	in the boxe	s above	3
Total for 6.6			

SLOPE WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce floor	oding and stream er	osion
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	9	
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		
should be thick enough (usually > $^{1}/_{8}$ in), or dense enough, to remain erect du	ıring surface flows.	1
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	
Rating of Site Potential If score is:	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		0
uses or cover that generate excess surface runoff?	Yes = 1 No = 0	U
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.,		2
houses or salmon redds)	points = 2	2
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
No flooding problems anywhere downstream	points = 0	
S 6.2. Has the site been identified as important for flood storage or flood		
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.

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: <i>Indicators are Cowardin classes and strata within the Forested class.</i> Check the Cowardin plant classes in the wetland. <i>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.</i>	
 □ Aquatic bed □ Emergent □ Scrub-shrub (areas where shrubs have > 30% cover) □ Forested (areas where trees have > 30% cover) □ If the unit has a Forested class, check if: □ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon 	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 □ Seasonally flooded or inundated □ Occasionally flooded or inundated □ Occasionally flooded or inundated □ Saturated only □ Permanently flowing stream or river in, or adjacent to, the wetland □ Seasonally flowing stream in, or adjacent to, the wetland 	1
□ Lake Fringe wetland□ Freshwater tidal wetland2 points2 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. None = 0 points Low = 1 point Moderate = 2 points All three diagrams in this row are HIGH = 3 points	2

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. <i>The number of checks is the number</i>	
of points.	
\square Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)	
☑ Standing snags (dbh > 4 in) within the wetland	
☑ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends	
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at	
least 33 ft (10 m)	2
☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning	
(> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees</i>	
that have not yet weathered where wood is exposed)	
\square At least $rac{1}{4}$ 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)	
\square Invasive plants cover less than 25% of the wetland area in every stratum of plants (see	
H 1.1 for list of strata)	
Total for H 1 Add the points in the boxes above	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%	
\ <u></u>	
If total accessible habitat is:	0
	O
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20 - 33% of 1 km Polygon points = 2	
10 - 19% of 1 km Polygon points = 1	
< 10 % of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate:	
0 % undisturbed habitat + (% moderate & low intensity land uses / 2) = 10%	
	1
Undisturbed habitat > 50% of Polygon points = 3	1
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2	
Undisturbed habitat 10 - 50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3 Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-2)	-2
≤ 50% of 1km Polygon is high intensity points = 0	_
Total for H 2 Add the points in the boxes above	-1
Rating of Landscape Potential If Score is: 4 - 6 = H 1 - 3 = M <- < 1 = L Record the rating on	=
Training of Landoupe i otolical in coole lo + V-II I V-III I V-II	aro mot page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose</i>	
only the highest score that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
☐ It has 3 or more priority habitats within 100 m (see next page)	
☐ It has 5 of 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 mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the	1
·	
Department of Natural Resources	
☐ It has been categorized as an important habitat site in a local or	
regional comprehensive plan, in a Shoreline Master Plan, or in a	
watershed plan	
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1	
Site does not meet any of the criteria above points = 0	
Rating of Value If Score is: \square 2 = H \square 1 = M \square 0 = L Record the rating on	the first page

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

8

WDFW Priority Habitats

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

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

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

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

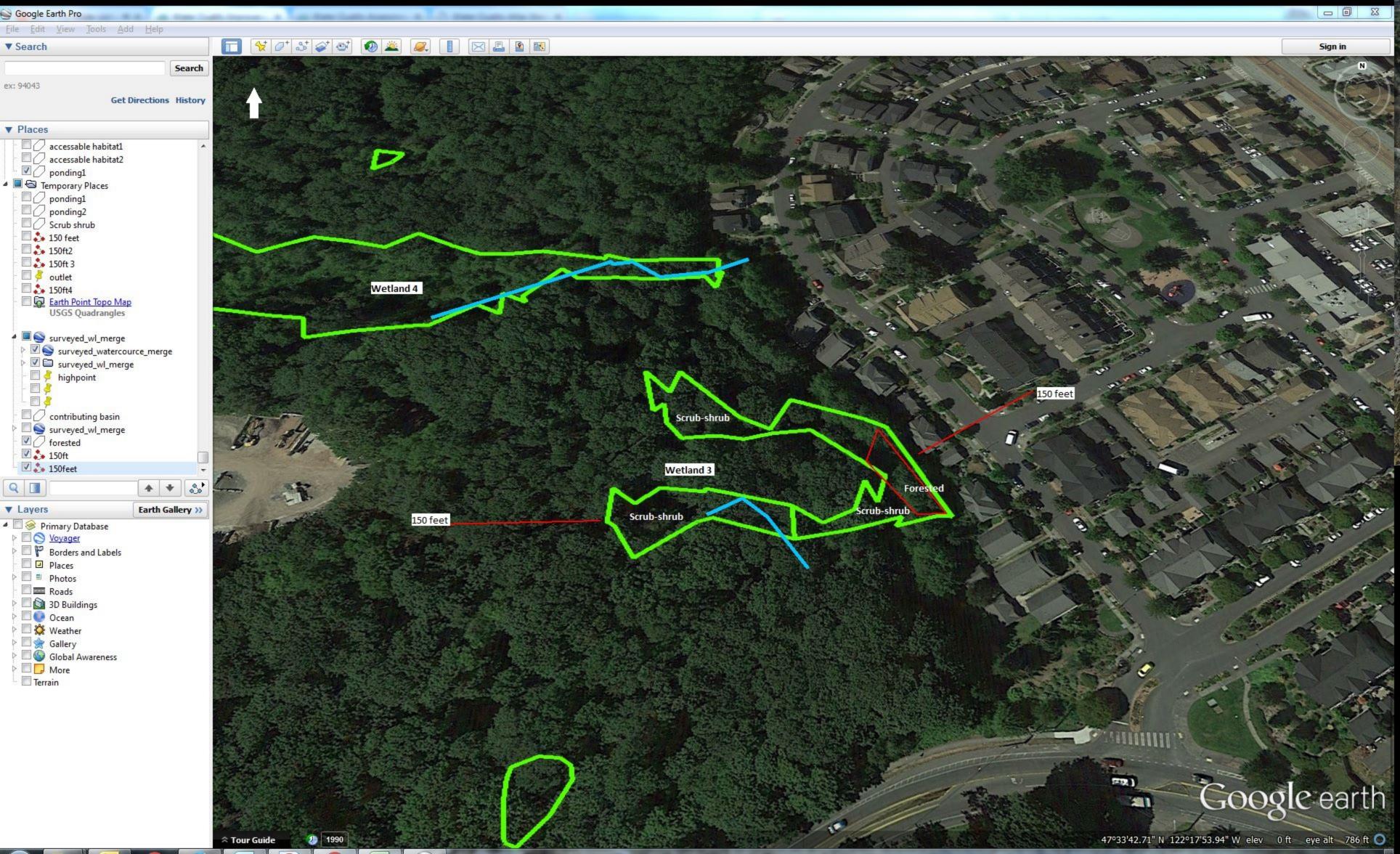
in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

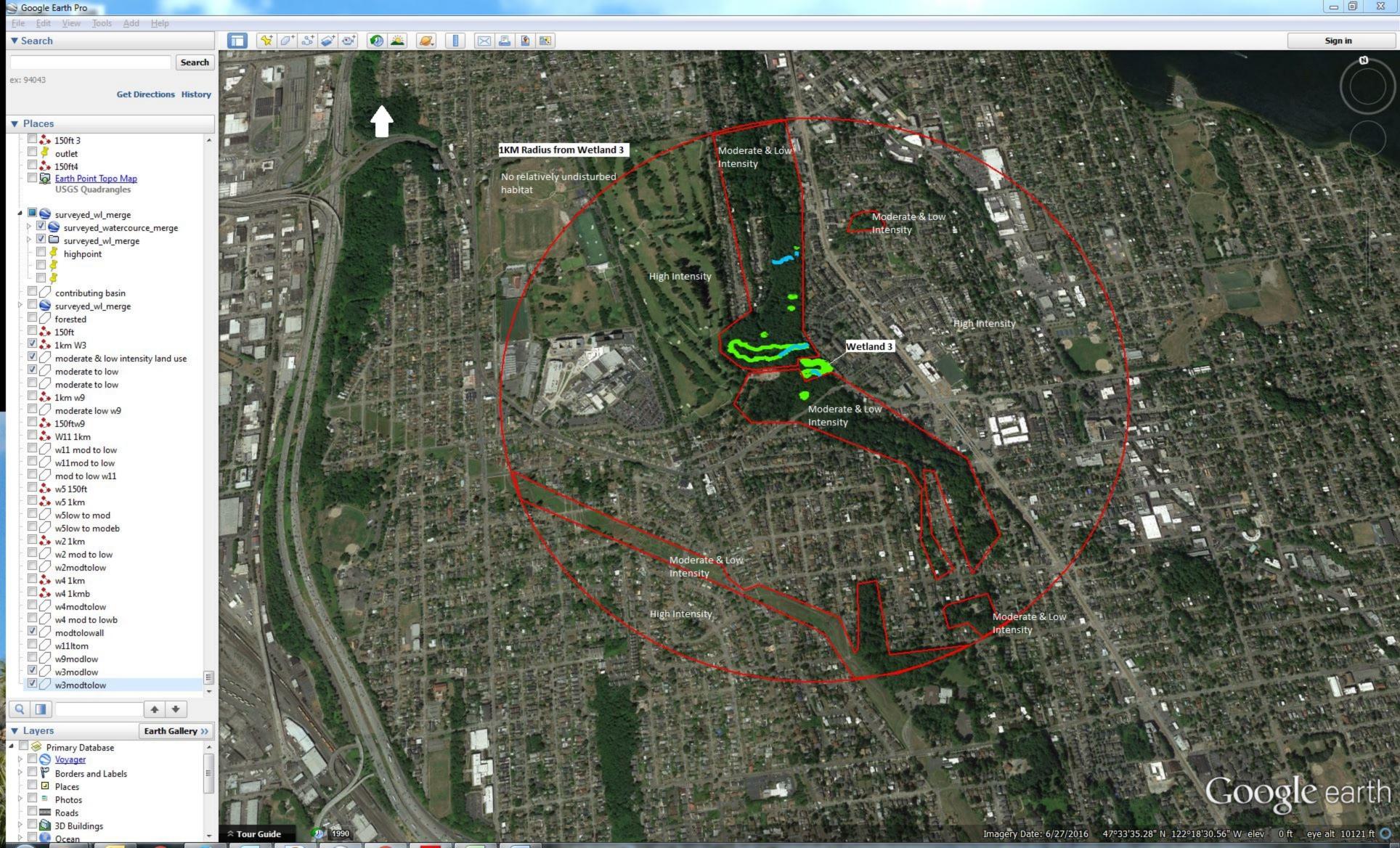
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are >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

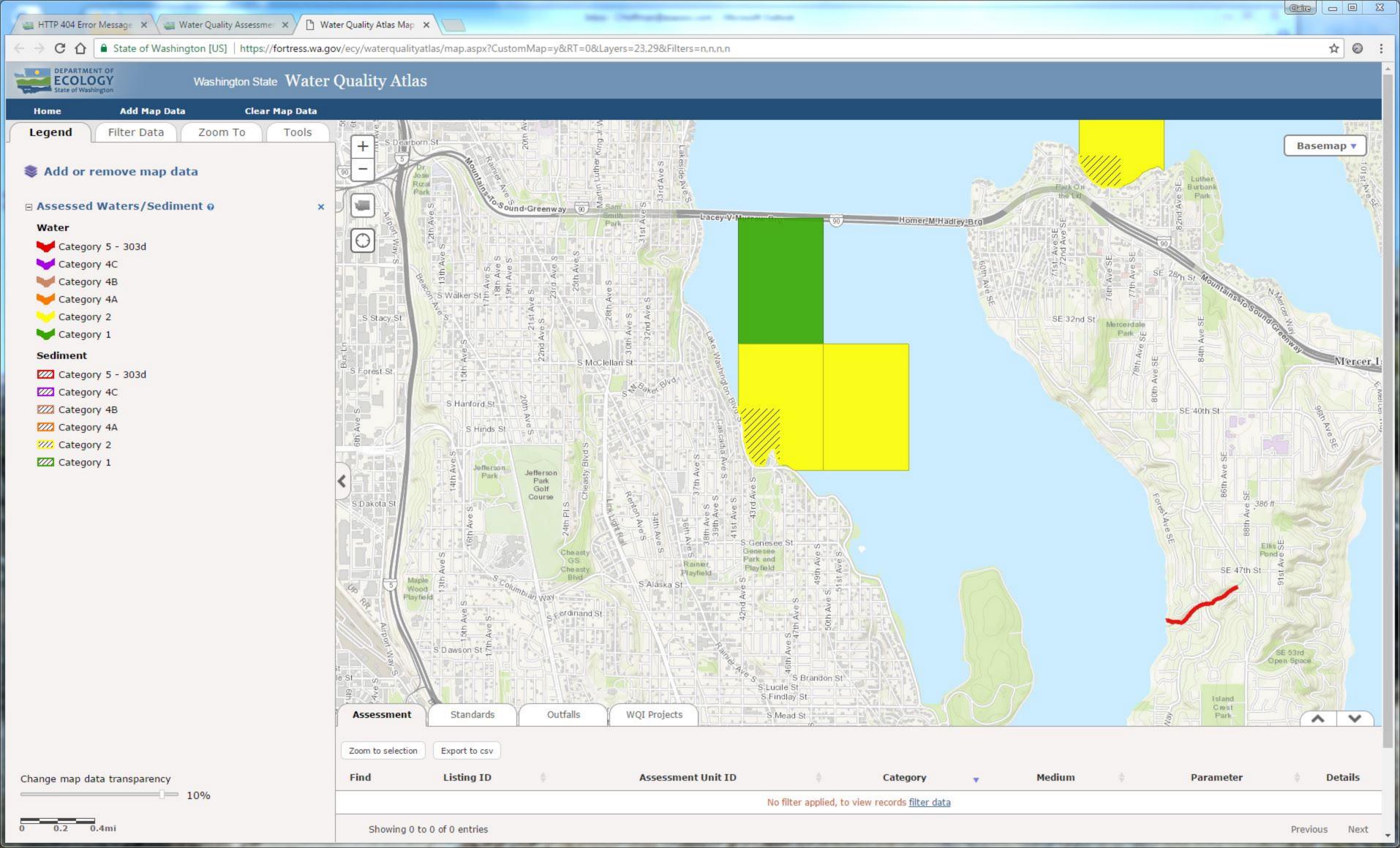
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
SC 1.0. I	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	
00 1.1.	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
	☐ Yes = Category I ☐ No = Category II	
SC 2.0. \	Wetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list	
	of Wetlands of High Conservation Value?	
	☐ Yes - Go to SC 2.2 ☑ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
	☐ Yes = Category I ☐ No = Not WHCV	
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
0004	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☑ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
	Value and listed it on their website?	
0000	☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. I	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,	
00 0.1.	that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	☐ Yes - Go to SC 3.3 ☐ 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		
30 4.0.	Does the wetland have at least 1 contiguous acre of forest that meets one of these		
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>		
	answer YES you will still need to rate the wetland based on its functions.		
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,		
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac		
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height		
	(dbh) of 32 in (81 cm) or more.		
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-		
	200 years old OR the species that make up the canopy have an average diameter (dbh)		
	exceeding 21 in (53 cm).		
	exceeding 21 in (55 cm).		
	☐ Yes = Category I ☑ No = Not a forested wetland for this section		
SC 5.0.	Wetlands in Coastal Lagoons		
0.0.0.	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?		
	The wetland lies in a depression adjacent to marine waters that is wholly or partially		
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,		
	rocks		
	The lagoon in which the wetland is located contains ponded water that is saline or		
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (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 $\frac{1}{10}$ ac (4350 ft ²)		
	☐ Yes = Category I ☐ No = Category II		
SC 6.0. Interdunal Wetlands			
	Is the wetland west of the 1889 line (also called the Western Boundary of Upland		
	Ownership or WBUO)? If you answer yes you will still need to rate the wetland		
	based on its habitat functions.		
	In practical terms that means the following geographic areas:		
	Long Beach Peninsula: Lands west of SR 103		
	Grayland-Westport: Lands west of SR 105		
	Ocean Shores-Copalis: Lands west of SR 115 and SR 109		
	☐ Yes - Go to SC 6.1 ☐ No = Not an interdunal wetland for rating		
SC 6.1.	Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form		
	(rates H,H,H or H,H,M for the three aspects of function)?		
	☐ Yes = Category I ☐ No - Go to SC 6.2		
SC 6.2.	Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?		
	☐ Yes = Category II ☐ No - Go to SC 6.3		
SC 6.3.	Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and		
	1 ac?		
	☐ Yes = Category III ☐ No = Category IV		
Catego	Category of wetland based on Special Characteristics		
If you or	asycrad No for all types, anter "Not Applicable" on Summery Form		







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		WASHINGTON LAKE	Dieldrin	Tissue
76479		WASHINGTON LAKE	Dieldrin	Tissue
77049		WASHINGTON LAKE	Chlordane	Tissue
77050		WASHINGTON LAKE	Chlordane	Tissue
77064		WASHINGTON LAKE	Chlordane	Tissue
500009		WASHINGTON LAKE	Sediment Bioassay	Sediment
500010		WASHINGTON LAKE	Sediment Bioassay	Sediment
8078		WASHINGTON LAKE	Lead	Water
11960		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
	1 WASHINGTON LAKE	Total Phosphorus	Water
52863	1 WASHINGTON LAKE	Total Phosphorus	Water
52864	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
75309	1 WASHINGTON LAKE	Endrin	Tissue

Figure 4. TMDL List, Page 3

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

RATING SUMMARY – Western Washington

Name of wetland (or ID #):	Wetland 4	_	Date of site visit:	20-Oct-16
Rated by Claire Hoffman	Trained by E	Trained by Ecology? ☑ Yes ☐ No		2008
HGM Class used for rating	Depressional & Slope	Wetland has multiple HGM classes? ☑ Yes ☐ No		Yes □No
	ot complete with out the figures re of base aerial photo/map Google ea		e combined).	
OVERALL WETLAND CA	TEGORY III (based on	functions ⊡or special	characteristics □)	
1. Category of wetland	I based on FUNCTIONS	_		
	Category I - Total score = 23 - 27	3	Score for each	
	Category II - Total score = 20 - 22	f	unction based	
X	Category III - Total score = 16 - 19		on three	
	Category IV - Total score = 9 - 15	l r	atings	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
List appropriate rating (H, M, L)				
Site Potential	M	M	М	
Landscape Potential	Н	Н	L	
Value	Н	L	М	Total
Score Based on Ratings	8	6	5	19

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	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	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

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

Slope Wetlands

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

HGM Classification of Wetland in Western Washington

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

1. Are the wa	ter levels in the entire unit usual	ly controlled by tides	except during floods?
☑ NO	- go to 2	☐ YES - the wetlar	nd class is Tidal Fringe - go to 1.1
1.1 Is th	e salinity of the water during per	riods of annual low fl	ow below 0.5 ppt (parts per thousand)?
If yo If it i		a Freshwater Tidal F Estuarine wetland a	☐ YES - Freshwater Tidal Fringe Fringe use the forms for Riverine wetlands. and is not scored. This method cannot be
	wetland unit is flat and precipitati and surface water runoff are NC		
	- go to 3 our wetland can be classified as	a Flats wetland, use	☐ YES - The wetland class is Flats the form for Depressional wetlands.
□ The plan	ntire wetland unit meet all of the vegetated part of the wetland is its on the surface at any time of east 30% of the open water area	on the shores of a b the year) at least 20	
☑ NO	- go to 4	☐ YES - The wetla	and class is Lake Fringe (Lacustrine Fringe)
✓ The✓ TheIt ma	ntire wetland unit meet all of the wetland is on a slope (<i>slope cal</i> water flows through the wetland ay flow subsurface, as sheetflow water leaves the wetland witho	n be very gradual), I in one direction (un v, or in a swale witho	
☑ NO	- go to 5		\square YES - The wetland class is Slope
		= -	eept occasionally in very small and shallow liameter and less than 1 ft deep).
☐ The from	ntire wetland unit meet all of the unit is in a valley, or stream cha that stream or river, overbank flooding occurs at lea	innel, where it gets in	
☑ NO	- go to 6		☐ YES - The wetland class is Riverine
NOTE: The Ri	iverine unit can contain denress	ions that are filled wi	th water when the river is not flooding

Wetland name or number	W4
------------------------	----

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

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

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

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

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

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.

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		4		
constricted permanently flowing outlet.	points = 2	1		
 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	points – i			
a permanently flowing ditch.	points = 1			
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic	points 1			
(use NRCS definitions).	Yes = 4 No = 0	0		
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-sh				
Forested Cowardin classes):	,			
Wetland has persistent, ungrazed, plants > 95% of area	points = 5	_		
Wetland has persistent, ungrazed, plants > $\frac{1}{2}$ of area	points = 3	5		
Wetland has persistent, ungrazed plants > ¹ / ₁₀ of area	points = 1			
Wetland has persistent, ungrazed plants < 1/10 of area	points = 0			
D 1.4. Characteristics of seasonal ponding or inundation:				
This is the area that is ponded for at least 2 months. See description	in manual.			
Area seasonally ponded is > ½ total area of wetland	points = 4	0		
Area seasonally ponded is > 1/4 total area of wetland	points = 2			
Area seasonally ponded is < ¼ total area of wetland	points = 0			
	in the boxes above	6		
Rating of Site Potential If score is: $\Box 12 - 16 = H \bigcirc 6 - 11 = M \Box 0 - 5 = L$	Record the rating on	the first page		
D 2.0. Does the landscape have the potential to support the water quality funct	ion of the site?			
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	1		
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that				
generate pollutants?	Yes = 1 No = 0	1		
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0		
D 2.4. Are there other sources of pollutants coming into the wetland that are		-		
not listed in questions D 2.1 - D 2.3?		1		
Source golf course; adjacent human disturbance & restoration	Yes = 1 No = 0			
	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,		0		
lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	0		
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the	` '	1		
	Yes = 1 No = 0	'		
D 3.3. Has the site been identified in a watershed or local plan as important		_		
for maintaining water quality (answer YES if there is a TMDL for the basin in		2		
which the unit is found)?	Yes = 2 No = 0			
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			

DEPRESSIONAL AND FLATS WETLANDS Hydrologic Functions Indicators that the site functions to reduce fleeding and stream degr	adation
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degr. D 4.0. Does the site have the potential to reduce flooding and erosion?	auation
· · · · · · · · · · · · · · · · · · ·	
D 4.1. <u>Characteristics of surface water outflows from the wetland:</u> Wetland is a depression or flat depression with no surface water	
leaving it (no outlet) points = 4	
Wetland has an intermittently flowing stream or ditch, OR highly	
constricted permanently flowing outlet points = 2	0
Wetland is a flat depression (QUESTION 7 on key), whose outlet is	Ğ
a permanently flowing ditch points = 1	
Wetland has an unconstricted, or slightly constricted, surface outlet	
that is permanently flowing points = 0	
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of	
the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the	
deepest part.	
Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7	
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5	5
\square Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3	
☑ The wetland is a "headwater" wetland points = 3	
Wetland is flat but has small depressions on the surface that trap water points = 1	
Marks of ponding less than 0.5 ft (6 in) points = 0	
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of	
upstream basin contributing surface water to the wetland to the area of the wetland unit itself.	
✓ The area of the basin is less than 10 times the area of the unit points = 5	5
The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit	
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	40
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?	4
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
Yes = 1 No = 0 D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human	
land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	1
Yes = 1 No = 0	'
Total for D 5 Add the points in the boxes above	3
Rating of Landscape Potential If score is: $\boxed{3}$ = H $\boxed{1}$ or 2 = M $\boxed{0}$ = L Record the rating on	_
D 6.0. Are the hydrologic functions provided by the site valuable to society?	are met page
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best	
matches conditions around the wetland unit being rated. Do not add points. <u>Choose the highest</u>	
score if more than one condition is met.	
The wetland captures surface water that would otherwise flow down-gradient into areas	
where flooding has damaged human or natural resources (e.g., houses or salmon redds):	
Flooding occurs in a sub-basin that is immediately down-	
gradient of unit. points = 2	
 Surface flooding problems are in a sub-basin farther down- 	1
gradient. points = 1	
☐ Flooding from groundwater is an issue in the sub-basin.	
☐ The existing or potential outflow from the wetland is so constrained	
by human or natural conditions that the water stored by the wetland	
cannot reach areas that flood. Explain why points = 0	
points of	
☑ There are no problems with flooding downstream of the wetland. points = 0	
☐ There are no problems with flooding downstream of the wetland. points = 0 D 6.2. Has the site been identified as important for flood storage or flood	
☐ There are no problems with flooding downstream of the wetland. points = 0 D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
 ☑ There are no problems with flooding downstream of the wetland. D 6.2. Has the site been identified as important for flood storage or flood 	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 2 3 structures: points = 2 ☐ Emergent ☑ 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 \(\frac{1}{4} \) ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☑ Seasonally flooded or inundated 3 types present: points = 2 2 ☐ Occasionally flooded or inundated 2 types present: points = 1 1 types present: points = 0 Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☑ Seasonally flowing stream in, or adjacent to, the wetland □ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 3 None = 0 points **Low** = 1 point Moderate = 2 points All three diagrams in this row are **HIGH** = 3 points

7

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

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

WDFW Priority Habitats

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

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

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: NOTE: This question is independent of the land use between the wetland unit and the priority habitat. Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha). ☑ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (full descriptions in WDFW PHS report). Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock. ☐ Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in 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

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

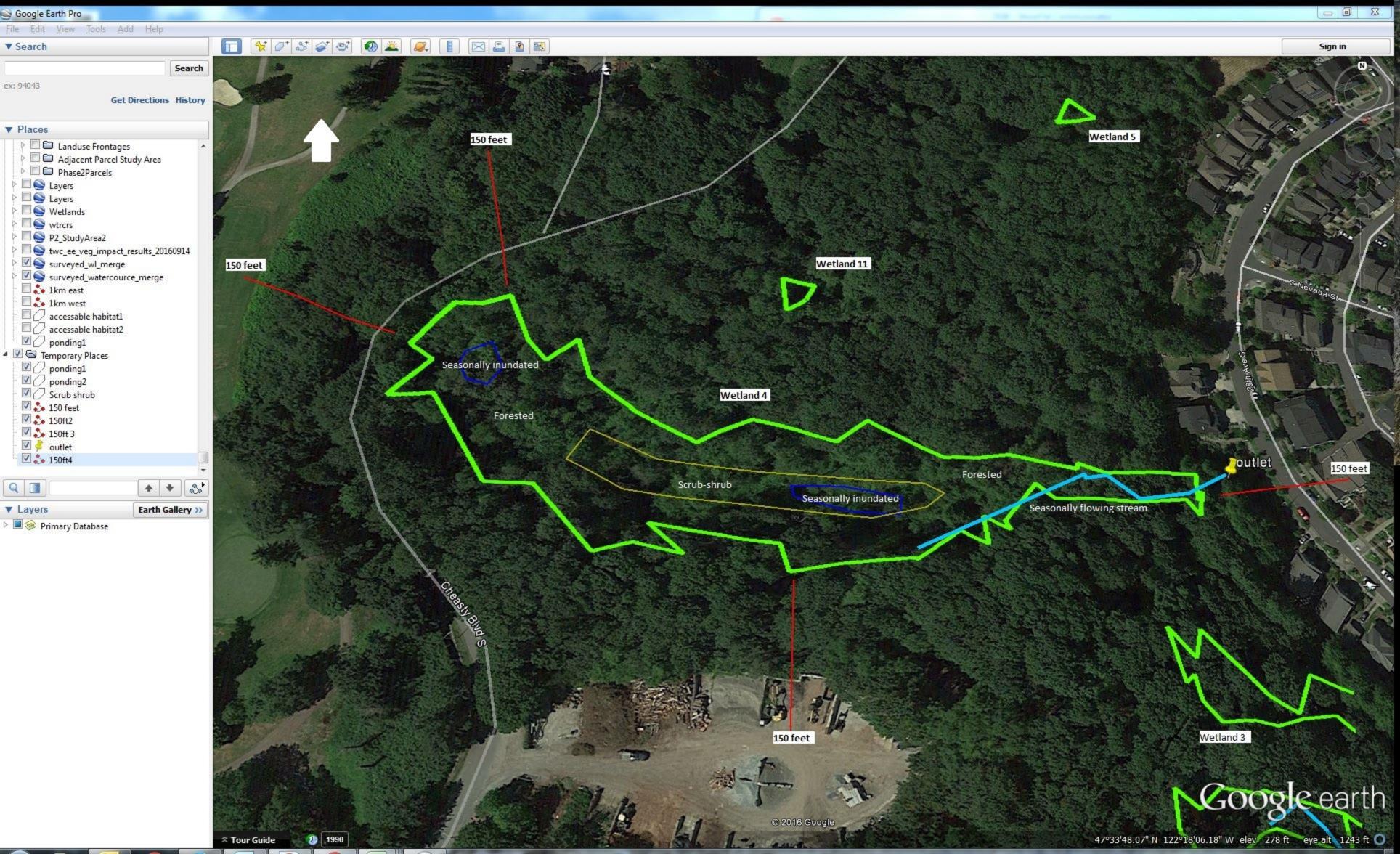
in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

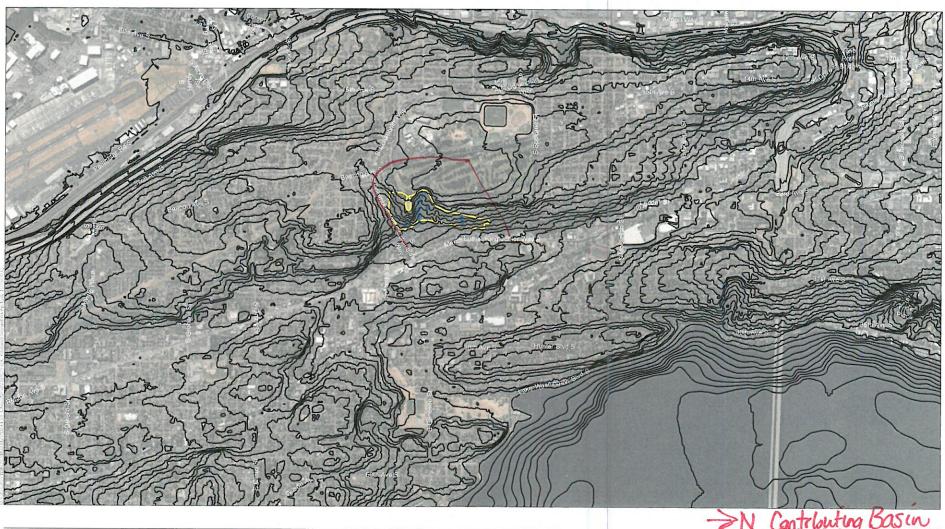
height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
SC 1.0. E	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☐ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
2000	☐ Yes = Category I ☐ No = Category II	
SC 2.0. V	Netlands of High Conservation Value (WHCV) Has the WA Department of Natural Resources updated their website to include the list	
00 2.1.	of Wetlands of High Conservation Value?	
	☐ Yes - Go to SC 2.2 ☐ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
	☐ Yes = Category I ☐ 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. E		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation	
	in bogs? Use the key below. If you answer YES you will still need to rate the	
0004	wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
00 0.2.	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	☐ Yes - Go to SC 3.3 ☐ No = Is not a bog	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4?	
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4	
	NOTE: If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
	the wetland is a bog.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,	
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann	
	spruce, or western white pine, AND any of the species (or combination of species) listed	
	in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

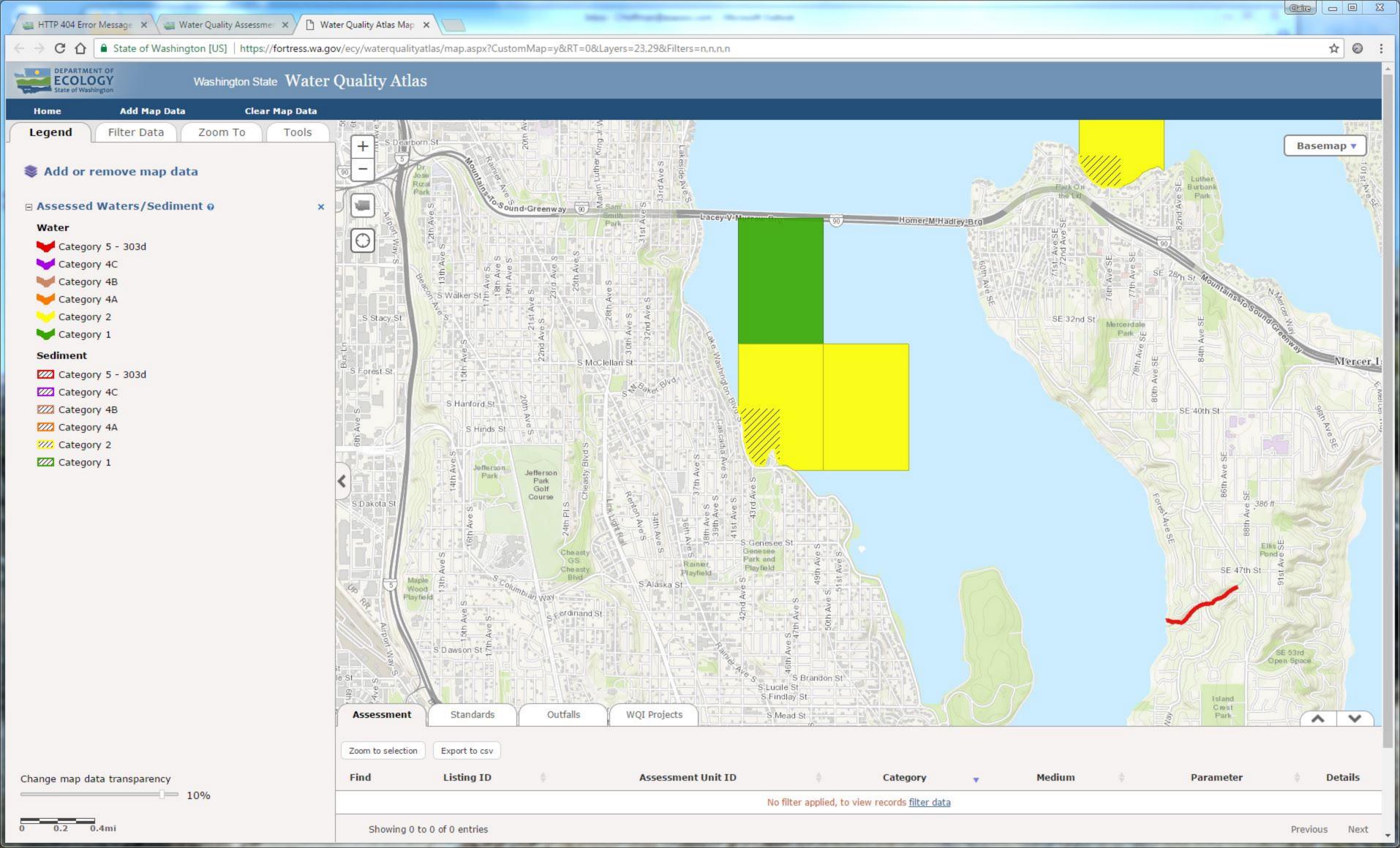
SC 4.0.	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
	200 years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0.	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>	
	be measured near the bottom)	
	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon	
SC 5.1.	Does the wetland meet all of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing),	
	and has less than 20% cover of aggressive, opportunistic plant species (see list of	
	species on p. 100).	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)	
22.2.2	☐ 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	
Categor	y of wetland based on Special Characteristics	
llf vou an	swered No for all types, enter "Not Applicable" on Summary Form	





SOURCE: ESA 2013 (aerial), ESA 2016, OSM 2014

ronmental Review. 140744.01 Figure 2 Wetland Delineation



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		WASHINGTON LAKE	Dieldrin	Tissue
76479		WASHINGTON LAKE	Dieldrin	Tissue
77049		WASHINGTON LAKE	Chlordane	Tissue
77050		WASHINGTON LAKE	Chlordane	Tissue
77064		WASHINGTON LAKE	Chlordane	Tissue
500009		WASHINGTON LAKE	Sediment Bioassay	Sediment
500010		WASHINGTON LAKE	Sediment Bioassay	Sediment
8078		WASHINGTON LAKE	Lead	Water
11960		WASHINGTON LAKE	Ammonia-N	Water
11963	2	WASHINGTON LAKE	Ammonia-N	Water

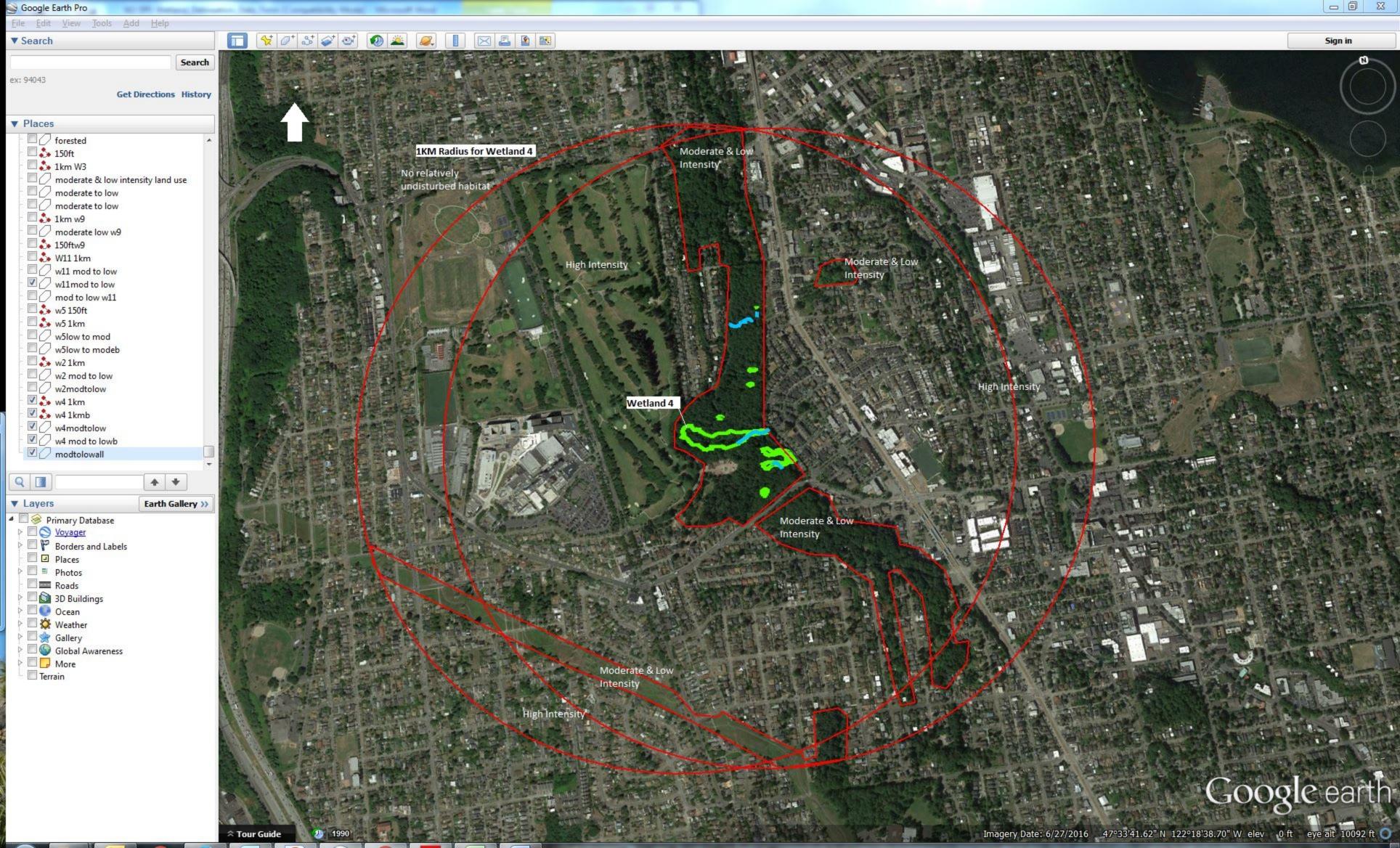
Figure 4. TMDL List, Page 1

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		WASHINGTON LAKE	Bacteria	Water
12196		WASHINGTON LAKE	Bacteria	Water
12197		WASHINGTON LAKE	Bacteria	Water
12200		WASHINGTON LAKE	Bacteria	Water
12201		WASHINGTON LAKE	Bacteria	Water
12202		WASHINGTON LAKE	Bacteria	Water
43481		WASHINGTON LAKE	Toxaphene	Tissue
43483		WASHINGTON LAKE	Mercury	Tissue
43484		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
	1 WASHINGTON LAKE	Total Phosphorus	Water
52863	1 WASHINGTON LAKE	Total Phosphorus	Water
52864	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
75309	1 WASHINGTON LAKE	Endrin	Tissue

Figure 4. TMDL List, Page 3

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



RATING SUMMARY – Western Washington

Name of wetland (or ID #):	Wetland 5		Date of site visit:	20-Oct-16
Rated by <u>Claire Hoffman</u>		Trained by Ecology? ☑ Yes ☐ No	Date of training	2008
HGM Class used for rating	Slope	Wetland has multip	le HGM classes? ☐	Yes ☑No
	-	out the figures requested (figures can oto/map Google Earth	be combined).	
OVERALL WETLAND CA	ATEGORYI	IV (based on functions ⊡or specia	al characteristics \Box)	
1. Category of wetland	d based on FUN	CTIONS		
	Category I - Tota	al score = 23 - 27	Score for each	
	Category II - Tot	tal score = 20 - 22	function based	
	Category III - To	otal score = 16 - 19	on three	
X	_		ratings	
	_		(order of ratings	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	ropriate rating	g (H, M, L)	
Site Potential	L	М	L	
Landscape Potential	L	L	L	
Value	Н	М	М	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	Х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	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	S 4.1	1
(can be added to another figure)		'
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	2
polygons for accessible habitat and undisturbed habitat		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	e the water levels in the entire unit usual	ly controlled by tides	except during floods?
	☑ NO - go to 2	☐ YES - the wetlan	d class is Tidal Fringe - go to 1.1
,	1.1 Is the salinity of the water during pe	riods of annual low flo	w below 0.5 ppt (parts per thousand)?
		a Freshwater Tidal Fres	☐ YES - Freshwater Tidal Fringe ringe use the forms for Riverine wetlands. nd is not scored. This method cannot be
	entire wetland unit is flat and precipitat dwater and surface water runoff are NC		
	☑ NO - go to 3 If your wetland can be classified as		☐ YES - The wetland class is Flats the form for Depressional wetlands.
3. Doe	es the entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of At least 30% of the open water area	on the shores of a both the year) at least 20 a	,
	☑ NO - go to 4	☐ YES - The wetlar	nd class is Lake Fringe (Lacustrine Fringe)
4. Doe	es the entire wetland unit meet all of the The wetland is on a slope (<i>slope call</i>) The water flows through the wetland It may flow subsurface, as sheetflow The water leaves the wetland witho	<i>n be very gradual</i>), d in one direction (union, v, or in a swale withou	
	□ NO - go to 5		☑ YES - The wetland class is Slope
	: Surface water does not pond in these ssions or behind hummocks (depression	• .	ept occasionally in very small and shallow ameter and less than 1 ft deep).
5. Do∈	es the entire wetland unit meet all of the The unit is in a valley, or stream cha from that stream or river, The overbank flooding occurs at lea	annel, where it gets in	
	□ NO - go to 6		☐ YES - The wetland class is Riverine
NOTE	: The Riverine unit can contain depress	ions that are filled wit	h water when the river is not flooding.

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

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

☐ YES - The wetland class is **Depressional**

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

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

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

Wetland name or number

 \square NO - go to 8

SLOPE WETLANDS		
Water Quality Functions - Indicators that the site functions to im	prove water quality	
S 1.0. Does the site have the potential to improve water quality?	1 7	
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	0
Slope is > 1% - 2%	points = 2	U
Slope is > 2% - 5%	points = 1	
Slope is greater than 5%	points = 0	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic		0
(use NRCS definitions):	Yes = 3 No = 0	U
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollu		
Choose the points appropriate for the description that best fits the plants in the		
means you have trouble seeing the soil surface (>75% cover), and uncut mear	is 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	2
Dense, woody, plants > ½ of area	points = 2	
Dense, uncut, herbaceous plants > 1/4 of area	points = 1	
Does not meet any of the criteria above for plants	points = 0	
	in the boxes above	2
Rating of Site Potential If score is: \Box 12 = H \Box 6 - 11 = M \bigcirc 0 - 5 = L	Record the rating on	
Rating of Site Potential if Score is. [12 = 11 [0 - 11 = W]0 - 3 = L	Necord the rating on	tile ilist page
S 2.0. Does the landscape have the potential to support the water quality functi	on of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in		0
land uses that generate pollutants?	Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are		
not listed in question S 2.1?		0
Other Sources	Yes = 1 No = 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,		0
lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue?		1
At least one aquatic resource in the basin is on the 303(d) list.	Yes = 1 No = 0	I
S 3.3. Has the site been identified in a watershed or local plan as important for		
maintaining water quality? Answer YES if there is a TMDL for the basin in		2
Lubiob the unit is found?		
which the unit is found?	Yes = 2 No = 0	
	Yes = 2 No = 0 in the boxes above	3

SLOPE WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce flo	oding and stream ero	osion
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		
the points appropriate for the description that best fits conditions in the wetland		
should be thick enough (usually $> 1/8$ in), or dense enough, to remain erect defined as	uring surface flows.	1
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	
Rating of Site Potential If score is: 1 = M	Record the rating on	the first page
S 5.0. Does the landscape have the potential to support hydrologic functions o	f the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land		0
uses or cover that generate excess surface runoff?	Yes = 1 No = 0	O
Rating of Landscape Potential If score is: 1 = M 0 = L	Record the rating on	the first page
	Record the rating on	the first page
S 6.0. Are the hydrologic functions provided by the site valuable to society?	,	the first page
	,	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	,	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.,	,	
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	,	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.,		
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	
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) Surface flooding problems are in a sub-basin farther down-gradient	points = 2 points = 1	1
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) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream	points = 2 points = 1	
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) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	points = 2 points = 1 points = 0	1

NOTES and FIELD OBSERVATIONS:

Dense uncut rigid plants are blackberries, emergent plants are not dense

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 3 structures: points = 2 ☐ Emergent ☑ 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 \(\frac{1}{4} \) ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☐ Seasonally flooded or inundated 3 types present: points = 2 0 2 types present: points = 1 ☐ Occasionally flooded or inundated 1 types present: points = 0 ☑ Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 0 None = 0 points **Low** = 1 point Moderate = 2 points All three diagrams in this row are **HIGH** = 3 points

Check the habitat features that are present in the wetland. The number of checks is the number of points. Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) Standing snags (dbh > 4 in) within the wetland Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (10 m) Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed) At least ¼ as of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata) Add the points in the boxes above H 1.1 for list of strata) Add the points in the boxes above H 2.0. Does the landscape have the potential to support the habitat function of the site? 12.0. Does the landscape have the potential to support the habitat function of the site? 12.1 Accessible habitat (include only habitat that directly abuts wetland unit).
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H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use ≤ 50% of 1km Polygon is high intensity Total for H 2 Rating of Landscape Potential If Score is: □ 4 - 6 = H □ 1 - 3 = M □ < 1 = L Record the rating on the first page
> 50% of 1 km Polygon is high intensity land use ≤ 50% of 1km Polygon is high intensity Total for H 2 Rating of Landscape Potential If Score is: □ 4 - 6 = H □ 1 - 3 = M ☑ < 1 = L Record the rating on the first page
≤ 50% of 1km Polygon is high intensity points = 0 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
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
Rating of Landscape Potential If Score is:
H 3.0. Is the habitat provided by the site valuable to society?
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose</i>
only the highest score that applies to the wetland being rated.
Site meets ANY of the following criteria: points = 2
☐ It has 3 or more priority habitats within 100 m (see next page)
☐ It provides habitat for Threatened or Endangered species (any plant
or animal on the state or federal lists)
☐ It is mapped as a location for an individual WDFW priority species
☐ It is a Wetland of High Conservation Value as determined by the
Department of Natural Resources
☐ It has been categorized as an important habitat site in a local or
regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1
Site does not meet any of the criteria above points = 0
Rating of Value If Score is: 2 = H 2 1 = M 0 = L Record the rating on the first page

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

WDFW Priority Habitats

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

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

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

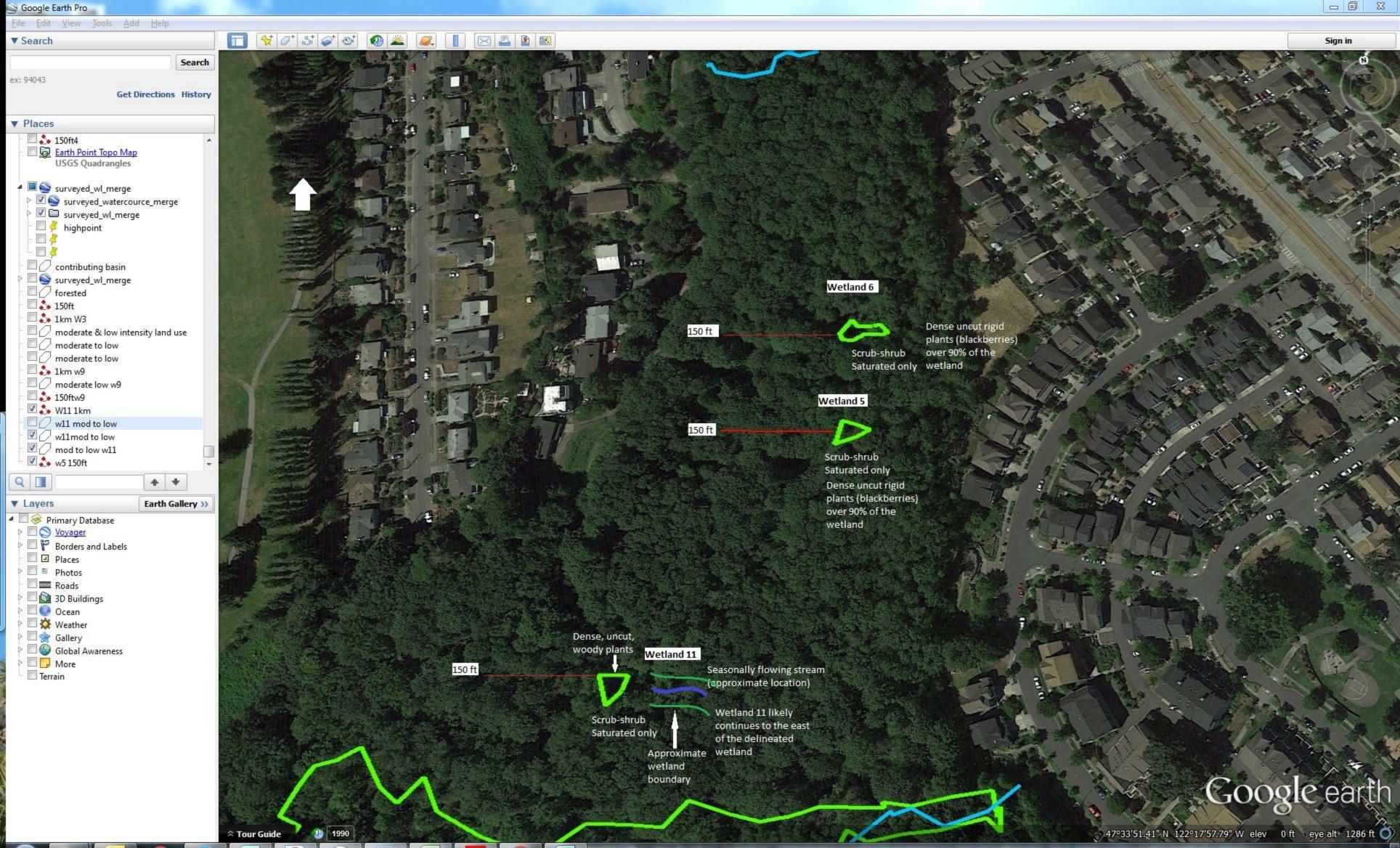
Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

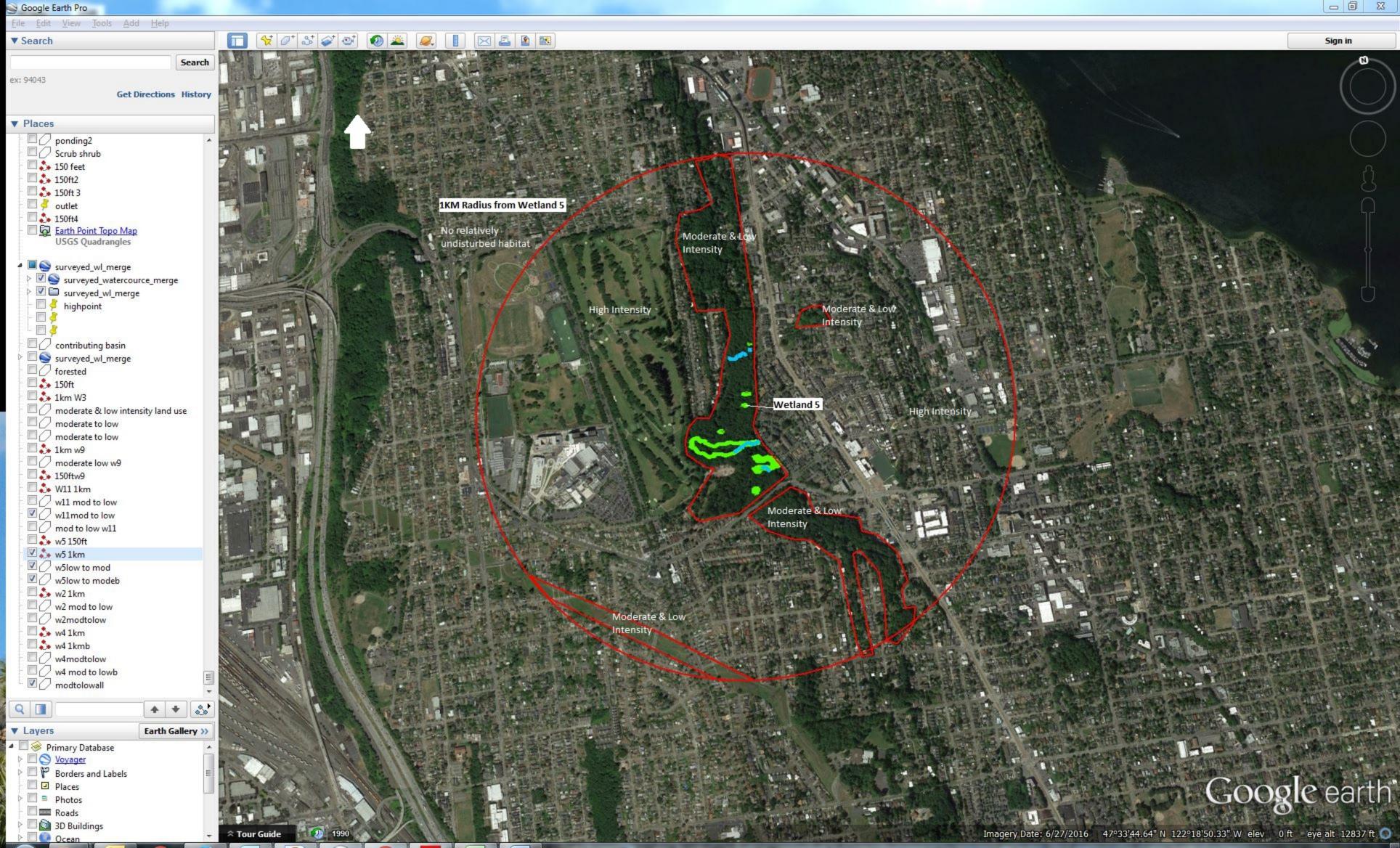
in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

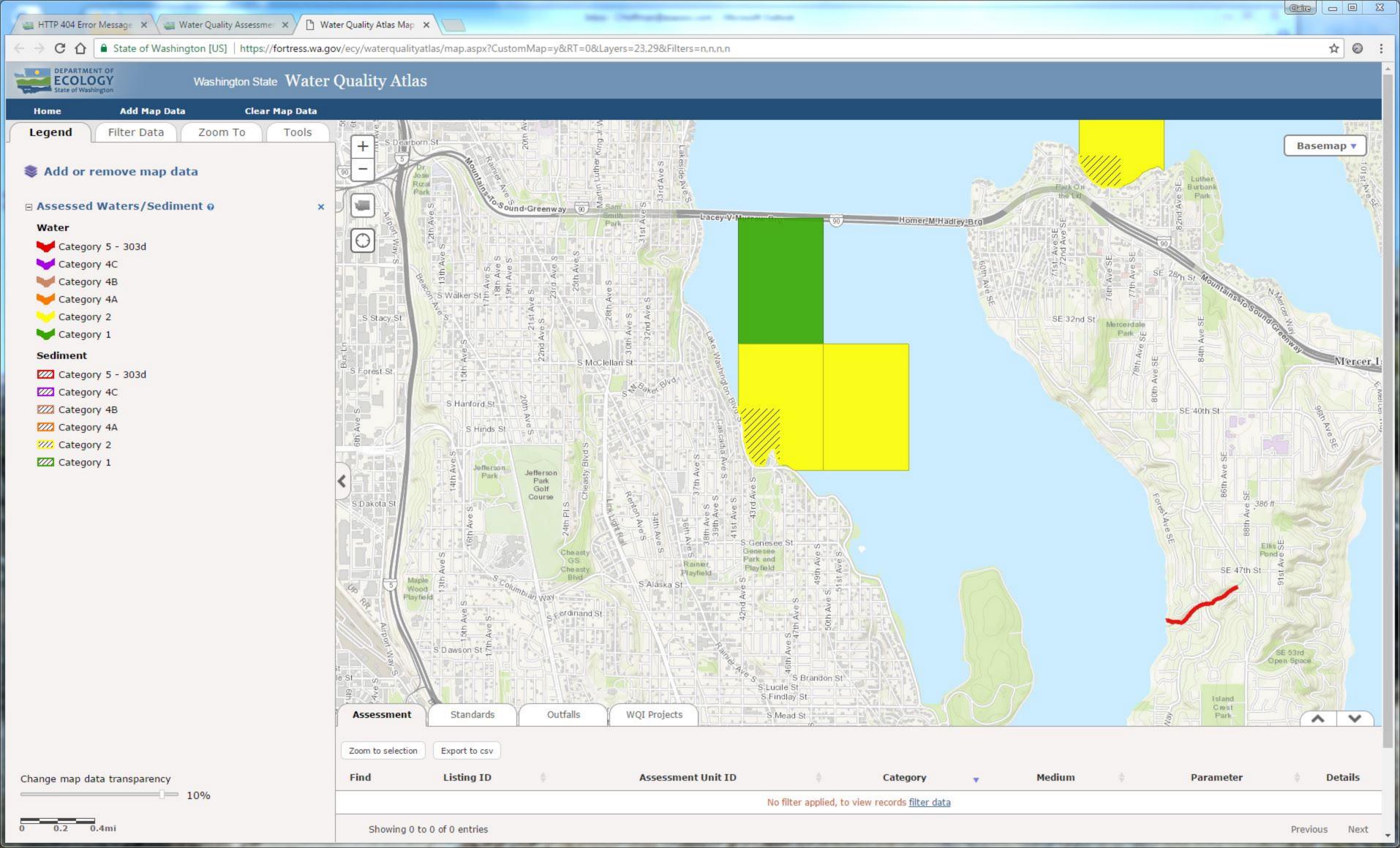
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland '	Туре	Category
	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
	stuarine Wetlands Does the wetland most the following criteria for Estuarine wetlands?	
	Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☑ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
	☐ Yes = Category I ☐ No = Category II	
SC 2.0. W	Vetlands of High Conservation Value (WHCV)	
	Has the WA Department of Natural Resources updated their website to include the list	
	of Wetlands of High Conservation Value?	
	\square Yes - Go to SC 2.2 \square 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	
	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	
	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. B		
	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	
0004	wetland based on its functions.	
	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	
	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.	\square Yes - Go to SC 3.3 \square No = Is not a bog 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.	
	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. I	Forested Wetlands			
	Does the wetland have at least 1 contiguous acre of forest that meets one of these			
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>			
	answer YES you will still need to rate the wetland based on its functions.			
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,			
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac			
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height			
	(dbh) of 32 in (81 cm) or more.			
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-			
	200 years old OR the species that make up the canopy have an average diameter (dbh)			
	exceeding 21 in (53 cm).			
	☐ Yes = Category I ☑ No = Not a forested wetland for this section			
SC 5.0. \	Wetlands in Coastal Lagoons			
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?			
	The wetland lies in a depression adjacent to marine waters that is wholly or partially			
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,			
_	rocks			
	The lagoon in which the wetland is located contains ponded water that is saline or			
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to			
	be measured near the bottom)			
	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon			
	Does the wetland meet all of the following three conditions?			
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing),			
	and has less than 20% cover of aggressive, opportunistic plant species (see list of			
	species on p. 100).			
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or 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. I	nterdunal 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			
30 0.1.	(rates H,H,H or H,H,M for the three aspects of function)?			
	☐ Yes = Category I ☐ No - Go to SC 6.2			
SC 6.2.	Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?			
0.2.	☐ Yes = Category II ☐ No - Go to SC 6.3			
SC 6.3.	Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and			
0.0.	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			







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		WASHINGTON LAKE	Dieldrin	Tissue
76479		WASHINGTON LAKE	Dieldrin	Tissue
77049		WASHINGTON LAKE	Chlordane	Tissue
77050		WASHINGTON LAKE	Chlordane	Tissue
77064		WASHINGTON LAKE	Chlordane	Tissue
500009		WASHINGTON LAKE	Sediment Bioassay	Sediment
500010		WASHINGTON LAKE	Sediment Bioassay	Sediment
8078		WASHINGTON LAKE	Lead	Water
11960		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
	1 WASHINGTON LAKE	Total Phosphorus	Water
52863	1 WASHINGTON LAKE	Total Phosphorus	Water
52864	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
75309	1 WASHINGTON LAKE	Endrin	Tissue

Figure 4. TMDL List, Page 3

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

RATING SUMMARY – Western Washington

Name of wetland (or ID #):	wetland 6		Date of site visit:	31-Oct-16
Rated by <u>Claire Hoffman</u>		Trained by Ecology? ☑ Yes ☐ No	Date of training	2008
HGM Class used for rating	Slope	Wetland has multipl	le HGM classes? □	Yes ☑No
	-	th out the figures requested (figures can hoto/map Google Earth	be combined).	
OVERALL WETLAND CA	TEGORY	(based on functions ⊡or specia	l characteristics \Box)	1
1. Category of wetland	d based on FU	NCTIONS		
	Category I - To	otal score = 23 - 27	Score for each	
	Category II - T	otal score = 20 - 22	function based	
Category III - Total score = 16 - 19		on three		
X	Category IV -	Total score = 9 - 15	ratings	
			(order of ratings	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List appropriate rating (H, M, L)			
Site Potential	L	М	М	
Landscape Potential	L	L	L	
Value	Н	М	М	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	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	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	S 4.1	1
(can be added to another figure)		'
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	2
polygons for accessible habitat and undisturbed habitat		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	e water levels in the entire unit usual	y controlled by tides 6	except during floods?
√	NO - go to 2	☐ YES - the wetland	d class is Tidal Fringe - go to 1.1
1.1	Is the salinity of the water during per	iods of annual low flo	w below 0.5 ppt (parts per thousand)?
		a Freshwater Tidal Fr Estuarine wetland al	☐ YES - Freshwater Tidal Fringe inge use the forms for Riverine wetlands. Ind is not scored. This method cannot be
	tire wetland unit is flat and precipitati ater and surface water runoff are NO	•	•
√	NO - go to 3 If your wetland can be classified as a	_	☐ YES - The wetland class is Flats he form for Depressional wetlands.
	ne entire wetland unit meet all of the The vegetated part of the wetland is plants on the surface at any time of t At least 30% of the open water area	on the shores of a bo he year) at least 20 a	•
7	NO - go to 4	☐ YES - The wetlan	d class is Lake Fringe (Lacustrine Fringe)
✓ ✓	ne entire wetland unit meet all of the The wetland is on a slope (<i>slope car</i> The water flows through the wetland It may flow subsurface, as sheetflow The water leaves the wetland witho	n be very gradual), in one direction (unic r, or in a swale withou	
	NO - go to 5	[☑ YES - The wetland class is Slope
	urface water does not pond in these tons or behind hummocks (depression		pt occasionally in very small and shallow ameter and less than 1 ft deep).
	ne entire wetland unit meet all of the The unit is in a valley, or stream cha from that stream or river, The overbank flooding occurs at leas	nnel, where it gets inc	•
	NO - go to 6	[☐ YES - The wetland class is Riverine
NOTE: Th	ne Riverine unit can contain depressi	ons that are filled with	n water when the river is not flooding.

Wetland name or number _	W6			
6. Is the entire wetland	I unit in a topographic depre	ession in which water ponds	s, or is saturated to the surface	, at

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

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

SLOPE WETLANDS		
Water Quality Functions - Indicators that the site functions to im	prove water quality	
S 1.0. Does the site have the potential to improve water quality?	,p	
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	1
Slope is > 2% - 5%	points = 1	
Slope is greater than 5%	points = 0	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic	F	
(use NRCS definitions):	Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollu		
Choose the points appropriate for the description that best fits the plants in the	wetland. <i>Dense</i>	
means you have trouble seeing the soil surface (>75% cover), and uncut mean	ns not grazed or	
mowed and plants are higher than 6 in.		
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6	2
Dense, uncut, herbaceous plants > $\frac{1}{2}$ of area	points = 3	
Dense, woody, plants > ½ of area	points = 2	
Dense, uncut, herbaceous plants > 1/4 of area	points = 1	
Does not meet any of the criteria above for plants	points = 0	
Total for S 1 Add the points	in the boxes above	3
Deting of Cite Detential If some in	D 14 C	
Rating of Site Potential If score is: $\Box 12 = H \Box 6 - 11 = M \Box 0 - 5 = L$	Record the rating on	the first page
		the first page
S 2.0. Does the landscape have the potential to support the water quality functi		the first page
S 2.0. Does the landscape have the potential to support the water quality functi S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in	on of the site?	the first page
S 2.0. Does the landscape have the potential to support the water quality functi S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?		
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are	on of the site?	
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?	on of the site? Yes = 1 No = 0	
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources	on of the site? Yes = 1 No = 0 Yes = 1 No = 0	0
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points	on of the site? Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above	0 0 0
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources	on of the site? Yes = 1 No = 0 Yes = 1 No = 0	0 0 0
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points	on of the site? Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on	0 0 0
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L	on of the site? Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on	0 0 the first page
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: \[\sumsymbol{1} - 2 = M \] \[\sumsymbol{\su} 0 = L \]	on of the site? Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on	0 0 0
S 2.0. Does the landscape have the potential to support the water quality functions 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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?	on of the site? Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on ?	0 0 the first page
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M ✓0 = L 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,	on of the site? Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on ?	0 0 the first page
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue?	on of the site? Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on ? Yes = 1 No = 0	0 0 the first page
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? 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. S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the basin in	on of the site? Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on ? Yes = 1 No = 0	0 0 the first page
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? 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. S 3.3. Has the site been identified in a watershed or local plan as important for	on of the site? Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on ? Yes = 1 No = 0	0 0 the first page 0 1
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M ☑0 = L 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? 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. S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the basin in which the unit is found?	on of the site? Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on ? Yes = 1 No = 0 Yes = 1 No = 0	0 0 the first page 0 1

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 d	uring surface flows.	1		
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1			
All other conditions	points = 0			
Rating of Site Potential If score is:	Record the rating on	the first page		
S 5.0. Does the landscape have the potential to support hydrologic functions o	f 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 nage		
rating of Earlasape i Steritiar in Score is.	record the rating on	the mat 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.,		1		
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			
S 6.2. Has the site been identified as important for flood storage or flood		0		
conveyance in a regional flood control plan?	Yes = 2 No = 0	U		
Total for S 6 Add the points	in the boxes above	1		
Rating of Value If score is: $\square 2 - 4 = H \square 1 = M \square 0 = L$	Record the rating on			

NOTES and FIELD OBSERVATIONS:

Dense uncut rigid plants are blackberries

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 3 structures: points = 2 ☐ Emergent ☑ 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 \(\frac{1}{4} \) ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☐ Seasonally flooded or inundated 3 types present: points = 2 0 ☐ Occasionally flooded or inundated 2 types present: points = 1 1 types present: points = 0 ☑ Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 0 None = 0 points **Low** = 1 point Moderate = 2 points All three diagrams in this row are **HIGH** = 3 points

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

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

WDFW Priority Habitats

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

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

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

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

Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various species of native fish and wildlife (full descriptions in WDFW PHS report).

Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.

Old-growth/Mature forests: Old-growth west of Cascade crest – Stands of at least 2 tree species,

forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests — Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.

□ Oregon White Oak: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (full descriptions in WDFW PHS report p. 158 – see web link above).

☐ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

■ Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161 – see web link above).

☐ **Instream**: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.

■ Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page).

☐ **Caves**: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.

☐ **Cliffs**: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.

□ **Talus**: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

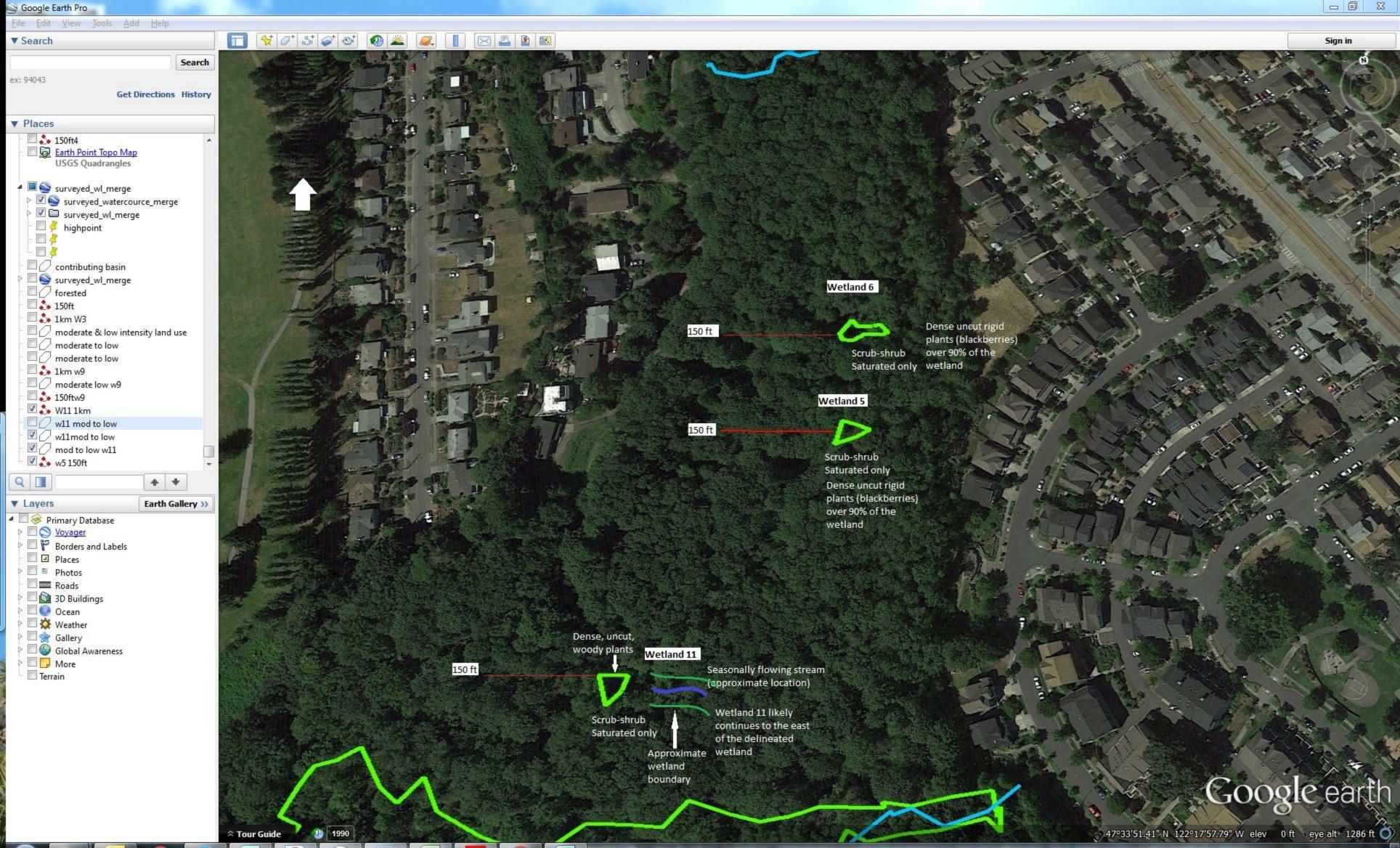
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

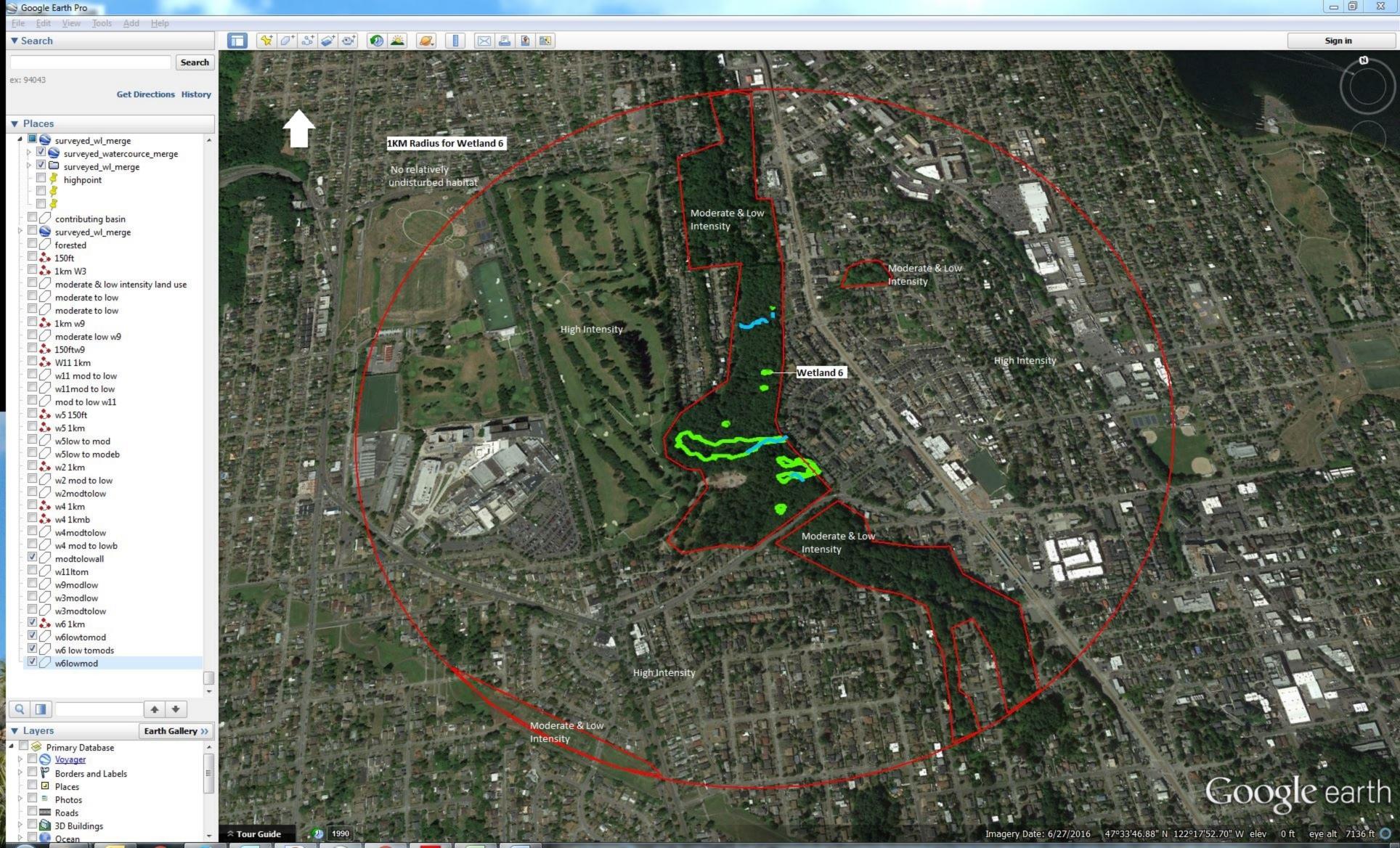
Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

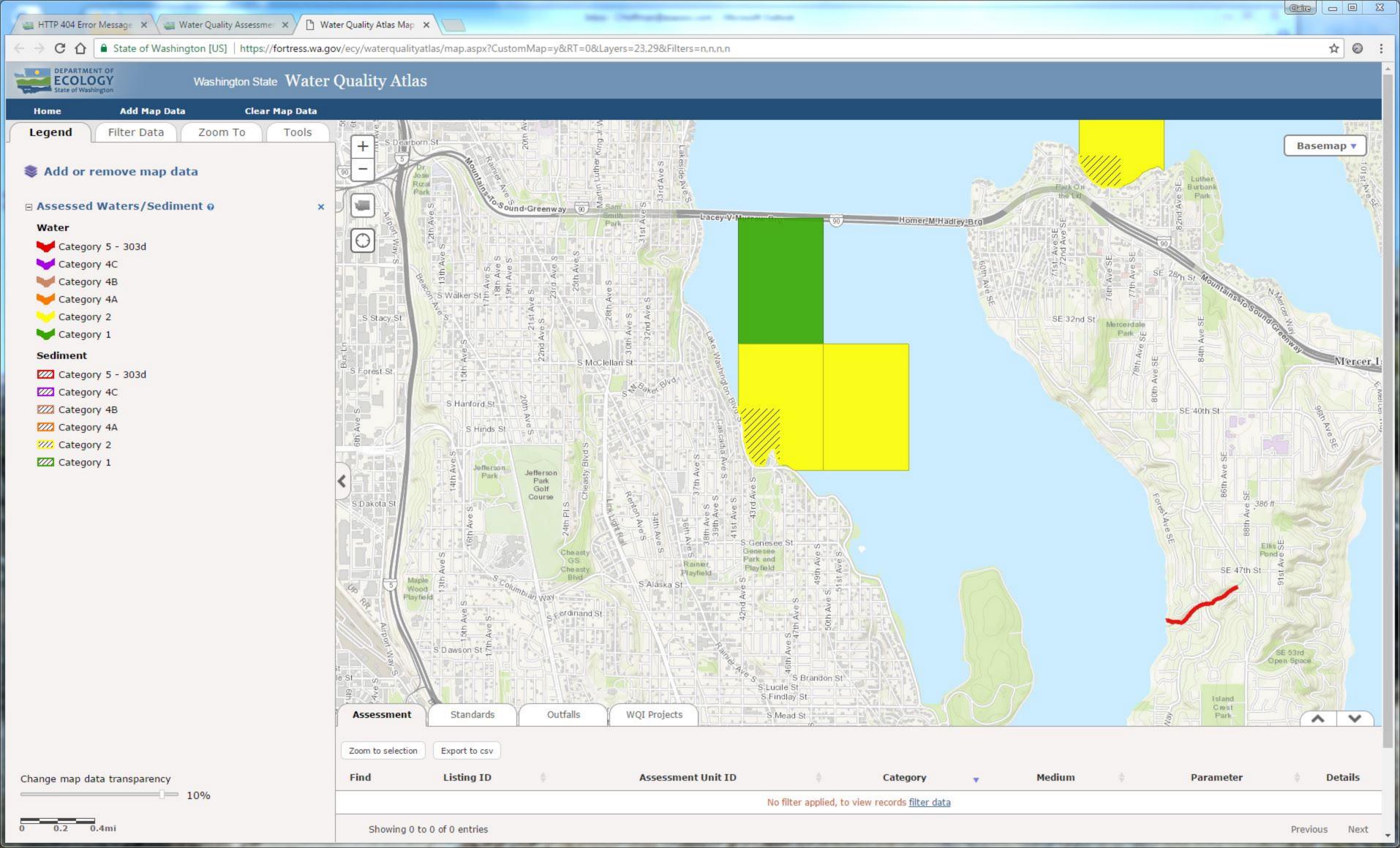
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
SC 1.0. E	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt ☐ Yes - Go to SC 1.1 ☐ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
00 1.1.	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
	☐ Yes = Category I ☐ No = Category II	
	Wetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list	
	of Wetlands of High Conservation Value?	
	☐ Yes - Go to SC 2.2 ☑ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
	☐ 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	
SC 2.4.	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☑ No = Not WHCV	
36 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?	
	Yes = Category I □ No = Not WHCV	
SC 3.0. E		
30 3.0.	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,	
SC 2 4	the wetland is a bog.	
SC 3.4.	Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir,	
	western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann	
	spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?	
	☐ Yes = Is a Category I bog ☐ No = Is not a bog	

SC 4.0. I	Forested Wetlands	
	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	answer YES you will still need to rate the wetland based on its functions.	
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
	200 years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	☐ Yes = Category I ☑ No = Not a forested wetland for this section	
SC 5.0. \	Wetlands in Coastal Lagoons	
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
	The wetland lies in a depression adjacent to marine waters that is wholly or partially	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>	
	be measured near the bottom)	
00 5 4 5	☐ Yes - Go to SC 5.1 ☑ No = Not a wetland in a coastal lagoon	
	Does the wetland meet all of the following three conditions?	
Ш	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	
SC 6.0. I	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	
00 0.1.	(rates H,H,H or H,H,M for the three aspects of function)?	
	☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.2.	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	
= 2.0.	1 ac?	
	☐ Yes = Category III ☐ No = Category IV	
Categor	y of wetland based on Special Characteristics	
_	swored No for all types, enter "Not Applicable" on Summary Form	







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		WASHINGTON LAKE	Dieldrin	Tissue
76479		WASHINGTON LAKE	Dieldrin	Tissue
77049		WASHINGTON LAKE	Chlordane	Tissue
77050		WASHINGTON LAKE	Chlordane	Tissue
77064		WASHINGTON LAKE	Chlordane	Tissue
500009		WASHINGTON LAKE	Sediment Bioassay	Sediment
500010		WASHINGTON LAKE	Sediment Bioassay	Sediment
8078		WASHINGTON LAKE	Lead	Water
11960		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		WASHINGTON LAKE	Bacteria	Water
12196		WASHINGTON LAKE	Bacteria	Water
12197		WASHINGTON LAKE	Bacteria	Water
12200		WASHINGTON LAKE	Bacteria	Water
12201		WASHINGTON LAKE	Bacteria	Water
12202		WASHINGTON LAKE	Bacteria	Water
43481		WASHINGTON LAKE	Toxaphene	Tissue
43483		WASHINGTON LAKE	Mercury	Tissue
43484		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
	1 WASHINGTON LAKE	Total Phosphorus	Water
52863	1 WASHINGTON LAKE	Total Phosphorus	Water
52864	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
75309	1 WASHINGTON LAKE	Endrin	Tissue

Figure 4. TMDL List, Page 3

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

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	e 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 \square)				
1. Category of wetland based on FUN	CTIONS					
Category I - Tota	al score = 23 - 27	Score for each				
		unction based				
		on three				
	otal score = 9 - 15	atings order of ratings				

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	propriate rating	g (H, M, L)	
Site Potential	L	L	L	
Landscape Potential	M	М	М	
Value	Н	Н	М	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	Х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	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	S 4.1	1
(can be added to another figure)		'
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	2
polygons for accessible habitat and undisturbed habitat		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 L	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 d	during periods of annual low flow below 0.5 ppt (parts per thousand)?
	sified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. e it is an Estuarine wetland and is not scored. This method cannot be
	precipitation is the only source (>90%) of water to it. off are NOT sources of water to the unit.
☑ NO - go to 3 If your wetland can be class	☐ YES - The wetland class is Flats sified as a Flats wetland, use the form for Depressional wetlands.
plants on the surface at any	all of the following criteria? vetland is on the shores of a body of permanent open water (without any y time of the year) at least 20 ac (8 ha) in size; rater area is deeper than 6.6 ft (2 m).
☑ NO - go to 4	☐ YES - The wetland class is Lake Fringe (Lacustrine Fringe)
It may flow subsurface, as	
\square NO - go to 5	☑ YES - The wetland class is Slope
·	in these type of wetlands except occasionally in very small and shallow epressions are usually <3 ft diameter and less than 1 ft deep).
from that stream or river,	all of the following criteria? ream channel, where it gets inundated by overbank flooding urs 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.

Wetland name or number	W8
------------------------	----

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

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

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

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

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

SLOPE WETLANDS		
Water Quality Functions - Indicators that the site functions to im	prove 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	0
Slope is > 1% - 2%	points = 2	2
Slope is > 2% - 5%	points = 1	
Slope is greater than 5%	points = 0	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic	·	0
(use NRCS definitions):	Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollu		
Choose the points appropriate for the description that best fits the plants in the		
means you have trouble seeing the soil surface (>75% cover), and uncut mear	ns not grazed or	
mowed and plants are higher than 6 in.		
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6	1
Dense, uncut, herbaceous plants > ½ of area	points = 3	
Dense, woody, plants > ½ of area	points = 2	
Dense, uncut, herbaceous plants > ½ of area	points = 1	
Does not meet any of the criteria above for plants	points = 0	
	in the boxes above	3
Rating of Site Potential If score is:	Record the rating on	tne first pag
S 2.0. Does the landscape have the potential to support the water quality funct	ion of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in		1
and uses that generate pollutants?	Yes = 1 No = 0	•
S 2.2. Are there other sources of pollutants coming into the wetland that are		
not listed in question S 2.1?		0
Other Sources	Yes = 1 No = 0	
'	in the boxes above	1
Rating of Landscape Potential If score is:	Record the rating on	the first pag
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,		0
	Yes = 1 No = 0	
ake, or marine water that is on the 303(d) list?		
3 3.2. Is the wetland in a basin or sub-basin where water quality is an issue?		1
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue?	Yes = 1 No = 0	1
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. S 3.3. Has the site been identified in a watershed or local plan as important for		1
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. S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the basin in		2
ake, or marine water that is on the 303(d) list? 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. S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the basin in which the unit is found?		
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. 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?		

SLOPE WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce floor	oding and stream ero	osion
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	-	
should be thick enough (usually $> 1/8$ in), or dense enough, to remain erect du	uring surface flows.	0
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	
Rating of Site Potential If score is: ☐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	f the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land		1
uses or cover that generate excess surface runoff?	Yes = 1 No = 0	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.,		2
houses or salmon redds)	points = 2	2
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
No flooding problems anywhere downstream	points = 0	
S 6.2. Has the site been identified as important for flood storage or flood		0
conveyance in a regional flood control plan?	Yes = 2 No = 0	<u> </u>
Total for S 6 Add the points	in the boxes above	2
Rating of Value If score is: 2 - 4 = H 1 = M 0 = L	Record the rating on	the first page

NOTES and FIELD OBSERVATIONS:

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 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 3 structures: points = 2 ☐ Emergent ☐ 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 \(\frac{1}{4} \) ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☑ Seasonally flooded or inundated 3 types present: points = 2 1 ☐ Occasionally flooded or inundated 2 types present: points = 1 1 types present: points = 0 ☑ Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 0 None = 0 points **Low** = 1 point Moderate = 2 points All three diagrams in this row are **HIGH** = 3 points

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

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

WDFW Priority Habitats

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

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

years old west of the Cascade crest.

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

☐ **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).

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

☐ **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.

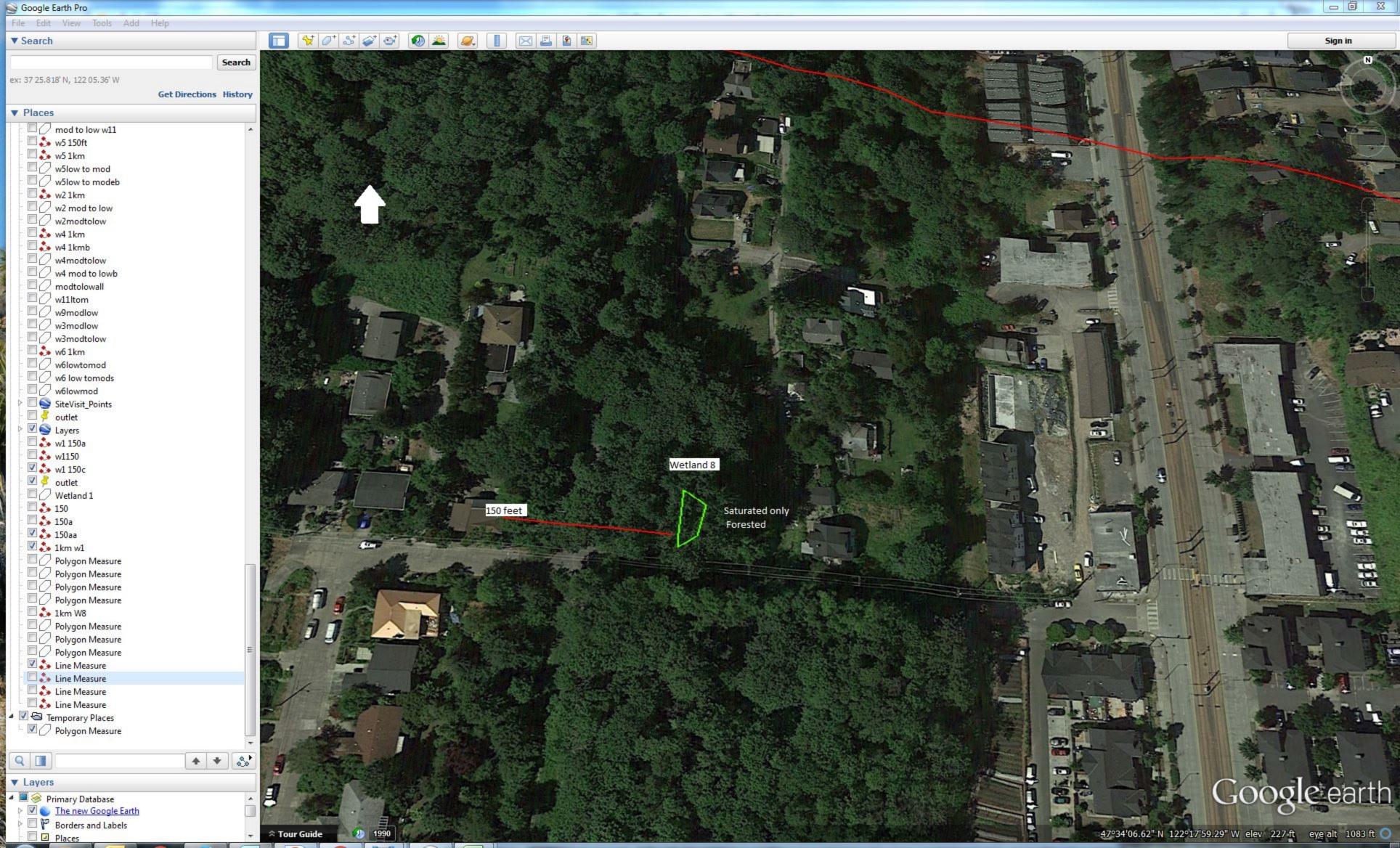
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

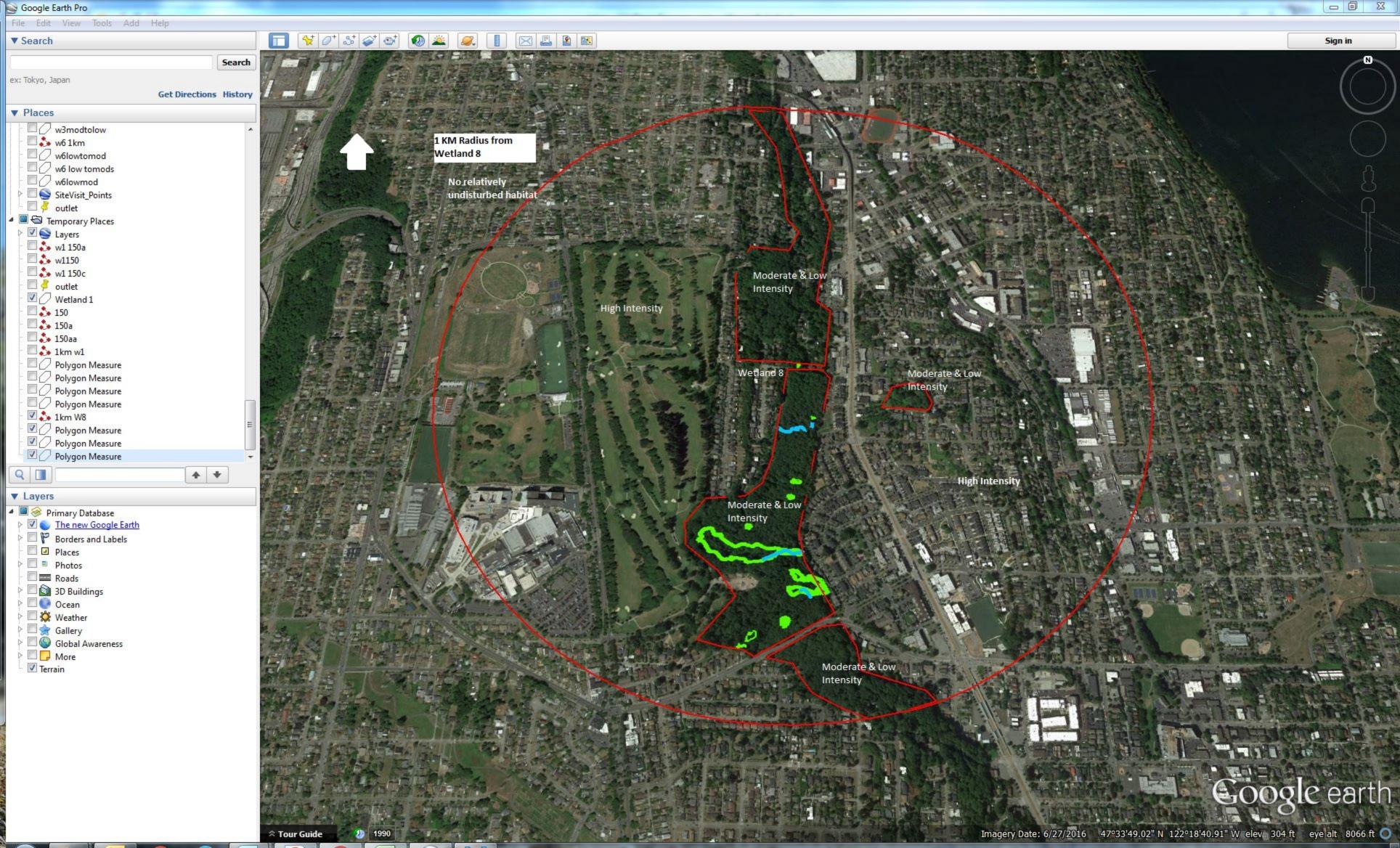
Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

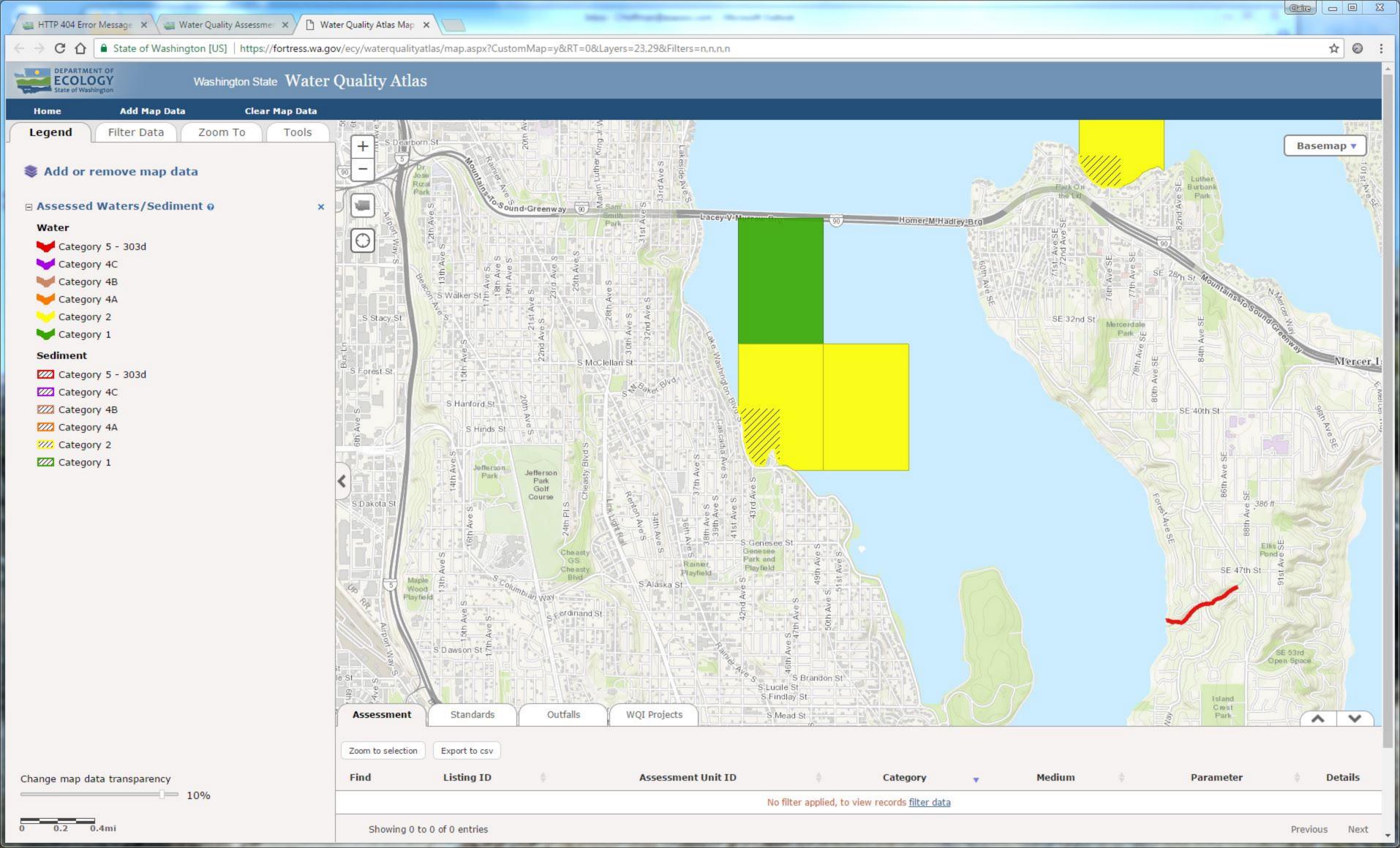
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

SC 4.0. I	Forested Wetlands		
	Does the wetland have at least 1 contiguous acre of forest that meets one of these		
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>		
	· · · · · · · · · · · · · · · · · · ·		
	answer YES you will still need to rate the wetland based on its functions.		
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,		
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac		
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height		
	(dbh) of 32 in (81 cm) or more.		
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-		
	200 years old OR the species that make up the canopy have an average diameter (dbh)		
	exceeding 21 in (53 cm).		
	□ Voc = Catagory I □ No = Not a forested watland for this coation		
00.50.1	☐ Yes = Category I ☐ No = Not a forested wetland for this section		
SC 5.0. \	Wetlands in Coastal Lagoons		
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?		
	The wetland lies in a depression adjacent to marine waters that is wholly or partially		
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,		
	rocks		
	The lagoon in which the wetland is located contains ponded water that is saline or		
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>		
	be measured near the bottom)		
	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon		
C 5 1 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 $\frac{3}{4}$ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-		
	grazed or un-mowed grassland.		
	The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²)		
	☐ Yes = Category I ☐ No = Category II		
SC 6.0. Interdunal Wetlands			
JC 0.0. I	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		
0.1.	(rates H,H,H or H,H,M for the three aspects of function)?		
	Yes = Category I □ No - Go to SC 6.2		
SC 6 0			
SC 6.2.	Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?		
0005	☐ 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			
	swered No for all types, enter "Not Applicable" on Summary Form		







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		WASHINGTON LAKE	Dieldrin	Tissue
76479		WASHINGTON LAKE	Dieldrin	Tissue
77049		WASHINGTON LAKE	Chlordane	Tissue
77050		WASHINGTON LAKE	Chlordane	Tissue
77064		WASHINGTON LAKE	Chlordane	Tissue
500009		WASHINGTON LAKE	Sediment Bioassay	Sediment
500010		WASHINGTON LAKE	Sediment Bioassay	Sediment
8078		WASHINGTON LAKE	Lead	Water
11960		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
	1 WASHINGTON LAKE	Total Phosphorus	Water
52863	1 WASHINGTON LAKE	Total Phosphorus	Water
52864	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
75309	1 WASHINGTON LAKE	Endrin	Tissue

Figure 4. TMDL List, Page 3

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

RATING SUMMARY – Western Washington

Name of wetland (or ID #):	Wetland 9		Date of site visit:	20-Oct-16
Rated by Claire Hoffman	Trained by Ed	cology? ☑ Yes ☐ No	Date of training	2008
HGM Class used for rating	Slope	Wetland has multip	ole HGM classes? ☐	Yes ☑No
	ot complete with out the figures re of base aerial photo/map google ear		be combined).	
OVERALL WETLAND CA	TEGORY IV (based on t	functions	al characteristics \Box)	1
1. Category of wetlan	l based on FUNCTIONS			
	Category I - Total score = 23 - 27		Score for each	
	Category II - Total score = 20 - 22		function based	
	Category III - Total score = 16 - 19		on three	
X	Category IV - Total score = 9 - 15		ratings	
			(order of ratings	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
List appropriate rating (H, M, L)				
Site Potential	L	М	L	
Landscape Potential	L	L	L	
Value	Н	М	М	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	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	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	S 4.1	1
(can be added to another figure)		'
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	2
polygons for accessible habitat and undisturbed habitat		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.

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

Wetland name or number	W9	
-		

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

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

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

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

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

SLOPE WETLANDS			
Water Quality Functions - Indicators that the site functions to im	iprove water q	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 dro	p in	
elevation for every 100 ft of horizontal distance)			
Slope is 1% or less	poin	ıts = 3	1
Slope is > 1% - 2%	poin	its = 2	
Slope is > 2% - 5%	poin	its = 1	
Slope is greater than 5%	poin	ts = 0	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic			0
(use NRCS definitions):		1o = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollu			
Choose the points appropriate for the description that best fits the plants in the			
means you have trouble seeing the soil surface (>75% cover), and uncut mean	ns not grazed (or	
mowed and plants are higher than 6 in.	noin	to - 6	
Dense, uncut, herbaceous plants > 90% of the wetland area	•	its = 6	2
Dense, uncut, herbaceous plants > ½ of area		its = 3	
Dense, woody, plants > ½ of area	•	its = 2	
Dense, uncut, herbaceous plants > ½ of area	•	its = 1	
Does not meet any of the criteria above for plants	<u> </u>	nts = 0	
Total for S 1 Add the points			3
Rating of Site Potential If score is: $\Box 12 = H \Box 6 - 11 = M \Box 0 - 5 = L$	Record the rat	itina on	tha tiret nama
			ine msi page
S 2.0. Does the landscape have the potential to support the water quality functi			ure mst page
S 2.0. Does the landscape have the potential to support the water quality functi	ion of the site?		0
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are	ion of the site?	?	
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?	ion of the site?	?	
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are	on of the site? Yes = 1 N	?	0
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?	on of the site? Yes = 1 N Yes = 1 N	? No = 0	0
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources	on of the site? Yes = 1 N Yes = 1 N	? No = 0 No = 0 above	0 0 0
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points	Yes = 1 N Yes = 1 N Yes = 1 N in the boxes a Record the rai	? No = 0 No = 0 above	0 0 0
S 2.0. Does the landscape have the potential to support the water quality functions 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M	Yes = 1 N Yes = 1 N Yes = 1 N in the boxes a Record the rai	? No = 0 No = 0 above	0 0 0 the first page
S 2.0. Does the landscape have the potential to support the water quality functions S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L	Yes = 1 N Yes = 1 N Yes = 1 N in the boxes a Record the rain ?	? No = 0 No = 0 above	0 0 0
S 2.0. Does the landscape have the potential to support the water quality functions 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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,	Yes = 1 N Yes = 1 N Yes = 1 N in the boxes a Record the rain ?	? No = 0 No = 0 above	0 0 the first page
S 2.0. Does the landscape have the potential to support the water quality functions 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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 N Yes = 1 N Yes = 1 N in the boxes a Record the rain Yes = 1 N	? No = 0 No = 0 above	0 0 0 the first page
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M ✓0 = L 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? S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue?	Yes = 1 N Yes = 1 N Yes = 1 N in the boxes a Record the rai Yes = 1 N Yes = 1 N	? No = 0 above string on	0 0 the first page
S 2.0. Does the landscape have the potential to support the water quality functions 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? 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. S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the basin in	Yes = 1 N Yes = 1 N Yes = 1 N in the boxes a Record the rai Yes = 1 N Yes = 1 N	? No = 0 above string on	0 0 the first page
S 2.0. Does the landscape have the potential to support the water quality functions 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? 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. S 3.3. Has the site been identified in a watershed or local plan as important for	Yes = 1 N Yes = 1 N Yes = 1 N in the boxes a Record the rai Yes = 1 N Yes = 1 N	? No = 0 above string on	0 0 the first page 0 1
S 2.0. Does the landscape have the potential to support the water quality functions 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? 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. S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the basin in	Yes = 1 N Yes = 1 N Yes = 1 N in the boxes a Record the rate Yes = 1 N Yes = 1 N Yes = 1 N	? No = 0 above ating on No = 0 No = 0	0 0 the first page 0 1

SLOPE WETLANDS			
Hydrologic Functions - Indicators that the site functions to reduce flooding	and stream ero	sion	
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 storm	s: Choose		
the points appropriate for the description that best fits conditions in the wetland. Ster	ns of plants		
should be thick enough (usually $> 1/8$ in), or dense enough, to remain erect during s	surface flows.	1	
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1		
All other conditions	points = 0		
Rating of Site Potential If score is: 1 = M	ord the rating on t	he first page	
S 5.0. Does the landscape have the potential to support hydrologic functions of the s	ite?		
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land		0	
uses or cover that generate excess surface runoff?	s = 1 No = 0	U	
Rating of Landscape Potential If score is:	ord the rating on t	he 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.,		1	
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		
S 6.2. Has the site been identified as important for flood storage or flood		0	
conveyance in a regional flood control plan?	s = 2 No = 0	U	
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 Reco	ord the rating on t	he 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.

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 3 structures: points = 2 ☐ Emergent ☑ 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 \(\frac{1}{4} \) ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☐ Seasonally flooded or inundated 3 types present: points = 2 0 ☐ Occasionally flooded or inundated 2 types present: points = 1 1 types present: points = 0 ☑ Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple 0 loosestrife, Canadian thistle If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 0 None = 0 points **Low** = 1 point Moderate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number	
of points. ☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)	
☐ Standing snags (dbh > 4 in) within the wetland	
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends	
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at	
least 33 ft (10 m)	0
☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees</i>	
that have not yet weathered where wood is exposed)	
☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas	
that are permanently or seasonally inundated (structures for egg-laying by amphibians)	
☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see	
H 1.1 for list of strata)	
Total for H 1 Add the points in the boxes above	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 <i>only habitat that directly abuts wetland unit</i>).	
Calculate:	
0 % undisturbed habitat + (10 % moderate & low intensity land uses / 2) = 5%	
If total appearible, helpitaties	0
If total accessible habitat is:	0
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20 - 33% of 1 km Polygon points = 2	
10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0	
<pre>< 10 % of 1 km Polygon points = 0 H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</pre>	
Calculate:	
0 % undisturbed habitat + (17 % moderate & low intensity land uses / 2) = 8.5%	
(•
Undisturbed habitat > 50% of Polygon points = 3	0
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2	
Undisturbed habitat 10 - 50% and > 3 patches points = 1	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3 Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-2)	-2
≤ 50% of 1km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above	-2
Rating of Landscape Potential If Score is:	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	1
Department of Natural Resources	
☐ It has been categorized as an important habitat site in a local or	
regional comprehensive plan, in a Shoreline Master Plan, or in a	
watershed plan	
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1	
Site does not meet any of the criteria above points = 0	
Rating of Value If Score is: 2 = H 2 1 = M 0 = L Record the rating on	the first page

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

WDFW Priority Habitats

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

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

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

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

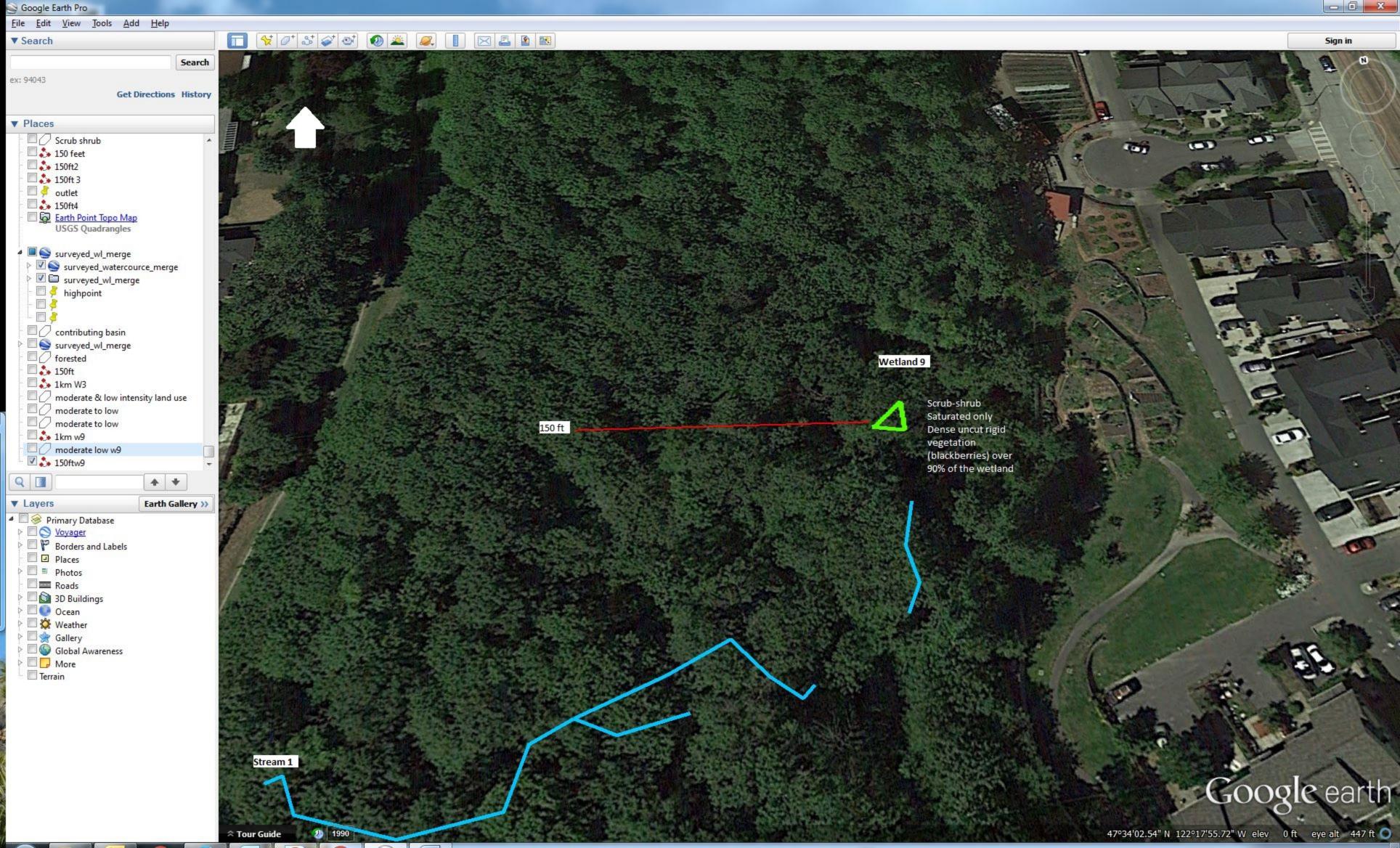
in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

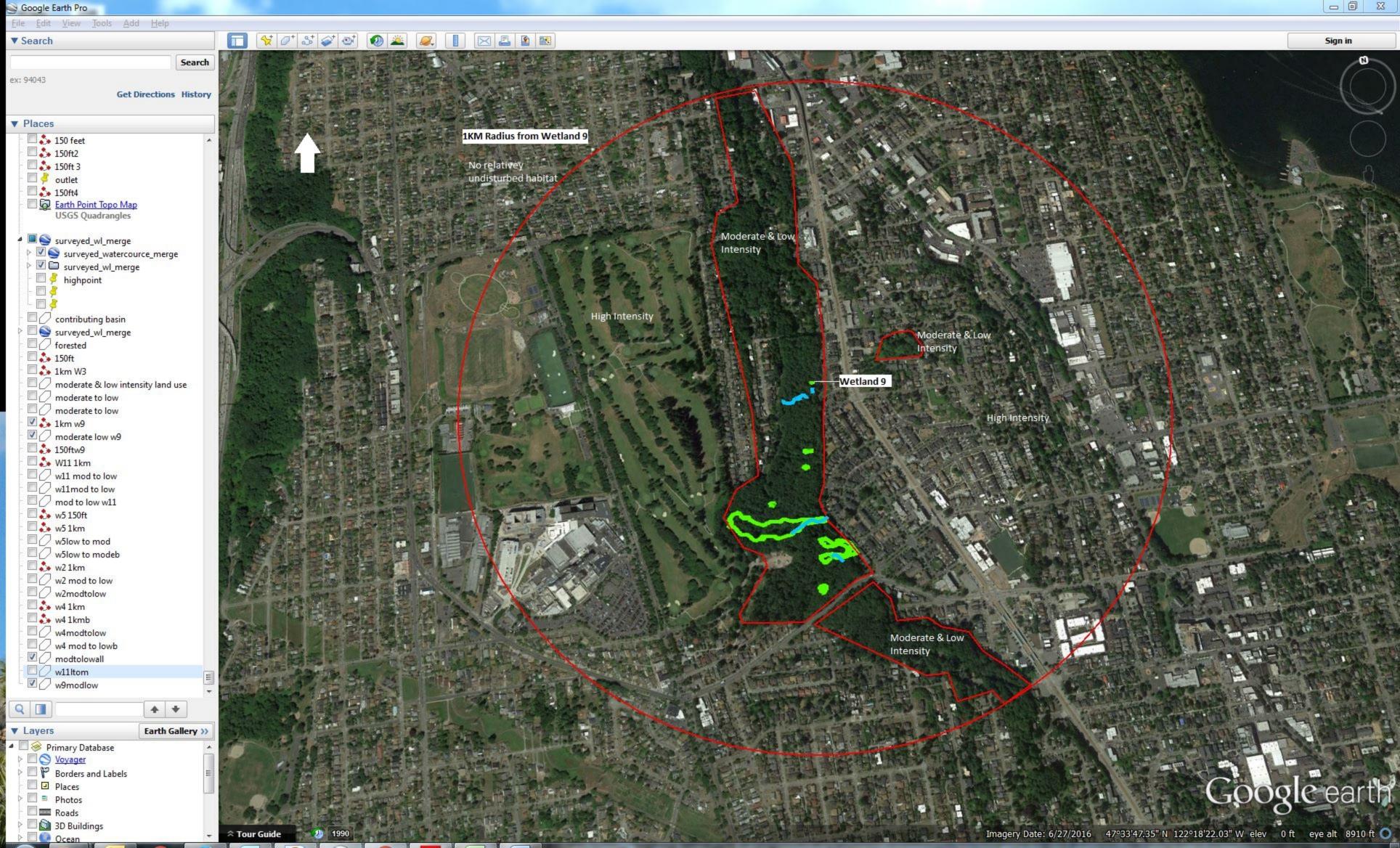
height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12

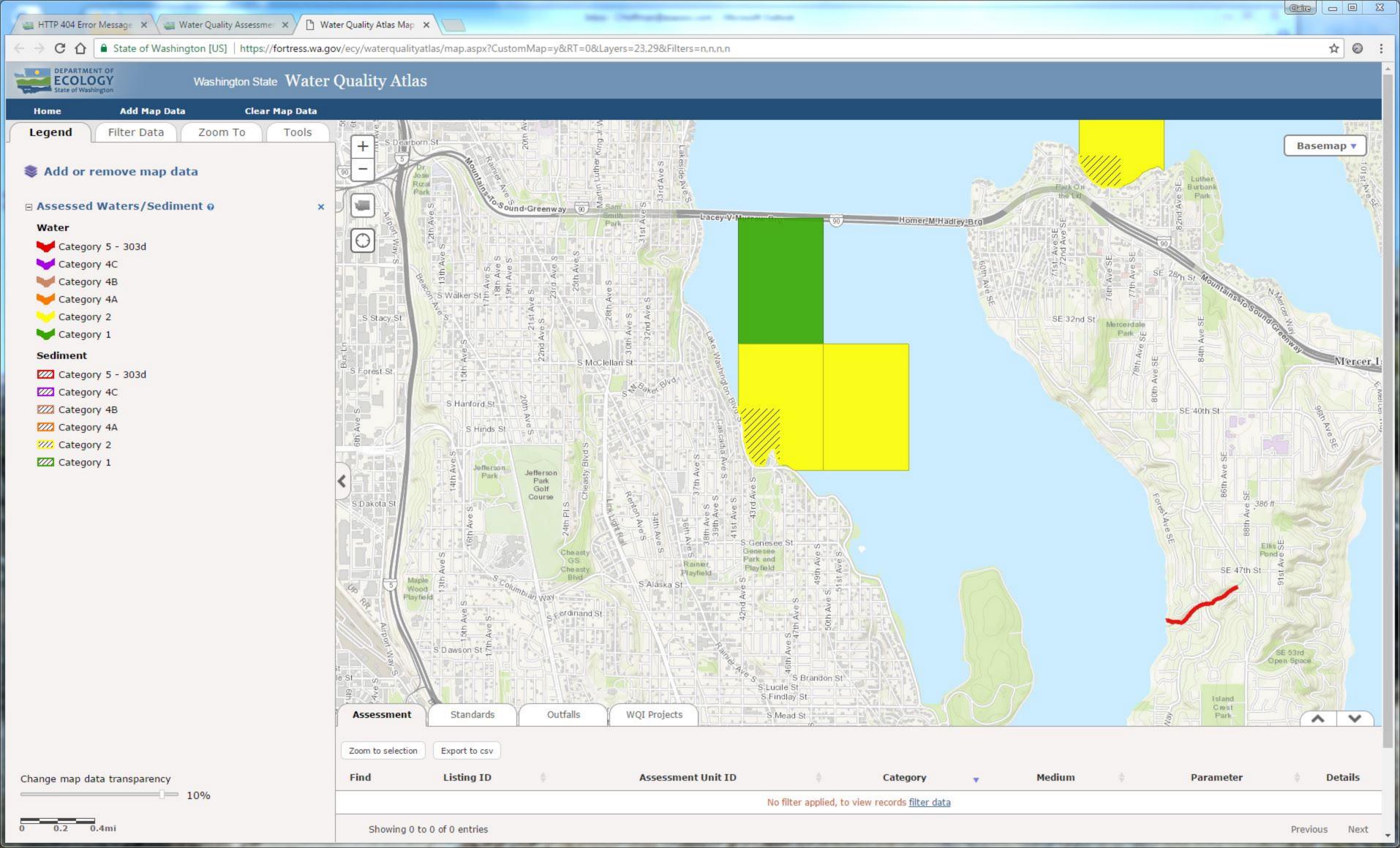
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
SC 1.0. E	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands? The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
	☐ Yes - Go to SC 1.1 ☐ No = Not an estuarine wetland	
SC 1.1.	Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
2000	☐ Yes = Category I ☐ No = Category II	
SC 2.0. V	Netlands of High Conservation Value (WHCV) Has the WA Department of Natural Resources updated their website to include the list	
00 2.1.	of Wetlands of High Conservation Value?	
	☐ Yes - Go to SC 2.2 ☐ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
	☐ Yes = Category I ☐ 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. E		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation	
	in bogs? Use the key below. If you answer YES you will still need to rate the	
0004	wetland based on its functions.	
SC 3.1.	Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
00 0.2.	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	☐ Yes - Go to SC 3.3 ☐ No = Is not a bog	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4?	
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4	
	NOTE: If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
	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	
OO 4.0	Does the wetland have at least 1 contiguous acre of forest that meets one of these	
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>	
	answer YES you will still need to rate the wetland based on its functions.	
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
	(dbh) of 32 in (81 cm) or more.	
	200 years old OR the species that make up the canopy have an average diameter (dbh)	
	exceeding 21 in (53 cm).	
	exoceding 21 in (66 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?	
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
	rocks	
	The lagoon in which the wetland is located contains ponded water that is saline or	
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>	
	be measured near the bottom)	
	☐ Yes - Go to SC 5.1 ☐ No = Not a wetland in a coastal lagoon	
SC 5.1	. Does the wetland meet all of the following three conditions?	
	\mathbf{r}	
	and has less than 20% cover of aggressive, opportunistic plant species (see list of	
	species on p. 100).	
	, ,	
	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:	
	9	
L	· · · /	
	☐ Yes - Go to SC 6.1 ☑ No = Not an interdunal wetland for rating	
SC 6.1	•	
	(rates H,H,H or H,H,M for the three aspects of function)?	
0000	☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.2	_	
0000	☐ Yes = Category II ☐ No - Go to SC 6.3	
SC 6.3	·	
	1 ac?	
O 1	☐ Yes = Category III ☐ No = Category IV	
_	ory of wetland based on Special Characteristics	







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		WASHINGTON LAKE	Dieldrin	Tissue
76479		WASHINGTON LAKE	Dieldrin	Tissue
77049		WASHINGTON LAKE	Chlordane	Tissue
77050		WASHINGTON LAKE	Chlordane	Tissue
77064		WASHINGTON LAKE	Chlordane	Tissue
500009		WASHINGTON LAKE	Sediment Bioassay	Sediment
500010		WASHINGTON LAKE	Sediment Bioassay	Sediment
8078		WASHINGTON LAKE	Lead	Water
11960		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		WASHINGTON LAKE	Bacteria	Water
12196		WASHINGTON LAKE	Bacteria	Water
12197		WASHINGTON LAKE	Bacteria	Water
12200		WASHINGTON LAKE	Bacteria	Water
12201		WASHINGTON LAKE	Bacteria	Water
12202		WASHINGTON LAKE	Bacteria	Water
43481		WASHINGTON LAKE	Toxaphene	Tissue
43483		WASHINGTON LAKE	Mercury	Tissue
43484		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
	1 WASHINGTON LAKE	Total Phosphorus	Water
52863	1 WASHINGTON LAKE	Total Phosphorus	Water
52864	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
75309	1 WASHINGTON LAKE	Endrin	Tissue

Figure 4. TMDL List, Page 3

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

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 multip	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 CATEGORYIV(based on functions ⊡or special characteristics □)					
1. Category of wetland	I based on FUNCTIONS				
	Category I - Total score = 23 - 27	Score for each			
	Category II - Total score = 20 - 22	function based			
Category III - Total score = 16 - 19		on three			
X	Category IV - Total score = 9 - 15	ratings			
		(order of ratings			

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List app	propriate rating	g (H, M, L)	
Site Potential	L	L	L	
Landscape Potential	L	L	L	
Value	Н	М	М	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	х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	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	S 4.1	1
(can be added to another figure)		'
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	2
polygons for accessible habitat and undisturbed habitat		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	e 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 wate	r during periods of annual low flow below 0.5 ppt (parts per thousand)?
	assified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. nge it is an Estuarine wetland and is not scored. This method cannot be
	d precipitation is the only source (>90%) of water to it. noff are NOT sources of water to the unit.
☑ NO - go to 3 If your wetland can be cl	\Box YES - The wetland class is Flats assified as a Flats wetland, use the form for Depressional wetlands.
plants on the surface at a	et all of the following criteria? e wetland is on the shores of a body of permanent open water (without any any time of the year) at least 20 ac (8 ha) in size; water area is deeper than 6.6 ft (2 m).
☑ NO - go to 4	☐ YES - The wetland class is Lake Fringe (Lacustrine Fringe)
	et all of the following criteria? e (slope can be very gradual), the wetland in one direction (unidirectional) and usually comes from seeps. as sheetflow, or in a swale without distinct banks. tland without being impounded.
□ NO - go to 5	☑ YES - The wetland class is Slope
	nd in these type of wetlands except occasionally in very small and shallow (depressions are usually <3 ft diameter and less than 1 ft deep).
from that stream or river,	stream channel, where it gets inundated by overbank flooding
□ NO - go to 6	☐ YES - The wetland class is Riverine
NOTF : The Riverine unit can conta	ain depressions that are filled with water when the river is not flooding.

	aphic depression in which water ponds, or is saturated to the surface, as that any outlet, if present, is higher than the interior of the wetland.
□ NO - go to 7	\square YES - The wetland class is Depressional
The unit does not pond surface water n	very flat area with no obvious depression and no overbank flooding? nore than a few inches. The unit seems to be maintained by high

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

☐ YES - The wetland class is **Depressional**

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

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

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

Wetland name or number W11

 \square NO - go to 8

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

SLOPE WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion		
S 4.0. Does the site have the potential to reduce flooding and stream erosion?		
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 du	uring surface flows.	0
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	
Rating of Site Potential If score is: 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	f the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land		0
uses or cover that generate excess surface runoff?	Yes = 1 No = 0	O
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.,		1
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	
S 6.2. Has the site been identified as important for flood storage or flood		0
conveyance in a regional flood control plan?	Yes = 2 No = 0	Ŭ
Total for S 6 Add the points	in the boxes above	1
Rating of Value If score is: $\square 2 - 4 = H$ $\square 1 = M$ $\square 0 = L$	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.

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 3 structures: points = 2 ☐ Emergent ☑ 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 \(\frac{1}{4} \) ac to count (see text for descriptions of hydroperiods). ☐ Permanently flooded or inundated 4 or more types present: points = 3 ☐ Seasonally flooded or inundated 3 types present: points = 2 1 ☐ Occasionally flooded or inundated 2 types present: points = 1 1 types present: points = 0 ☑ Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☑ Seasonally flowing stream in, or adjacent to, the wetland ☐ Lake Fringe wetland 2 points ☐ Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle 1 If you counted: > 19 species points = 25 - 19 species points = 1< 5 species points = 0H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high. 2 None = 0 points **Low** = 1 point Moderate = 2 points All three diagrams in this row are **HIGH** = 3 points

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number	
of points.	
\square 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	4
least 33 ft (10 m)	1
☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning	
(> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees</i>	
that have not yet weathered where wood is exposed) ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas	
that are permanently or seasonally inundated (structures for egg-laying by amphibians)	
☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see	
H 1.1 for list of strata)	
Total for H 1 Add the points in the boxes above	5
Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 - 6 = L Record the rating on	_
Rating of one fotential in occirc is.	the mst 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:	0
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	· ·
20 - 33% of 1 km Polygon points = 2	
10 - 19% of 1 km Polygon points = 1	
< 10 % of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate:	
0 % undisturbed habitat + (20 % moderate & low intensity land uses / 2) = 10%	
Undisturbed habitat > 50% of Polygon points = 3	1
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2	
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2	
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3 Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-2)	-2
≤ 50% of 1km Polygon is high intensity and use points = (-2)	-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 <a>-	=
Rating of Landscape Fotential in Score is 4-0-11 1-3-14	the mst page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose</i>	
only the highest score that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
☐ It has 3 or more priority habitats within 100 m (see next page)	
☐ It provides habitat for Threatened or Endangered species (any plant	
or animal on the state or federal lists)	
☐ It is mapped as a location for an individual WDFW priority species	4
☐ It is a Wetland of High Conservation Value as determined by the	1
Department of Natural Resources	
☐ It has been categorized as an important habitat site in a local or	
regional comprehensive plan, in a Shoreline Master Plan, or in a	
watershed plan	
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1	
Site does not meet any of the criteria above points = 0	
Rating of Value If Score is: \square 2 = H \square 1 = M \square 0 = L Record the rating on	the first page

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

WDFW Priority Habitats

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

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

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: NOTE: This question is independent of the land use between the wetland unit and the priority habitat. Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha). ☑ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (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

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

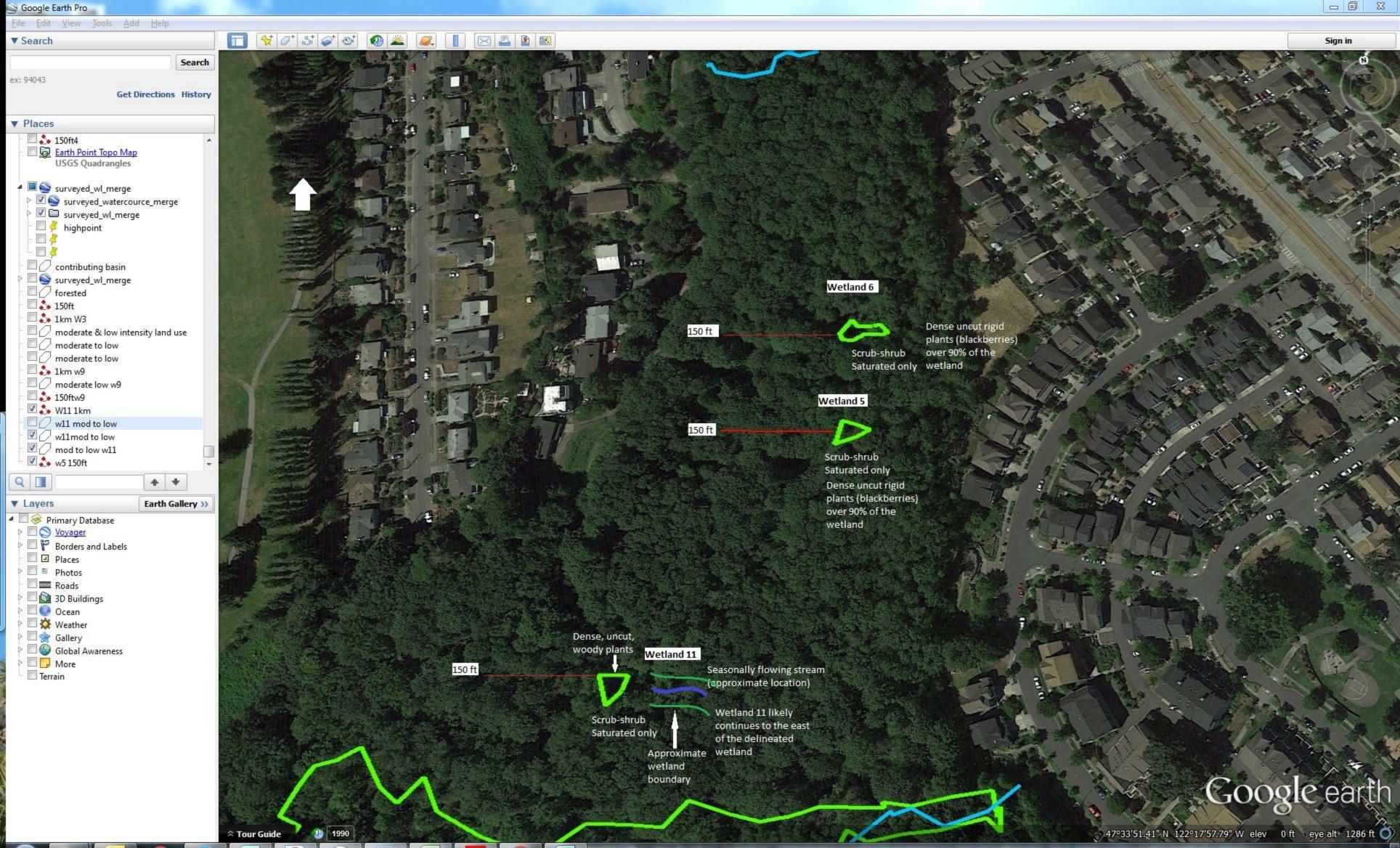
in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

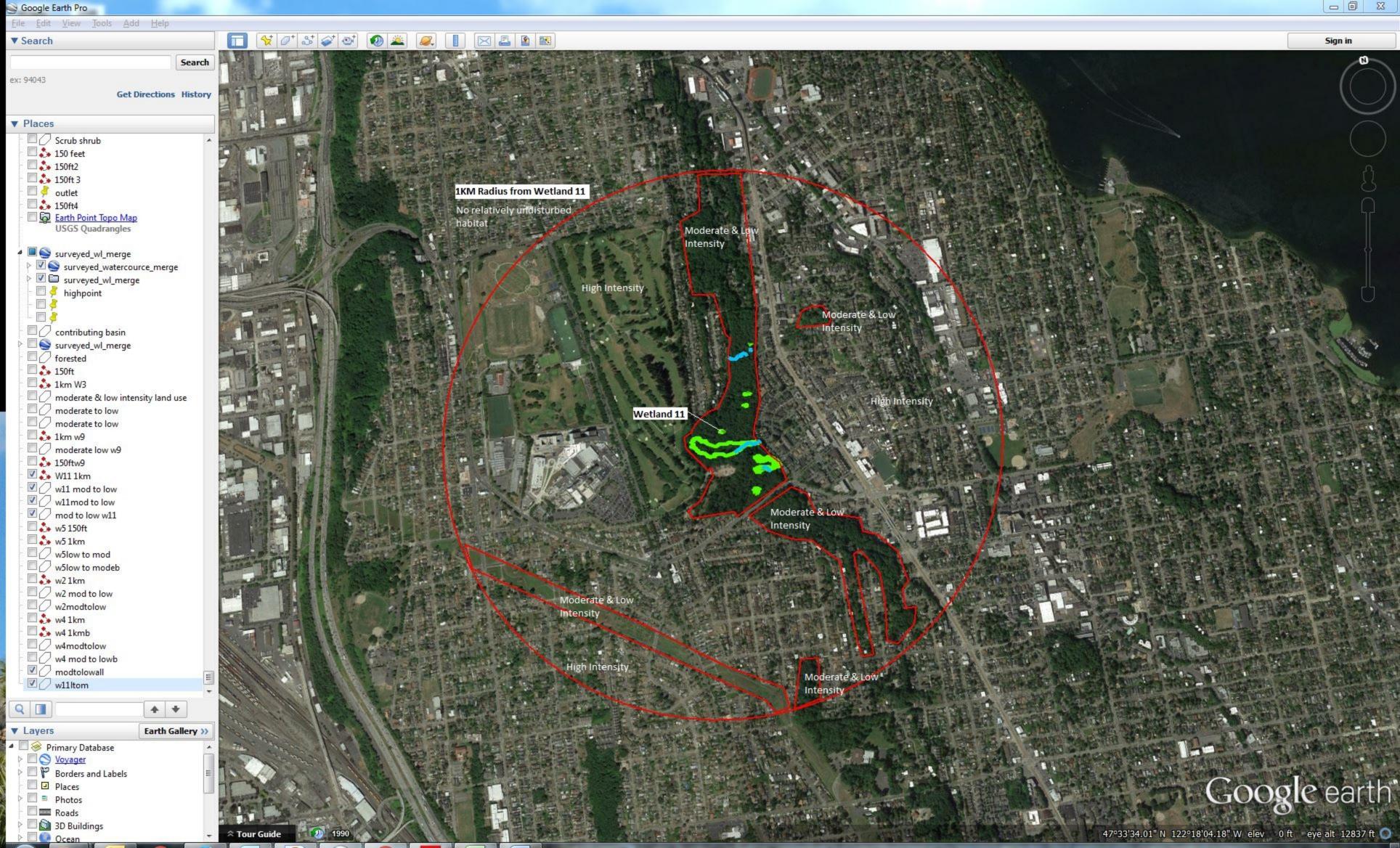
height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12

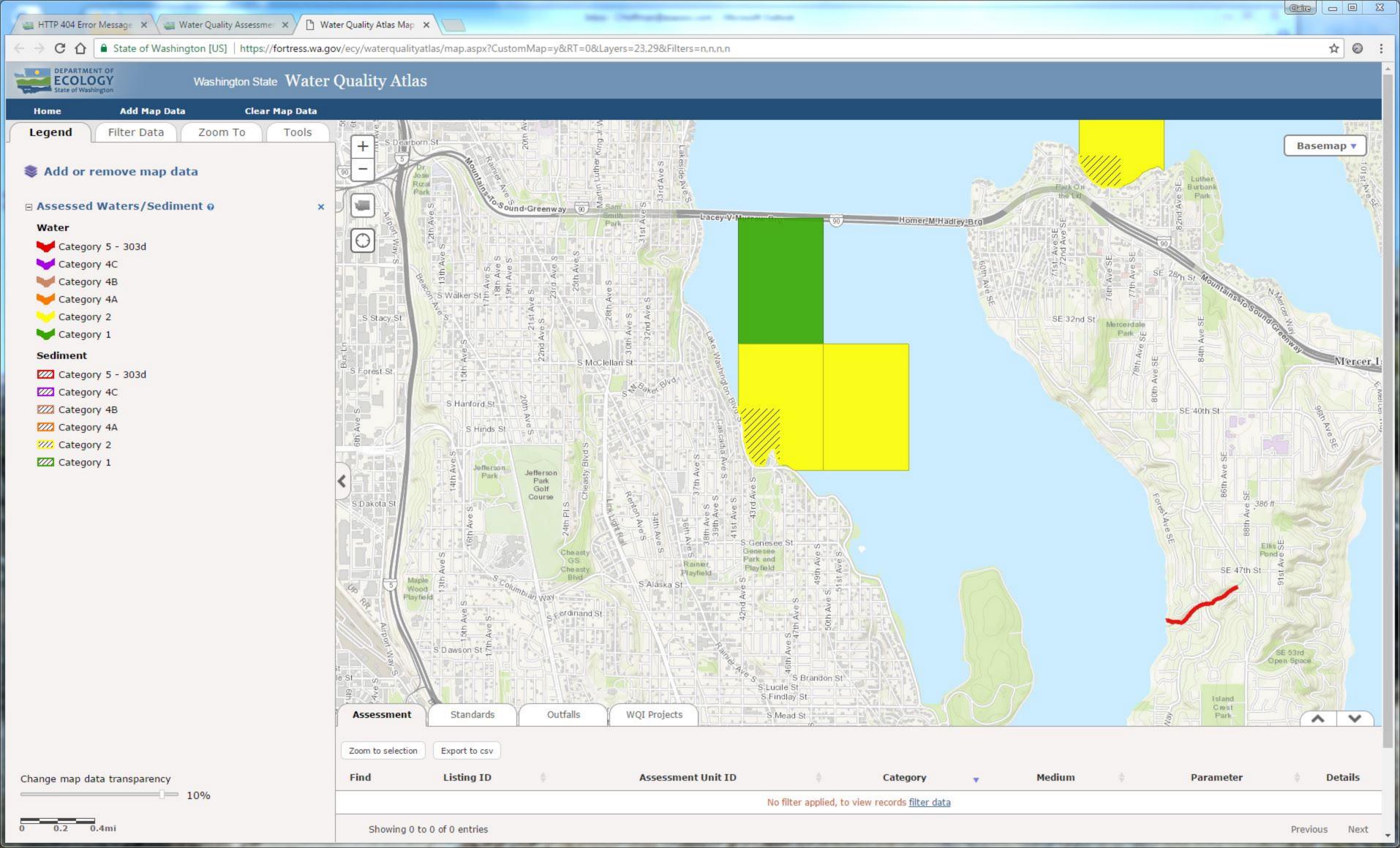
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
SC 1.0. I	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	
00 1.1.	Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific	
	Reserve designated under WAC 332-30-151?	
	☐ Yes = Category I ☐ No - Go to SC 1.2	
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
	The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing,	
	and has less than 10% cover of non-native plant species. (If non-native species are	
	Spartina, see page 25)	
	At least 3/4 of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-	
	grazed or un-mowed grassland.	
	The wetland has at least two of the following features: tidal channels, depressions with	
	open water, or contiguous freshwater wetlands.	
	☐ Yes = Category I ☐ No = Category II	
SC 2.0. \	Wetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list	
	of Wetlands of High Conservation Value?	
	☐ Yes - Go to SC 2.2 ☑ No - Go to SC 2.3	
SC 2.2.	Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
	☐ Yes = Category I ☐ No = Not WHCV	
SC 2.3.	Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?	
	http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf	
0004	☐ Yes - Contact WNHP/WDNR and to SC 2.4 ☑ No = Not WHCV	
SC 2.4.	Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation	
	Value and listed it on their website?	
0000	☐ Yes = Category I ☐ No = Not WHCV	
SC 3.0. I	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,	
00 0.1.	that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	☐ Yes - Go to SC 3.3 ☐ 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. I	Forested Wetlands			
	Does the wetland have at least 1 contiguous acre of forest that meets one of these			
	criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you</i>			
	answer YES you will still need to rate the wetland based on its functions.			
	Old-growth forests (west of Cascade crest): Stands of at least two tree species,			
	forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac			
	(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height			
	(dbh) of 32 in (81 cm) or more.			
	Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-			
	· · · · · · · · · · · · · · · · · · ·			
	200 years old OR the species that make up the canopy have an average diameter (dbh)			
	exceeding 21 in (53 cm).			
	☐ Yes = Category I ☑ No = Not a forested wetland for this section			
SC 5.0. \	Wetlands in Coastal Lagoons			
	Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?			
	The wetland lies in a depression adjacent to marine waters that is wholly or partially			
	, , , , , , , , , , , , , , , , , , , ,			
	separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,			
	rocks			
	The lagoon in which the wetland is located contains ponded water that is saline or			
	brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>			
	be measured near the bottom)			
	☐ Yes - Go to SC 5.1 ☑ No = Not a wetland in a coastal lagoon			
SC 5 1 I	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			
00 0.1.	(rates H,H,H or H,H,M for the three aspects of function)?			
	· · · · · · · · · · · · · · · · · · ·			
00.00	☐ Yes = Category I ☐ No - Go to SC 6.2			
SC 6.2.	Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?			
	\square Yes = Category II \square 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			
Categor	y of wetland based on Special Characteristics			
_	If you answered No for all types, enter "Not Applicable" on Summary Form			







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		WASHINGTON LAKE	Dieldrin	Tissue
76479		WASHINGTON LAKE	Dieldrin	Tissue
77049		WASHINGTON LAKE	Chlordane	Tissue
77050		WASHINGTON LAKE	Chlordane	Tissue
77064		WASHINGTON LAKE	Chlordane	Tissue
500009		WASHINGTON LAKE	Sediment Bioassay	Sediment
500010		WASHINGTON LAKE	Sediment Bioassay	Sediment
8078		WASHINGTON LAKE	Lead	Water
11960		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
	1 WASHINGTON LAKE	Total Phosphorus	Water
52863	1 WASHINGTON LAKE	Total Phosphorus	Water
52864	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
75309	1 WASHINGTON LAKE	Endrin	Tissue

Figure 4. TMDL List, Page 3

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

RATING SUMMARY – Western Washington

Name of wetland (or ID #):	Wetland 12		Date of site visit:	5-Apr-17
Rated by Claire Hoffman	Traine	ed by Ecology? ☑ Yes ☐No	Date of training _	Mar-17
HGM Class used for rating	Slope	Wetland has multip	le HGM classes? ☐ \	∕es ⊡No
	oot complete with out the fig of base aerial photo/map <u>Go</u>	- , ,	be combined).	
OVERALL WETLAND CA	ATEGORY <u>IV</u> (ba	sed on functions ☑or specia	al characteristics \Box)	
1. Category of wetland	d based on FUNCTIONS			
	Category I - Total score = 2	3 - 27	Score for each	
	Category II - Total score = :	20 - 22	function based	
	Category III - Total score =	16 - 19	on three	
X	Category IV - Total score =	9 - 15	ratings	
			(order of ratings	

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
List appropriate rating (H, M, L)				
Site Potential	L	М	L	
Landscape Potential	L	L	L	
Value	M	М	М	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	Х

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	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	S 4.1	1
(can be added to another figure)		l l
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	H 2.1, H 2.2, H 2.3	2
polygons for accessible habitat and undisturbed habitat		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 ur	nit 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 du	ring periods of annual low flow below 0.5 ppt (parts per thousand)?
-	ified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. it is an Estuarine wetland and is not scored. This method cannot be
	recipitation is the only source (>90%) of water to it. f are NOT sources of water to the unit.
☐ NO - go to 3 If your wetland can be class.	☐ YES - The wetland class is Flats ified as a Flats wetland, use the form for Depressional wetlands.
plants on the surface at any	all of the following criteria? etland is on the shores of a body of permanent open water (without any time of the year) at least 20 ac (8 ha) in size; ter area is deeper than 6.6 ft (2 m).
☑ NO - go to 4	☐ YES - The wetland class is Lake Fringe (Lacustrine Fringe)
	lope can be very gradual), wetland in one direction (unidirectional) and usually comes from seeps. heetflow, or in a swale without distinct banks.
\square NO - go to 5	☐ YES - The wetland class is Slope
•	n these type of wetlands except occasionally in very small and shallow pressions are usually <3 ft diameter and less than 1 ft deep).
from that stream or river,	all of the following criteria? eam channel, where it gets inundated by overbank flooding rs at least once every 2 years.
☑ NO - go to 6	☐ YES - The wetland class is Riverine
NOTE: The Riverine unit can contain of	depressions that are filled with water when the river is not flooding.

Wetland name or number	12	
wenano name or nomber	1/	

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

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

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

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

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

SLOPE WETLANDS			
Water Quality Functions - Indicators that the site functions to im	prove 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	2	
Slope is > 1% - 2%	points = 2	3	
Slope is > 2% - 5%	points = 1		
Slope is greater than 5%	points = 0		
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic		0	
(use NRCS definitions):	Yes = 3 No = 0	U	
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollu			
Choose the points appropriate for the description that best fits the plants in the			
means you have trouble seeing the soil surface (>75% cover), and uncut mear	ns not grazed or		
mowed and plants are higher than 6 in.	:		
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6	2	
Dense, uncut, herbaceous plants > ½ of area	points = 3		
Dense, woody, plants > ½ of area	points = 2		
Dense, uncut, herbaceous plants > ½ of area	points = 1		
Does not meet any of the criteria above for plants	points = 0		
'	in the boxes above	5	
Deting of Cita Detential If some in			
Rating of Site Potential If score is: $\Box 12 = H \Box 6 - 11 = M \Box 0 - 5 = L$	Record the rating on	the first page	
S 2.0. Does the landscape have the potential to support the water quality function		the first page	
S 2.0. Does the landscape have the potential to support the water quality functi		the first page 0	
S 2.0. Does the landscape have the potential to support the water quality functi S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in	ion of the site?		
S 2.0. Does the landscape have the potential to support the water quality functi S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?	ion of the site?		
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are	ion of the site?	0	
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources	ion of the site? Yes = 1 No = 0	0	
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources	ion of the site? Yes = 1 No = 0 Yes = 1 No = 0	0 0 0	
S 2.0. Does the landscape have the potential to support the water quality functions S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M	Yes = 1 No = 0 Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on	0 0 0	
S 2.0. Does the landscape have the potential to support the water quality functions 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: 1 - 2 = M 10 = L	Yes = 1 No = 0 Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on	0 0 0	
S 2.0. Does the landscape have the potential to support the water quality functions 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M	Yes = 1 No = 0 Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on	0 0 0	
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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 Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on	0 0 the first page	
S 2.0. Does the landscape have the potential to support the water quality functions 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M	Yes = 1 No = 0 Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on	0 0 the first page	
S 2.0. Does the landscape have the potential to support the water quality function S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue?	Yes = 1 No = 0 Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on Yes = 1 No = 0 Yes = 1 No = 0	0 0 the first page	
S 2.0. Does the landscape have the potential to support the water quality functions 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? 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 Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on Yes = 1 No = 0 Yes = 1 No = 0	0 0 the first page	
S 2.0. Does the landscape have the potential to support the water quality functions 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? 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. S 3.3. Has the site been identified in a watershed or local plan as important for	Yes = 1 No = 0 Yes = 1 No = 0 Yes = 1 No = 0 in the boxes above Record the rating on Yes = 1 No = 0 Yes = 1 No = 0	0 0 the first page 0 1	
S 2.0. Does the landscape have the potential to support the water quality functions 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other Sources Total for S 2 Add the points Rating of Landscape Potential If score is: □1 - 2 = M □0 = L 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? 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. S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the basin in which the unit is found?	Yes = 1 No = 0 Yes = 1 No = 0 In the boxes above Record the rating on Yes = 1 No = 0 Yes = 1 No = 0	0 0 the first page 0 1	

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				
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 du	ıring surface flows.	1		
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1			
All other conditions	points = 0			
Rating of Site Potential If score is: 1 = M	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		0		
uses or cover that generate excess surface runoff?	Yes = 1 No = 0	U		
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.,		1		
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			
S 6.2. Has the site been identified as important for flood storage or flood		0		
conveyance in a regional flood control plan?	Yes = 2 No = 0	U		
Total for S 6 Add the points	in the boxes above	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:

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: <i>Indicators are Cowardin classes and strata within the Forested class.</i> Check the Cowardin plant classes in the wetland. <i>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.</i>				
 □ Aquatic bed □ Emergent □ Scrub-shrub (areas where shrubs have > 30% cover) □ Forested (areas where trees have > 30% cover) □ If the unit has a Forested class, check if: □ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon 	0			
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods).				
 □ Permanently flooded or inundated □ Seasonally flooded or inundated □ Occasionally flooded or inundated □ Occasionally flooded or inundated □ Saturated only □ Permanently flowing stream or river in, or adjacent to, the wetland □ Seasonally flowing stream in, or adjacent to, the wetland 	0			
□ Lake Fringe wetland□ Freshwater tidal wetland2 points2 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	0			
in this row are HIGH = 3 points				

H 1.5. Special habitat features:			
Check the habitat features that are present in the wetland. The number of checks is the number			
of points.			
☑ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)			
☐ Standing snags (dbh > 4 in) within the wetland			
☐ Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends			
at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at			
least 33 ft (10 m)	2		
☐ Stable steep`banks of fine material that might be used by beaver or muskrat for denning			
(> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees</i>			
that have not yet weathered where wood is exposed)			
\square At least $rac{1}{4}$ ac of thin-stemmed persistent plants or woody branches are present in areas			
that are permanently or seasonally inundated (structures for egg-laying by amphibians)			
☑ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see			
H 1.1 for list of strata)			
Total for H 1 Add the points in the boxes above	3		
Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 - 6 = L Record the rating of	n 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:	0		
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3			
20 - 33% of 1 km Polygon points = 2			
10 - 19% of 1 km Polygon points = 1			
l ' '			
< 10 % of 1 km Polygon points = 0 H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.			
Calculate:			
0 % undisturbed habitat + (% moderate & low intensity land uses / 2) = 10%			
Hardistant allegatives 500% of Delange	1		
Undisturbed habitat > 50% of Polygon points = 3			
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2			
Undisturbed habitat 10 - 50% and > 3 patches points = 1			
Undisturbed habitat < 10% of 1 km Polygon points = 0			
H 2.3 Land use intensity in 1 km Polygon: If			
> 50% of 1 km Polygon is high intensity land use points = (-2)			
≤ 50% of 1km Polygon is high intensity points = 0			
Total for H 2 Add the points in the boxes above			
Rating of Landscape Potential If Score is:	n the first page		
H 3.0. Is the habitat provided by the site valuable to society?	1		
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose</i>			
only the highest score that applies to the wetland being rated.			
Site meets ANY of the following criteria: points = 2			
☐ It has 3 or more priority habitats within 100 m (see next page)			
☐ It provides habitat for Threatened or Endangered species (any plant			
or animal on the state or federal lists)			
☐ It is mapped as a location for an individual WDFW priority species			
☐ It is a Wetland of High Conservation Value as determined by the			
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 Site does not reach any of the criteria above			
Site does not meet any of the criteria above points = 0			
Rating of Value If Score is: \square 2 = H \square 1 = M \square 0 = L Record the rating of	ı tne first page		

WDFW Priority Habitats

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

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

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

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

V	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 (<i>full descriptions in WDFW PHS report p. 158</i> – see web link above).
	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Westside Prairies : Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (<i>full descriptions in WDFW PHS report p. 161 – see web link above</i>).
	Instream : The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Nearshore : Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (<i>full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page</i>).
	Caves : A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus : Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
√	Snags and Logs : Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12

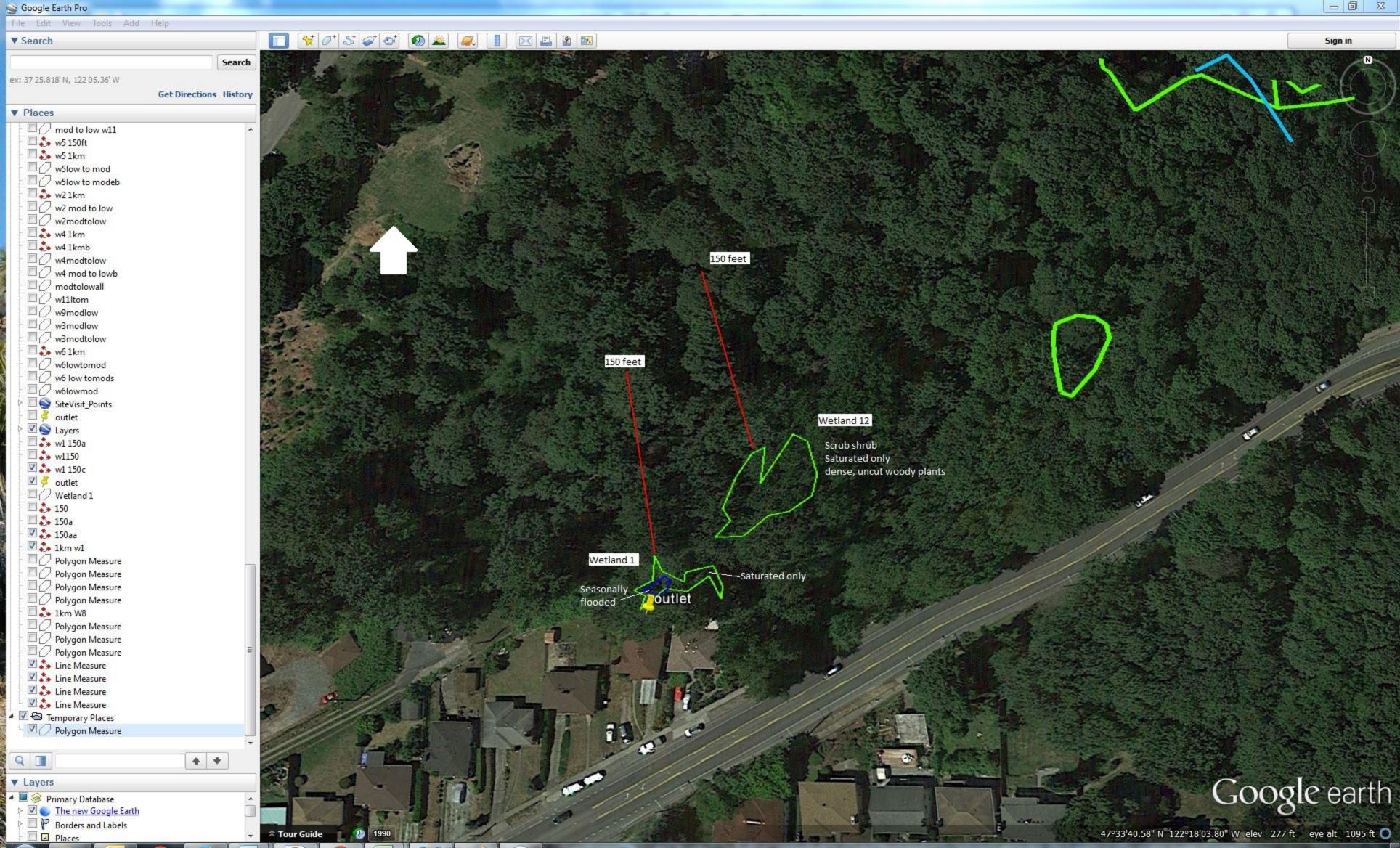
Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

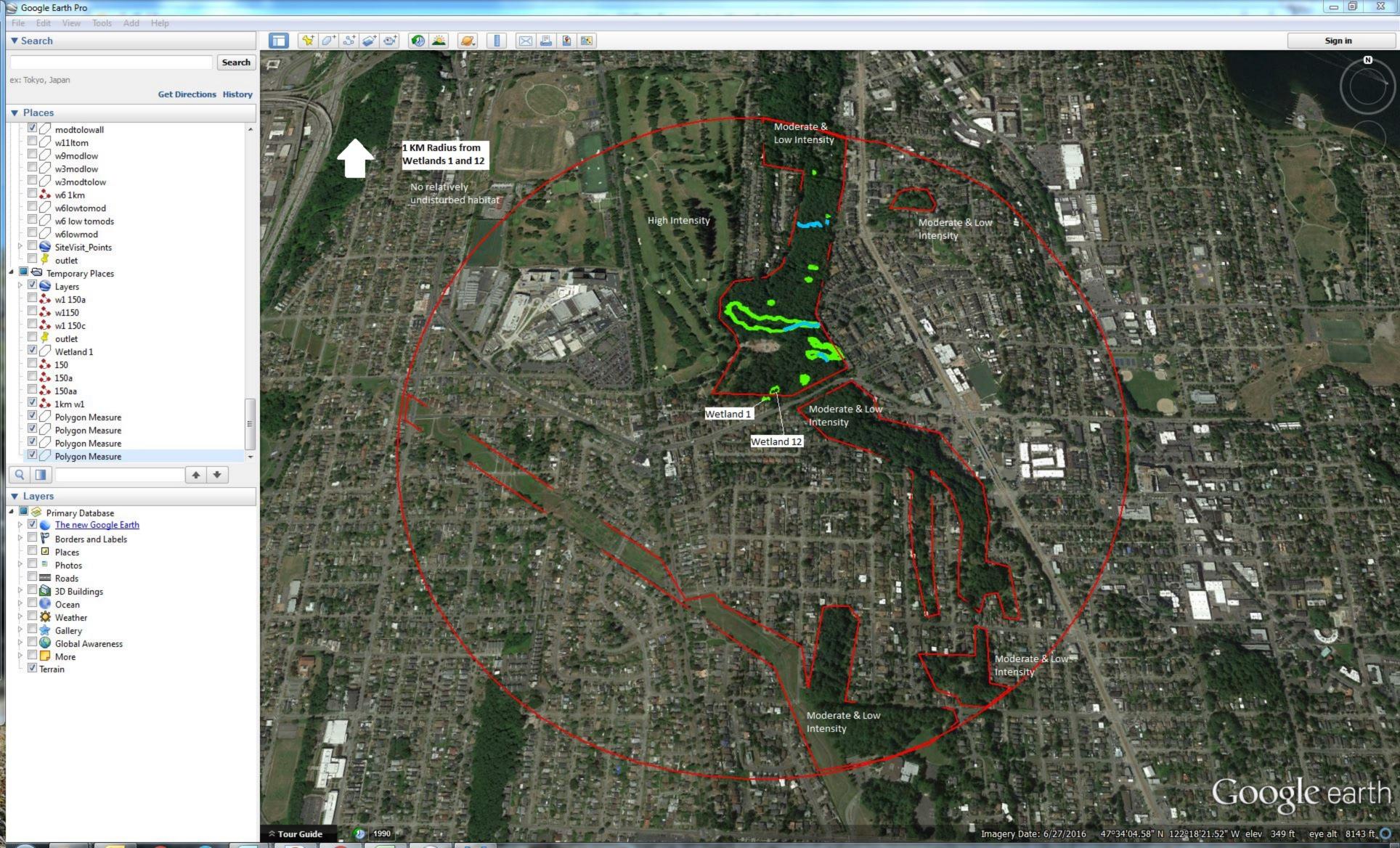
in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

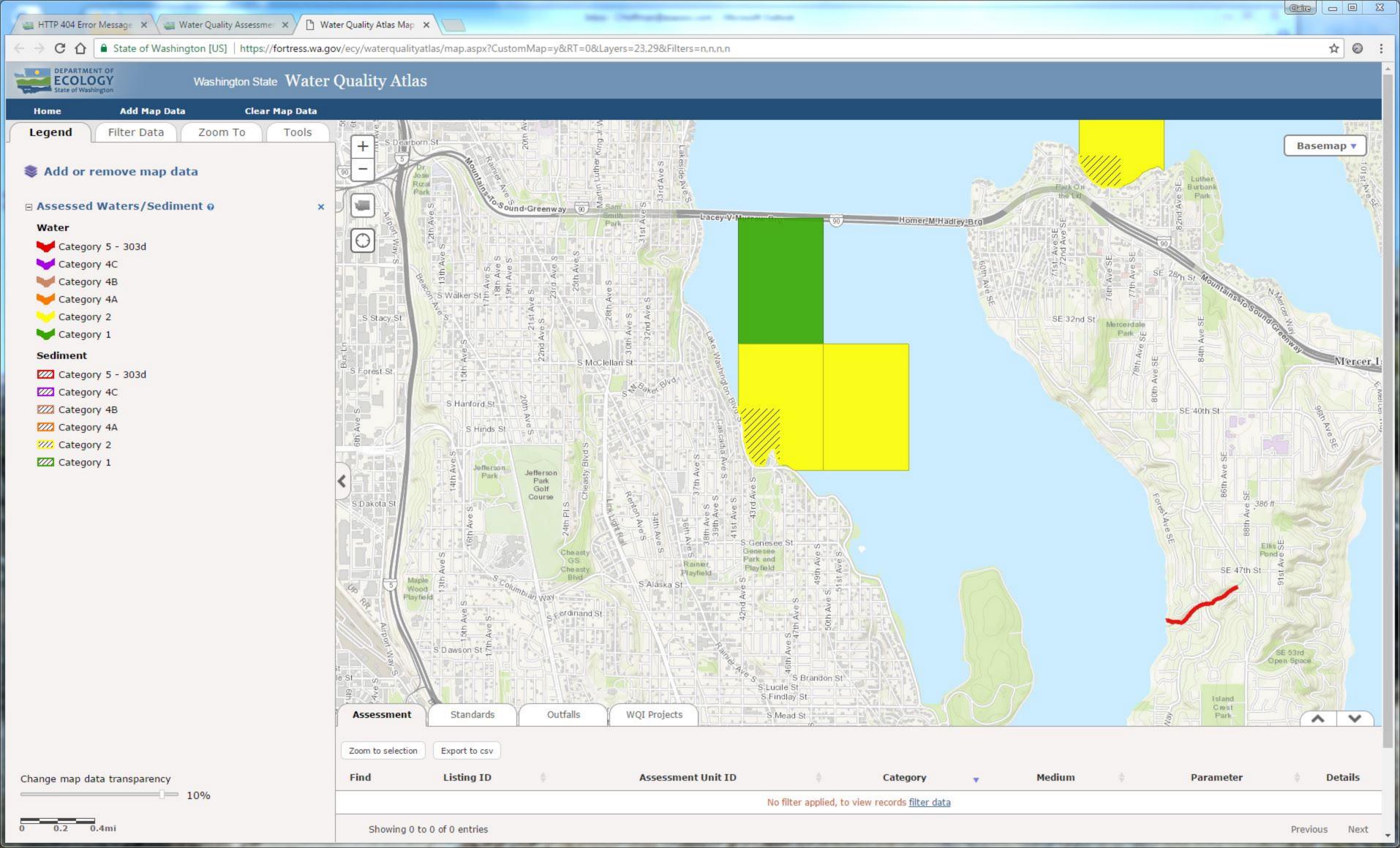
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland	Туре	Category
	any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
SC 1.0. E	Estuarine Wetlands	
	Does the wetland meet the following criteria for Estuarine wetlands?	
	The dominant water regime is tidal,	
	Vegetated, and	
	With a salinity greater than 0.5 ppt	
SC 1.1.	☐ Yes - Go to SC 1.1 ☐ No = Not an estuarine wetland Is the wetland within a National Wildlife Refuge, National Park, National Estuary	
30 1.1.	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. V	Vetlands of High Conservation Value (WHCV)	
SC 2.1.	Has the WA Department of Natural Resources updated their website to include the list	
	of Wetlands of High Conservation Value?	
	\square Yes - Go to SC 2.2 \square 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. E		
	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation	
	in bogs? Use the key below. If you answer YES you will still need to rate the	
00 2 4	wetland based on its functions. Does an area within the wetland unit have organic soil horizons, either peats or mucks,	
SC 3.1.	that compose 16 in or more of the first 32 in of the soil profile?	
	☐ Yes - Go to SC 3.3 ☐ No - Go to SC 3.2	
SC 3.2.	Does an area within the wetland unit have organic soils, either peats or mucks, that are	
00 3.2.	less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic	
	ash, or that are floating on top of a lake or pond?	
	☐ Yes - Go to SC 3.3 ☐ No = Is not a bog	
SC 3.3.	Does an area with peats or mucks have more than 70% cover of mosses at ground	
	level, AND at least a 30% cover of plant species listed in Table 4?	
	☐ Yes = Is a Category I bog ☐ No - Go to SC 3.4	
	NOTE: If you are uncertain about the extent of mosses in the understory, you may	
	substitute that criterion by measuring the pH of the water that seeps into a hole dug at	
	least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present,	
	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.	
criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i>	
answer YES you will still need to rate the wetland based on its functions.	
☐ Old-growth forests (west of Cascade crest): Stands of at least two tree species,	
forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac	
(20 trees/ha) that are at least 200 years of age OR have a diameter at breast height	
(dbh) of 32 in (81 cm) or more.	
☐ Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-	
200 years old OR the species that make up the canopy have an average diameter (dbh)	
exceeding 21 in (53 cm).	
☐ Yes = Category I ☐ No = Not a forested wetland for this section	
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially	
separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently,	
rocks	
☐ The lagoon in which the wetland is located contains ponded water that is saline or	
brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to</i>	
be measured near the bottom)	
☐ 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?	
, , , , , , , , , , , , , , , , , , , ,	
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.	
\Box 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	
1	
(rates H,H,H or H,H,M for the three aspects of function)?	
☐ Yes = Category I ☐ No - Go to SC 6.2	
SC 6.2. 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	







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		WASHINGTON LAKE	Dieldrin	Tissue
76479		WASHINGTON LAKE	Dieldrin	Tissue
77049		WASHINGTON LAKE	Chlordane	Tissue
77050		WASHINGTON LAKE	Chlordane	Tissue
77064		WASHINGTON LAKE	Chlordane	Tissue
500009		WASHINGTON LAKE	Sediment Bioassay	Sediment
500010		WASHINGTON LAKE	Sediment Bioassay	Sediment
8078		WASHINGTON LAKE	Lead	Water
11960		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		WASHINGTON LAKE	Bacteria	Water
12196		WASHINGTON LAKE	Bacteria	Water
12197		WASHINGTON LAKE	Bacteria	Water
12200		WASHINGTON LAKE	Bacteria	Water
12201		WASHINGTON LAKE	Bacteria	Water
12202		WASHINGTON LAKE	Bacteria	Water
43481		WASHINGTON LAKE	Toxaphene	Tissue
43483		WASHINGTON LAKE	Mercury	Tissue
43484		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
	1 WASHINGTON LAKE	Total Phosphorus	Water
52863	1 WASHINGTON LAKE	Total Phosphorus	Water
52864	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	Total Phosphorus	Water
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	4,4'-DDD	Tissue
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	Bacteria	Water
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	4,4'-DDT	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
	1 WASHINGTON LAKE	Beta-BHC	Tissue
75309	1 WASHINGTON LAKE	Endrin	Tissue

Figure 4. TMDL List, Page 3

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: CHEA	STY GREENSPACE	E 140744.01	Date: 12-13-16
Scope / Purpose: W	INTER SLIAVEY		Time: 8:30 am - 11:00 am
Observers: FLON	LOGAN & PE	TER CARR	County / State: 6106 / WA
Survey Conditions: Co	Id & calm, occ.	light wind	Site Activity Notes: High level of ambient noise
TEMPERATURE ~ 35			-planes overhead (every 1-3 mins) -traffic on Cheasty Blvd 4 others -light rail regular noise from bells
WEATHER	ČLEAR PARTLY-CI	LOUDY OVERCAST	light rail regular noise from bells
PRECIPITATION	NONE MIST	DRIZZLE RAIN	4 crossings

4-ltr	Species	Initial	Detection	If AUC		Sex	(Behavior / Notes
code		Position	Method	S or C	М	F	U	
GCKI	Golden-crowned Kinglet	FLT / GRD)	(VIS)/ AUD		χ	X		F
SOSP	Song sparrow	FLT / GRD	VIS)/ AUD	. 2			X	F
BCCH	Black capped-chickadee	FLT / GRD	(VIS)/ AUD	X			X	For Fil
CBCH	Chestnut-backed chickadae	FLT / GRD	(VIS)/ AUD				X	purity .
BEWR	Bawick's wren	FLT / GRD	(VIS)/ AUD				X	funds funds
NOFL	Northern flicker	(FLT) GRD	(VIS) / AUD)	X			×	F, FL, AL
RCKI	Ruby-crowned kinglet	FLT / GRD	VIS / AUD			L	X	from .
PAWR	Pacific wran	FLT / GRD	(VIS) AUD				X	100
BRCR	Brown creeper	FLT / GRD)	(VIS)/ AUD				X	opus fasti
AMGO	American goldfinch	FLT/ GRD	VIS / AUD	×			X	France Land
AMRO		FLT / GRD	VIS / AUD	X			×	factor.
RBSA	Red-breasted sapsucker	FLT (GRD)	VIS / AUD				X	F, FL excavations obs
SPTO	Spotted towhere	FLT / GRD	VIS / AUD	X			X	F
RTHA	Red-tailed hank	FLT/ GRD	VIS (AUD)	X			X	FL over Send of greenspace
DCCO	Double-crested cormorant	FLT)/ GRD	VIS)/ AUD				X	
BAEA	Bald eagle	FLT)/ GRD	VIS)/ AUD				X	FL west of greenspace
STJA	Steller's jay	FLT) GRD	VIS / AUD				X	FLF
ANThe	Anna's humming bird	FLT (GRD)	VIS)/ (AUB)	X			X	Perched & Vocalizing
DOWO	Downy wood pecker	FLT / GRD	(VIS / AUG)	X			X	former V
DEJU	Dark-eyed junco	FLT GRD	(VIS)/ AUD				Χ	FL, F

Data	Initial Position (choose one): FLT = in flight GRD = on ground	Other notes:	111	
Codes	Detection Method: VIS = visual/seen AUD = aural/heard	Eastarn	gray squirral (2)	
	If AUD (pick one): S = song C = call			
	Behavior Codes: F = Forage, FL = flying, R= resting/roosting, FS = flushed, AL = alert posture (erec w/neck extended, not vocalizing), A = antagonistic behavior (chase or aggressive contact), CO = copulation, NM = carrying nest material	t		

Project / Site:	CHERSTY	GREENSP	ACE	140744.01	Date:	12-13-1	6
Observers:	ILON LO	GAN &	PETER	CARR	Time:	8:30a	START

Transect	Species	Initial	Detection	If A	UD		Sex			Behavior / Notes
& BOTH		Position	Method	Sc	or C	М	F	U	8	
GWXN	Glaucous x Western gull	FLT/ GRD	(VIS)/ AUD					X	FL	over green space
	Winged	FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD				V			
	9	FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD						1-31	
		FLT / GRD	VIS / AUD							<i>B</i>
		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							9
	- 1 A THE COLUMN TO THE COLUMN	FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							
Ti .		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							
1000		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD						1000	
		FLT / GRD	VIS / AUD							
	,	FLT / GRD	VIS / AUD				350			9
		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							

Data	Initial Position (choose one): FLT = in flight GRD = on ground	Other notes:
Codes	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	

BIRD SURVEY DATA SHEET

Project / Site: CM	EASTY GI	REENISPA	ACE 14074	1.01 Date: 4-4-17
Scope / Purpose: 🍮	PRING S	LRVEY		Time: 6:35a - 8:40a
Observers: FLOI	V LOGAN	1 & PETE	R CARR	County / State: LING / WA
Survey Conditions:		no Wine	d.	Site Activity Notes: High level of background noise as previously noted.
WEATHER PRECIPITATION	CLEAR	PARTLY-CLOU	UDY OVERCAST DRIZZLE RAIN	Spring conditions - plants leating out, flowers blooming (red current, solomo
			TV III	periy, skunk cabbaga, etc.)

Frensect / Point	Species	Initial	Detection	ection If AUD			Sex		Behavior / Notes
/ Point	2 2 1/4/10/20	Position	Method	So	r C	M	F	U	
AMRO	American robin	FLT (GRD	VIS / AUD					X	AL, F, FL
HOF1	House finch	FLT / GRD	VIS /(AUD)	X		Χ			Singing wast of graenspace
RCKI	Ruby-crowned kinglet	FLT / GRD	VIS / AUD	×		X			F
BEWR	Bewick's wren	FLT / GRD	VIS) (AUD)	X		X		K	F
AMCR	American crow	FLT (GRD)	VIS /(AUD)					Χ	Some individ in park; flyovers
GW×W	Glaucins Wingled x Nestern	ŒLT// GRD	VIS)/ AUD					Χ	
SOSP	Song sparrow	FLT (GRD)	(VIS)/ AUD	×					frame.
SPTO	Spotted towher	FLT /GRD	VIS)/(AUD)					Χ	Partie
BCCH	Black-capped chickedee	FLT/GRD	VIS) AUD	X		X			Several & singing
STJA	Steller's Jay	(ELT) GRD	VIS/ AUD					X	
NOFL	Northern flicker	FLT (GRD)	VIS / AUD					Χ	Several drumming
DEJU	Dark-eyed junco	FLT / GRD	VIS / AUD					×	
ANHU	Anna's humming bird	FLT/GRD	(VIS / A(D)	X		X			Several individuals (~5)
COHA	Coopers hawk	FLT / GRD	VIS / AUD			×	X		Nm: Pair in courtship, extremely active, vocalizing, moving, inter-
PAWR	Pacific wren	FLT / GRD	VIS / AUD	X		X			F acting,
AM60	American goldfinch	FLT/ GRD	VIS / AUD					X	FL
BRCR	frown creaper	FLT /GRD	VIS/ AUD					X	F
RBNU	Red-braastad nuthatch	FLT / GRD	VIS / AUD					X	f and a second
RBS4	Reb-breasted sapsneker	FLT / GRD	VIS)/ AUD					Χ	F
VATH	Varied thrush	FLT / GRD	VIS / AUD					X	5 notes heard only

Data

Initial Position (choose one): FLT = in flight GRD = on ground / + FLL

Codes

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

Sunrise 6:43a Eastern gray squirrel (2)

Project / Site: CHEASTY GREENSPACE 4-4-17 Date: Observers: /LON LOGAN & PETER CARR 6:35a START Time:

Transect	Species	Initial	Detection	If A	UD		Sex		Behavior / Notes
/_Point		Position	Method	So	r C	М	F	U	
BUSH	Bushtit	FLT / GRD	VIS / AUD					X	F
CBCH	Chestnut-backed Ohickadoe	FLT (GRD	VIS / AUD					X	F
YRWA	Yellow rumped warblar Golden-crowned kingled European starting	FLT / GRD	VIS (AUD)	X		X		,	
BCKI	Golden-crowned kingled	FLT / GRD	(VIS KAUD					X	F
EUST	European Starting	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						

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

Augustian Augustian

BIRD SURVEY DATA SHEET

Project / Site: CHEASTY GREENSPACE 14074401	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 TEMPERATURE ~ 55° 98°/0 humidity	Site Activity Notes: Abundant spring plant growth
WEATHER CLEAR PARTLY-CLOUDY OVERCAST	
PRECIPITATION NONE MIST DRIZZLE RAIN	

Transect	Species	Initial	Detection	If A	UD	Sex			Behavior / Notes
4 LTR Point		Position	Method	Sc	r C	М	F	U	
	Red breasted sapsucker	FLT /GRD	(VIS)/ AUD			,		X	N-Nesting in snag s of maint.
AMRO	American robin	FLT / GRD	(VIS)/(AUD)	X				X	7+ in greens pace singing.
DEJU	Dark-eyed junco	FLT / GRD	VIS / AUD	X				X	F
EUST	European starting	FLT / GRD	VIS / AUD					χ	N-In snag in meadow-mointy
BCCH	Black-capped chickades	FLT /GRD	VIS / AUD	X				X	F
AMGO	American gold Firch	FLT) GRD	(VIS) / (UB)		X			X	FL
	Spotted towher	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			Χ	* * * * * * * * * * * * * * * * * * * *
CA60	Canada goase	FLT// GRD	VIS / AUD	•	X			X	FL
BEWR	Bewickir wren	FLT /GRD	VIS / AUD	X		X			
HOFI	House Finch	FLT (GRD	VIS / AUD	X		X			
WIWA	Wilsons warbler	FLT GRD	VIS / AUD	×		X			F
PAWR	Pacific wren	FLT / (GRD)	VIS /(AUD)	×		X			F
STJA	Stellers jay	FLT/ GRD	VIS / (AUD)		X	4		X	A
SWTH	Swainson's thrush	FLT / GRD	(VIS)/ AUD					X	F
PSFL	Pacific slope flycatcher	FLT (GRD)	VIS / (AUD)	X		X			8
NOFL	2	FLT// GRD	VIS / AUD					X	
DOWD	Downy woodpedor	FLT / GRD *	VIS / AUD		X	X			F
6WWG	Glancons winged gull	FLT/GRD	VIS) / AUD					X	

Data Initial Position
Codes Detection Me

Initial Position (choose one): FLT = in flight GRD = on ground/4 rel

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

Other notes:

Sunrisee 5,48 Am

Project / Site: CHEAST Y GREENSPACE 140744.01 Date: 5-4-17

Observers: (LON LOGAN & PETER CARR Time: 6:00a START

Transect	Species	Initial	Detection	If A	If AUD Sex			Behavior / Notes		
/ Point		Position	Method	S or C		М	F	υ		
COHA	Coopers hawk	FLT (GRD	JIS / AUD			X	×		N- 9 likely on eggs. Will	
ANHU	\sim	FLT/ GRD (VIS / AUD	X		X			N- & likely on eggs. Win	
RBNU	Red-breasted nuthach	FLT / GRD	VIS /(AUD)	X	-	X			F	
BusH	Bullit	FLT / GRD	VIS / AUD)	X			X	F	
CBCH	Chestnut backed childe	FLT / GRD	VIS / AUD			-		X		
VIRED	DIRED SP.	FLTY GRD	VIS AUD					X	Probable/unconformed	
		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							
	a	FLT / GRD	VIS / AUD							
1 1/1		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							
	and the second s	FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD							
		FLT / GRD	VIS / AUD						14	
		FLT / GRD	VIS / AUD							
	p.	FLT / GRD	VIS / AUD							
-		FLT / GRD	VIS / AUD							

Data	Initial Position (choose one): FLT = in flight GRD = on ground	Other notes:
Codes	Detection Method: VIS = visual/seen AUD = aural/heard	
	If AUD (pick one): S = song C = call	В
	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	

APPENDIX E: TREE INVENTORY

ESA

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	<u> </u>
!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	llex aquifolium	14	Very Poor	No	
?8	Acer macrophyllum	10	Good	No	
?9	Acer macrophyllum	18	Fair	Likely, grove	

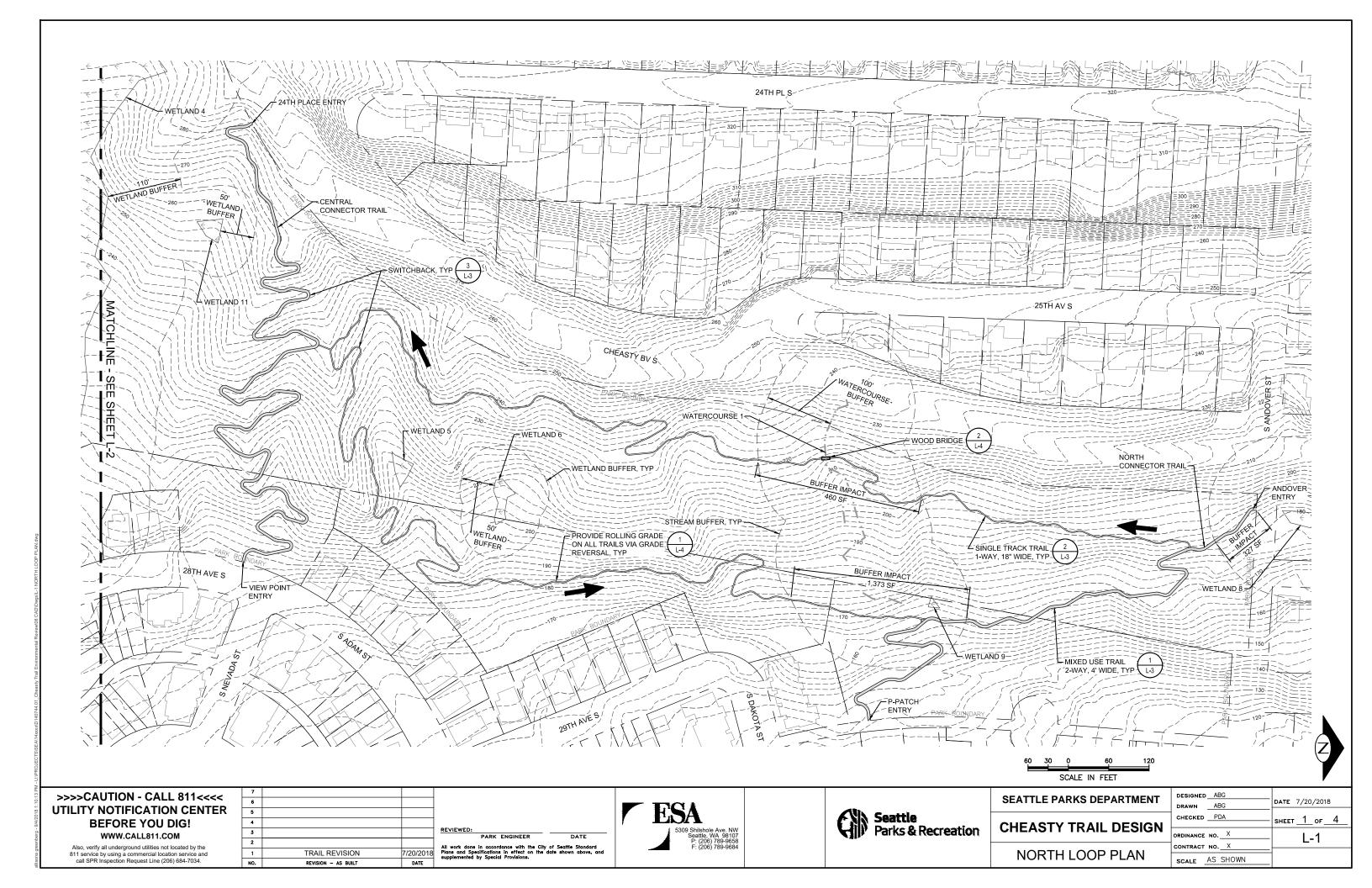
Table E-2. Trees in along Cheasty North portion of the Trail

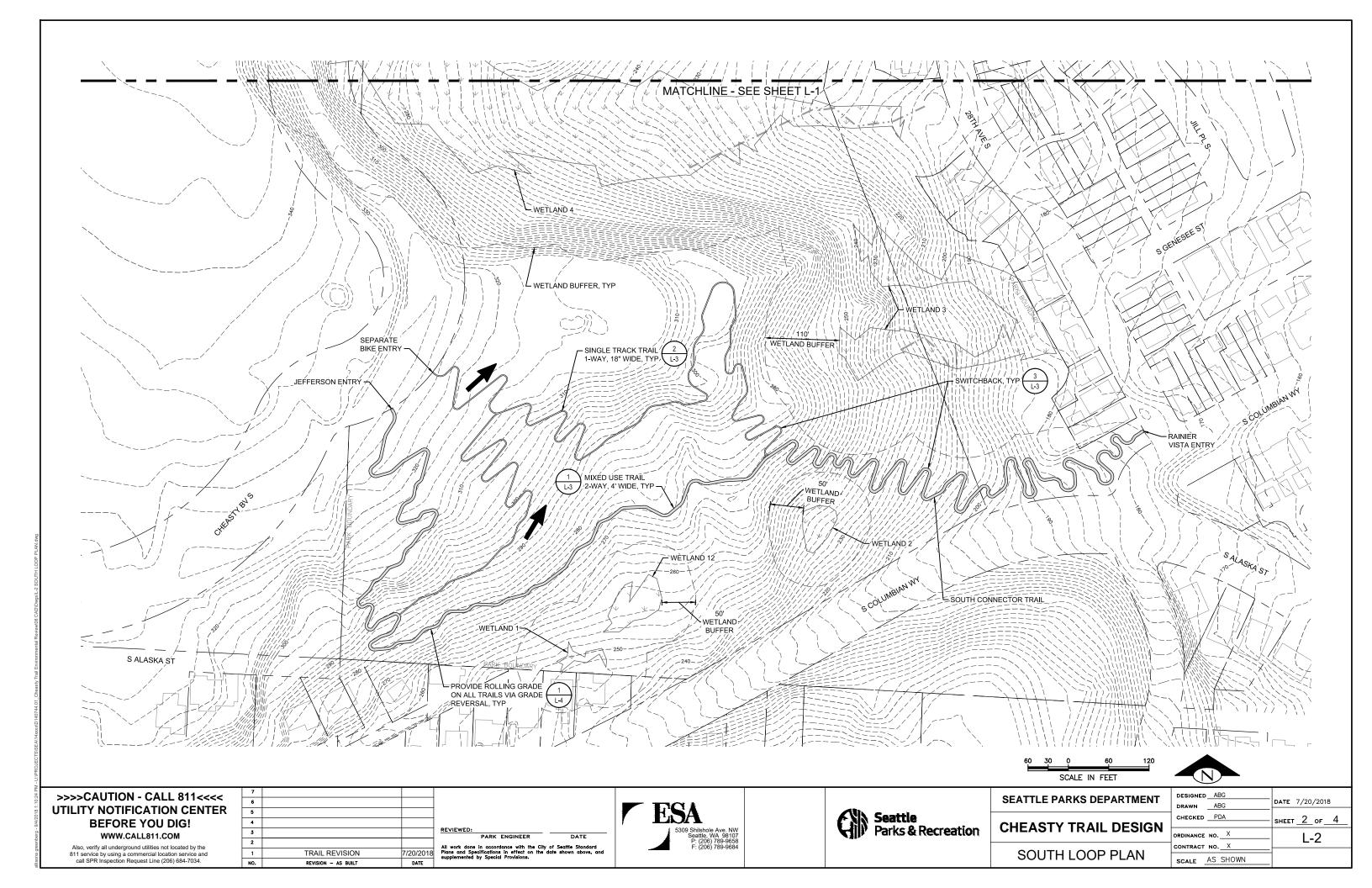
Tree ID	Species	DBH	Condition	Exceptional	Notes
17	Acer macrophyllum	16	Fair	Likely, grove	
19	Acer macrophyllum	13	Dead	No	
20	Acer macrophyllum	26	Poor	No	
21	Acer macrophyllum	8	Dead	No	
22	Acer macrophyllum	36	Good	Likely, grove	
23	Acer macrophyllum	11	Dead	No	
24	Acer macrophyllum	17	Good	Likely, 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	

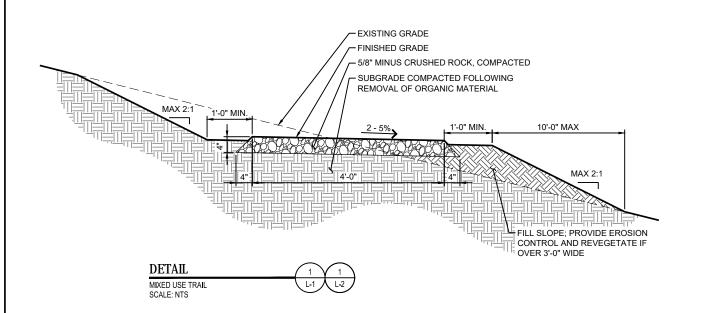
Tree ID	Species	DBH	Condition	Exceptional	Notes
63	Acer macrophyllum	7	Good	No	
64	Acer macrophyllum	16	Good	Likely, grove	
65	Acer macrophyllum	11	Fair	No	
66	Acer macrophyllum	9	Dead	No	
67	Acer macrophyllum	14	Good	Likely, grove	
68	Acer macrophyllum	24	Good	Likely, grove	
69	Arbutus menziesii	10	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

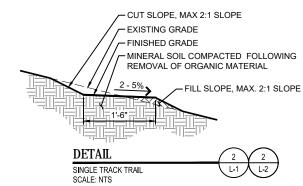


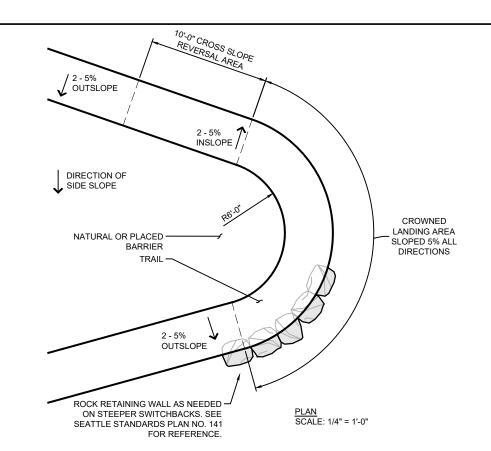


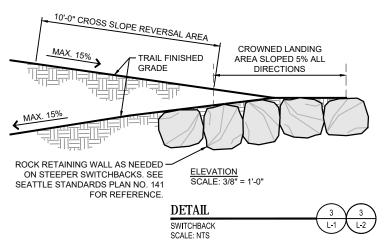




- 1. WALK AND FLAG CORRIDORS TO FIELD FIT TRAILS ON SITE. RECLAIM OLD TRAIL WHERE POSSIBLE
- 2. WHEN LOCATING TRAIL ALIGNMENT USE THE "HALF RULE": THE TRAIL GRADE SHOULD BE LESS THAN HALF THE SLOPE OF THE HILLSIDE.
- 3. LOCATE GRADE REVERSALS ABOVE ALL TURNS.
- 4. BUILD SWITCHBACKS ON FLATTEST AREA AVAILABLE 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.
- 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<

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
	1	TRAIL REVISION	7/20/2018
	2		
	3		
	4		
	5		
	6		
ı			

REVIEWED:
PARK ENGINEER DATE





SEATTLE PARKS DEPARTMENT						
CHEASTY TRAIL DESIGN						
TRAIL DETAILS & NOTES						

DESIGNED	ABG ABG	DATE 7/20/2018
CHECKED		SHEET 3 OF 4
ORDINANCE	NO. X	L-3
CONTRACT	NO. X	
SCALE	AS SHOWN	

