

CRITICAL AREAS REPORT

April 20, 2021



North Grand Forest Bainbridge Island, Washington

Prepared for

Bainbridge Island Metropolitan Parks and Recreation District 7666 NE High School Road Bainbridge Island, WA 98110 (206) 842-2306

Prepared by

Ecological Land Services

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TABLE OF CONTENTS

Introduction	1
METHODOLOGY	1
STUDY AREA DESCRIPTION	2
VEGETATION	
Soils	
Hydrology	
NATIONAL WETLAND INVENTORY	
BAINBRIDGE ISLAND CRITICAL AREAS INVENTORY	
WASHINGTON DEPARTMENT OF FISH AND WILDLIFE PRIORITY HABITAT AND SPECIES	
WASHINGTON DEPARTMENT OF NATURAL RESOURCES FPAMT	
CONCLUSIONS	
WETLAND CATEGORIZATION	
CRITICAL AREA REGULATIONS	
CRITICAL AREAS RECONNAISSANCE	
LIMITATIONS	6
References	7

i

FIGURES & PHOTOPLATES

Figure 1	Vicinity Map
Figure 2	Existing Conditions
Figure 3	Proposed Conditions
Figure 4	Soil Survey Map
Figure 5	National Wetlands Inventory Map
Figure 6	Bainbridge Island Critical Areas Map
Figure 7	WDFW Priority Habitats and Species
Figure 8	WDNR FPARS
Figure 9	Wetland Rating Form-150' Offset
Figure 10	Wetland Rating Form-1 Km Offset
Figure 11	Wetland Rating Form-303(d) & TMDLs
Photoplates	Site Photos

APPENDIX A

Wetland Determination Data Forms

APPENDIX B

Wetland Rating Form

SIGNATURE PAGE

The information and data in this report were compiled and prepared under the supervision and direction of the undersigned.

Joanne Bartlett, PWS Senior Biologist

Introduction

Ecological Land Services, Inc. (ELS) was contracted by Bainbridge Island Metropolitan Parks and Recreation District (BIMPRD) to complete a critical areas assessment for the North Grand Forest located at the corner of Miller Road and Koura Road, Kitsap County Tax Parcel Number 162502-2-001-2002, within a portion of Section 16, Township 25 North, Range 2 East of the Willamette Meridian, in Bainbridge Island, Washington (Figure 1). This report summarizes findings of the critical areas assessment according to the *Bainbridge Island Municipal Code (BIMC), Chapters* 16.20.110 Fish and Wildlife Habitat Conservation Areas (FWHCA) and 16.20.140 Wetlands.

METHODOLOGY

The critical areas assessment followed the Routine Determination Method in the Western Mountains, Valleys, and Coast Region according to the U.S. Army Corps of Engineers, Wetland Delineation Manual (Environmental Laboratory 1987), and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0) (U.S. Army Engineer Research and Development Center 2010).

The Routine Determination Method examines three parameters—vegetation, soils, and hydrology—to determine if wetlands exist in a given area. Hydrology is critical in determining what is wetland but is often difficult to assess because hydrologic conditions can change periodically (hourly, daily, or seasonally). Consequently, it is necessary to determine if hydrophytic vegetation and hydric soils are present, which would indicate that water is present for long enough duration to support a wetland plant community. By definition, wetlands are those areas that are inundated or saturated by surface or ground water 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 are regulated as "Waters of the United States" by the U.S. Army Corps of Engineers (USACE), as "Waters of the State" by the Washington Department of Ecology (DOE), and locally by Bainbridge Island.

To identify the presence of critical areas, which include FWHCA and wetlands, ELS biologists collected vegetation, hydrology, and soil data at eight test plots in the North Grand Forest. A handheld Trimble Global Positioning System (GPS) was used to locate the test plots and perimeter trail on the site map (Figure 2). Data was collected on June 17, 2019 and revealed that there are no onsite wetlands because the positive indicators were not observed for all three of the wetland parameters. No indicators of other critical areas were observed on or within 300 feet of the study area.

On April 7, 2021, ELS revisited the North Grand Forest to delineate the onsite slope wetland that was identified by users of the perimeter trail. It was unintentionally overlooked during the 2019 critical area reconnaissance. To verify the wetland boundaries on the study area, ELS biologists collected data on vegetation, soils, and hydrology. The wetland boundary was delineated using consecutively numbered fluorescent flagging labeled "WETLAND DELINEATION". The wetland boundary was determined through breaks in topography, changes in vegetation, and evidence of surface hydrology. Vegetation, soil, and hydrology data was collected at Test Plots 10, 11, and 12 at the north end of the wetland to verify the delineated boundary (Appendix A). The wetland boundary and test plots were mapped using a handheld GPS unit to show the extent of the wetland and data collection on the site map (Figure 2).

STUDY AREA DESCRIPTION

The North Grand Forest is part of the BIMPRD park system, which is in the southeast corner of Miller Road and Koura Road in the Meadowmeer area of Bainbridge Island, Washington (Figure 1). The park property lies on both sides of Miller Road, but the largest portion of the park is located on the east side (Figure 2). The study area lies inside the perimeter trail, but observations were made in the forest outside the study area (Photoplates 1 and 2). The trail is part of the BIMPRD trail system that runs through other portions of the Grand Forest as well as other parks in the area. It is a dirt trail that is fairly narrow and does not appear to be as heavily used as the other Grand Forest trails (Photoplates 1 and 2). The park property overall slopes moderately down from east to west with areas of narrow depressional troughs in several locations. It is composed of upland forest with large, old growth trees with a mostly sparse high shrub layer. There are forested openings throughout where a dense high shrub layer has formed within the understory (Photoplates 1, 2, and 3). There were dense low shrub and herbaceous plant layers throughout the study area The properties around the North Grand Forest include one of the (Photoplates 2 and 3). Meadowmeer residential areas to the east, undeveloped forest currently managed by the Bainbridge Island Land Trust to the south, and well used, two lane roads to the north and west (Koura and Miller Roads, respectively).

Wetland A is a small, slope wetland that lies at the north end of the North Grand Forest and just south of the northern segment of the perimeter trail (Figure 2). The wetland outlets into a small ephemeral drainage that goes underground about 100 feet west of the wetland. The drainage continues westerly and crosses the trail before reaching the low area at Koura Road. There is a culvert under the road that provides an outlet for the drainage, however, there is rarely water flow as evidenced by the small channel and lack of water during the April 7th site visit. The wetland is a scrub/shrub community even though there are a few trees within the wetland because there is a largely open forest canopy. The wetland has a saturated only hydroperiod with occasionally flooded areas at the north end.

VEGETATION

Wetland Vegetation

Test Plot 11 was conducted within Wetland A next to one of the occasionally flooded areas. The ground was mostly bare in the test plot area but there were low percentages of lady fern (*Athyrium cyclosorum*, FAC), American speedwell (*Veronica americana*, OBL), and youth-on-age (*Tolmiea menziesii*, FAC). Elsewhere, the wetland contained varying percentages of sapling-sized western red cedar (*Thuja plicata*, FAC), salmonberry (*Rubus spectabilis*, FAC), Indian plum (Oemleria cerasiformis, FACU), and skunk cabbage (*Lysichiton americanum*, OBL). English ivy (*Hedera helix*, FACU) was dominant over the ground in the upper, eastern half of the wetland.

Upland Vegetation

Upland data was collected at Test Plots 10 and 12 on the east and west sides of Wetland A, respectively. The dominant vegetation in these areas includes bigleaf maple (*Acer macrophyllum*, FACU), western red cedar, Douglas fir (*Pseudotsuga menziesii*, FACU), evergreen huckleberry (*Vaccinium ovatum*, FACU), Oregon grape (*Mahonia nervosa*, FACU), sword fern (*Polystichum munitum*, FACU), and trailing blackberry (*Rubus ursinus*, FACU).

Data was collected on the remainder of the North Grand Forest in 2019 and mostly within the depressional troughs that form in the east-west sloping terrain. These troughs were the focus of the critical area assessment because critical areas are often found in low depressional areas. The vegetation in these areas was dominated by western red cedar and bigleaf maple within the test plot areas but there were also Douglas fir and western hemlock (Tsuga heterophylla, FACU) trees throughout. The shrub layer was dense where there are openings in the forest canopy and was dominated by salmonberry, ocean spray (Holodiscus discolor, FACU), evergreen huckleberry, red huckleberry (Vaccinium parvifolium, FACU), hazelnut (Corylus cornuta, FACU), and salal (Gaultheria shallon, FACU). The herbaceous layer was dominated by sword fern, trailing blackberry, vanilla leaf (Achlys triphylla, NL, assumed UPL), foam flower (Tiarella trifoliata, FAC), stinging nettle (Urtica dioica, FAC), fringe cup (Tellima grandiflora, FACU), enchanter's nightshade (Circaea alpina, FAC), and bracken fern (Pteridium aquilinum, FACU). There also were lower percentages of bleeding heart (Dicentra formosa, FACU), wood fern (Dryopteris expansa, FACW), and wild ginger (Asarum caudatum, FACU) present throughout the upland forest. The hydrophytic vegetation criterion was met at only one of the eight test plots conducted on the study area.

The dominant vegetation found onsite is recorded on the attached wetland determination data forms (Appendix A). The indicator status, following the common and scientific names, indicates how likely a species is to be found in wetlands. Listed from most likely to least likely to be found in wetlands, the indicator status categories are:

- **OBL** (obligate wetland) Almost always occur in wetlands.
- **FACW** (facultative wetland) Usually occur in wetlands, but may occur in non-wetlands.
- **FAC** (facultative) Occur in wetlands and non-wetlands.
- **FACU** (facultative upland) Usually occur in non-wetlands, but may occur in wetlands.
- **UPL** (obligate upland) Almost never occur in wetlands.
- NI (no indicator) Status not yet determined.

Soils

As referenced on the U.S.D.A. Natural Resources Conservation Service (NRCS 2021) website, the soils within the study area include Harstine gravelly ashy sandy loam, 0 to 6 percent slopes (14), Harstine gravelly ashy sandy loam, 15 to 30 percent slopes (16), and Kapowsin gravelly ashy loam, 6 to 15 percent slopes (Figure 3). The soil unit just east of the study area and on the park property is Kapowsin gravelly ashy loam, 0 to 6 percent slopes (22). None of these soil units are classified as hydric (NRCS 2021). Harstine soils are moderately well drained and formed in sandy glacial drift with an influence of volcanic ash over dense glaciomarine deposits. Depth to water table in Harstine soils is more than 80 inches. Kapowsin soils are moderately well drained and formed in volcanic ash mixed with glacial drift over dense glaciomarine deposits. The depth to the water table ranges between 11 and 24 inches below the surface. Areas mapped as hydric soils do not necessarily mean that an area is or is not a wetland—hydrology, hydrophytic vegetation, and hydric soils must all be present to classify an area as a wetland.

Wetland Soils

The soil profile at Test Plot 11 consisted of gravelly sandy loam in two layers. The 10-inch surface layer had a dark brown (10YR 2/1) matrix color over a depleted (10YR 4/1) subsurface

layer that contained redoximorphic concentrations having a reddish brown (10YR 4/6) colors. The soil profile meets hydric soil A11 because the surface layer was 10 inches thick over a depleted matrix color. Organic material was visible within the surface layer, which is an additional characteristic of hydric soils meeting the A11 indicator.

Upland Soils

Test Plots 10 and 12 were conducted in the upland east and west of the wetland, respectively. The soil profile at Test Plot 10 consisted of a two-layer gravelly sandy loam profile with a 10-inch surface layer having a dark brown (10YR 2/2) matrix color. The underlying layer had a reddish brown (10YR 4/4) matrix color. The profile at Test Plot 12 consisted of a very gravelly sandy loam having a single layer with a dark brown (10YR 2/2) matrix color. The profiles revealed at Test Plots 10 and 12 have high matrix chromas and lack redoximorphic concentrations so meet none of the hydric soil indicators.

Test Plots 1 through 8 consisted of gravelly sandy loam soil profiles at seven of the eight test plots. These soil profiles generally consisted of two layers with a 2 to 7-inch surface layers that had brown (10YR 2/2) matrix chromas. The subsurface layer had red to reddish brown (7.5YR 4/6 to 10YR 4/6) matrix chromas. A three-layer profile was revealed at Test Plot 8 and consists of a 2-inch brown surface layer (10YR 2/2), a 6-inch light brown intermediate layer (10YR 3/3), and a bottom layer with a red (10YR 4/6) matrix chroma. The soil profiles revealed at the eight test plots did not meet any of the hydric soil indicators because of high matrix chromas.

Hydrology

Hydrology was present in Wetland A as soil saturation to the surface and surface water to a depth of 1 inch with water flow within the internal drainage. The source of hydrology is primarily groundwater seepage emerging from the soil in the northeast corner. Water flows westerly through the wetland and enters a small ephemeral drainage channel that parallels the northern perimeter trail. Water disappears underground about 100 feet from the wetland and did not appear in any other point along the surface drainage. The drainage ends at the culvert under Koura Road along the north edge of the North Grand Forest.

Hydrology was not present during the field visit and there was no evidence of wetland hydrology. Therefore, the wetland hydrology criterion was not met for any location of the study area. In addition, no water flow or flow indicators were observed within the depressional east-west troughs where observed in the study area. Therefore, streams are not present on the North Grand Forest or within the study area.

NATIONAL WETLAND INVENTORY

The U.S. Fish and Wildlife Service (USFWS 2021), National Wetlands Inventory (NWI) map does not indicate the presence of wetlands on or within 300 feet of the property (Figure 4). NWI maps are to be used with discretion because they are intended to gather general wetland information about a regional area and therefore are limited in accuracy for smaller areas due to their large scale. A single wetland was identified and delineated at the north end, which mostly likely does not appear on the NWI because of its small size.

BAINBRIDGE ISLAND CRITICAL AREAS INVENTORY

The Bainbridge Island Critical Areas Web Application (BI 2021) maps a small wetland near the middle of the west half of the study area (Figure 5). The wetland was not observed in this area during the field reconnaissance as verified at Test Plot 4, which is located near the northern tip of the mapped wetland (Figure 2). The test plot data revealed that there were no positive indicators for any of the three wetland parameters and no wetlands in this area as mapped. Wetland A was identified at the north end of the North Grand Forest where wetlands were not map. Critical area maps are to be used with discretion because they are intended to gather general wetland information about a regional area and therefore are limited in accuracy for smaller areas due to their large scale.

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE PRIORITY HABITAT AND SPECIES

The Washington Department of Fish and Wildlife (WDFW) Priority Habitat and Species (PHS) website (WDFW 2021) identifies and maps priority habitat and species areas in the state of Washington. The PHS map shows no priority habitats or species on or near the North Grand Forest (Figure 6).

WASHINGTON DEPARTMENT OF NATURAL RESOURCES FPAMT

The Washington State Department of Natural Resources (WDNR 2021) Forest Practices Application Mapping Toole (FPAMT) water type mapping website does not indicate the presence of streams on or within 200 feet of the study area (Figure 6). Streams were not identified in the depressional troughs that extend down the moderate slopes because there were no indicators of water flow observed.

CONCLUSIONS

WETLAND CATEGORIZATION

Wetland A was rated according to *Washington State Wetlands Rating System for Western Washington-2014 Update* (Rating System) (Hruby 2014), and received ratings based on functions (Appendix B). This small wetland is on a slope and is composed of a single vegetation community (scrub-shrub) and meets the criteria for a Category IV system scoring a total of 14 points with 6 points for habitat functions.

CRITICAL AREA REGULATIONS

The *BIMC Chapters 16.20.110.E. 16.20.140.I* specifies buffers based on wetland category, scores for habitat functions on the rating form, and the intensity of the proposed land use in accordance with the Rating System (BIMC 2018). However, buffers for Category IV wetlands are based on the category and the intensity of the land use. For moderate intensity land uses, a 40-foot buffer is required, and a 15-foot building setback is required from the wetland buffer.

The small drainage within and exiting Wetland A was flowing during the April 7th site visit but ceased about 100 feet from the wetland. It appears to either dissipate into the ground or there is seasonal flow as there was no water present in any other segment of the drainage. It appears that there is flow after storm events but it is infrequent because of the narrow width (6 inches). Because it is ephemeral and it does not flow into a Type N or F water, it is not regulated and does not require a buffer.

CRITICAL AREAS RECONNAISSANCE

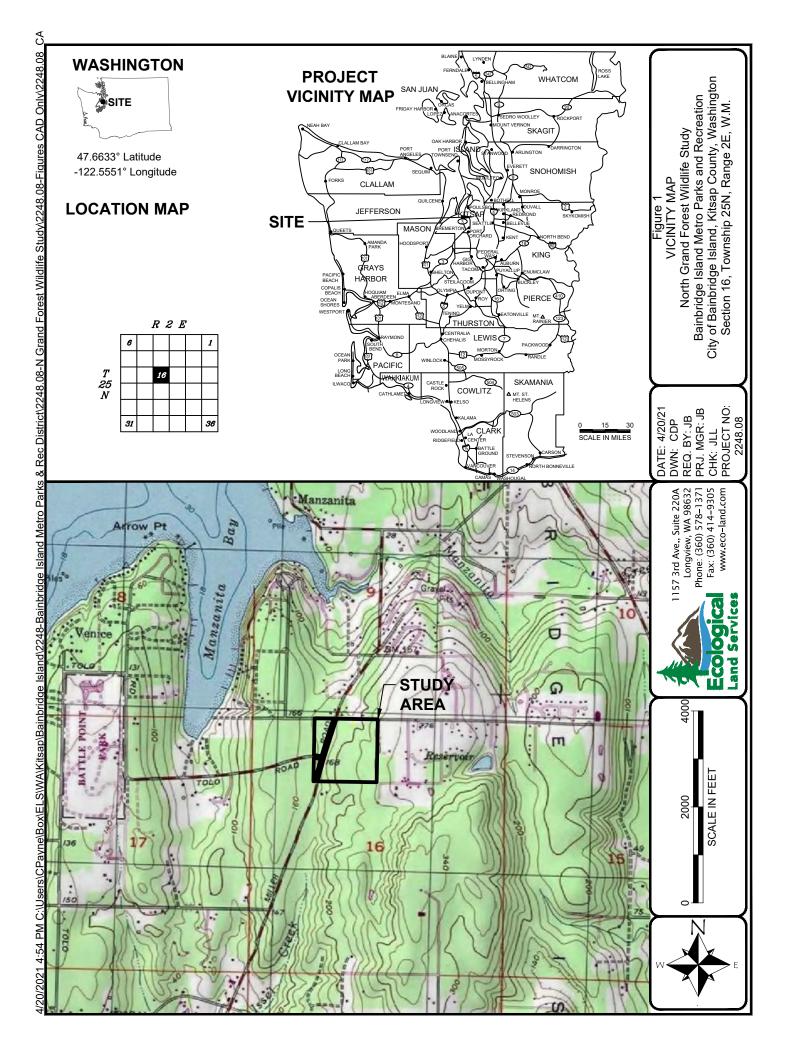
The field reconnaissance conducted in 2019 revealed that there were no other critical areas on the North Grand Forest property. The City of Bainbridge Island maps a small wetland near the middle of the study area, but this area was not observed during the field reconnaissance. One of the eight test plots was conducted near the mapped wetland and no wetland indicators or potential indicators were observed. The reconnaissance included collection of data at eight test plots to determine whether wetlands or other critical areas were present. The data was collected in low areas including depressional troughs that form through the sloping terrain. The test plot data indicates that the North Grand Forest is largely composed of upland with a small slope wetland at the north end, which was identified and delineated in April 2021. There is a small outlet from the wetland, but it is not a formal stream because it has ephemeral water flow and does not connect to other stream systems.

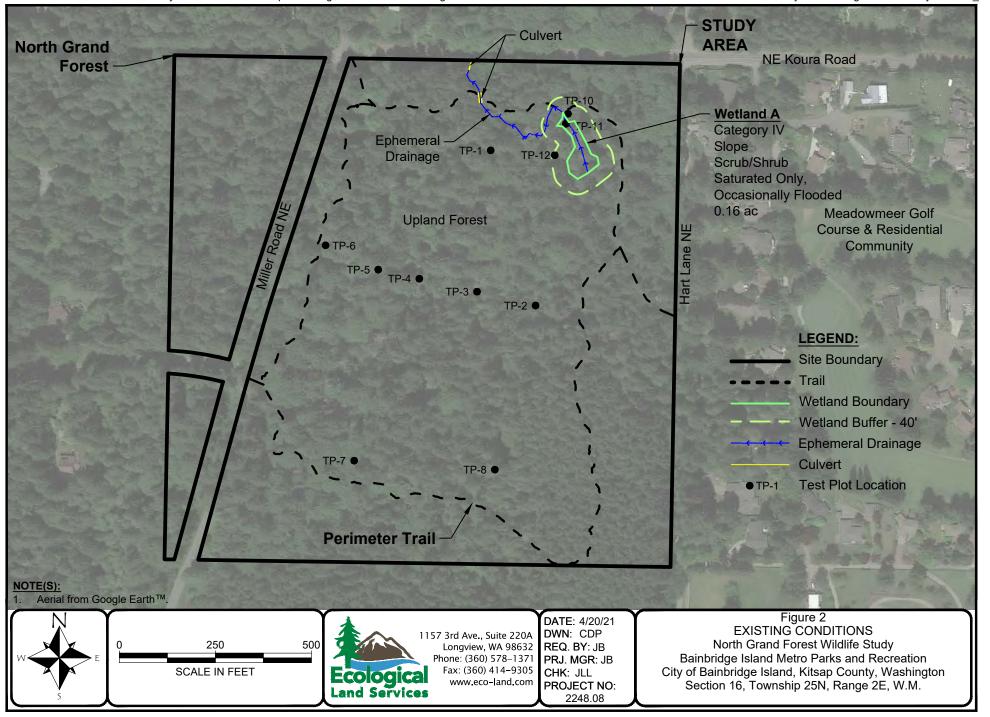
LIMITATIONS

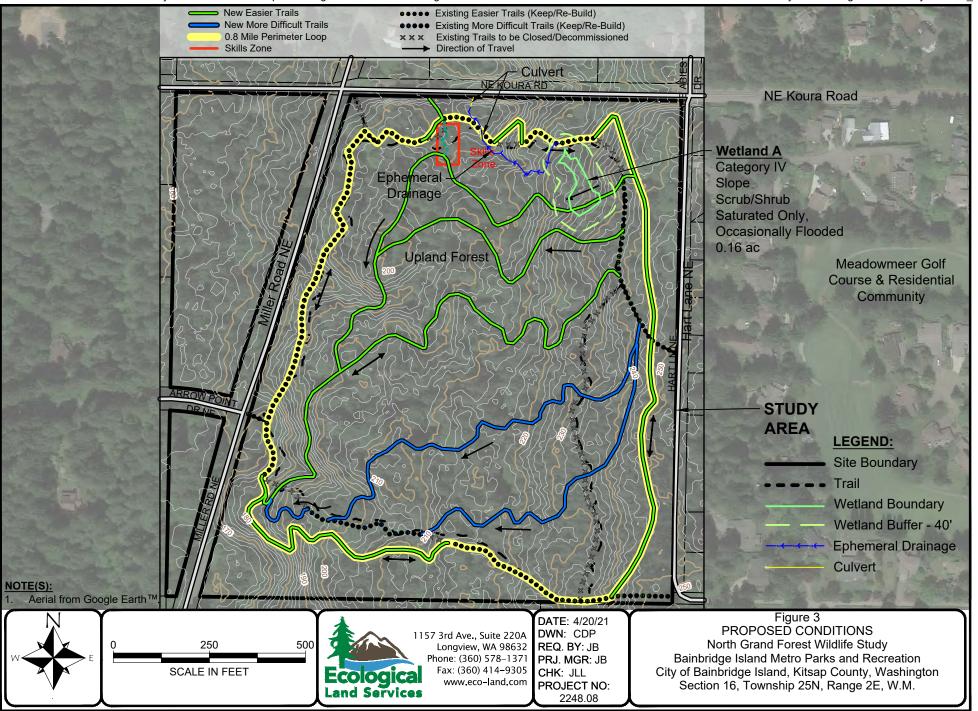
ELS bases this report's determinations on standard scientific methodology and best professional judgment. In our opinion, local, state, and federal regulatory agencies should agree with our determinations. However, the information contained in this report should be considered preliminary and used at your own risk until it has been approved in writing by the appropriate regulatory agencies. ELS is not responsible for the impacts of any changes in environmental standards, practices, or regulations after the date of this report.

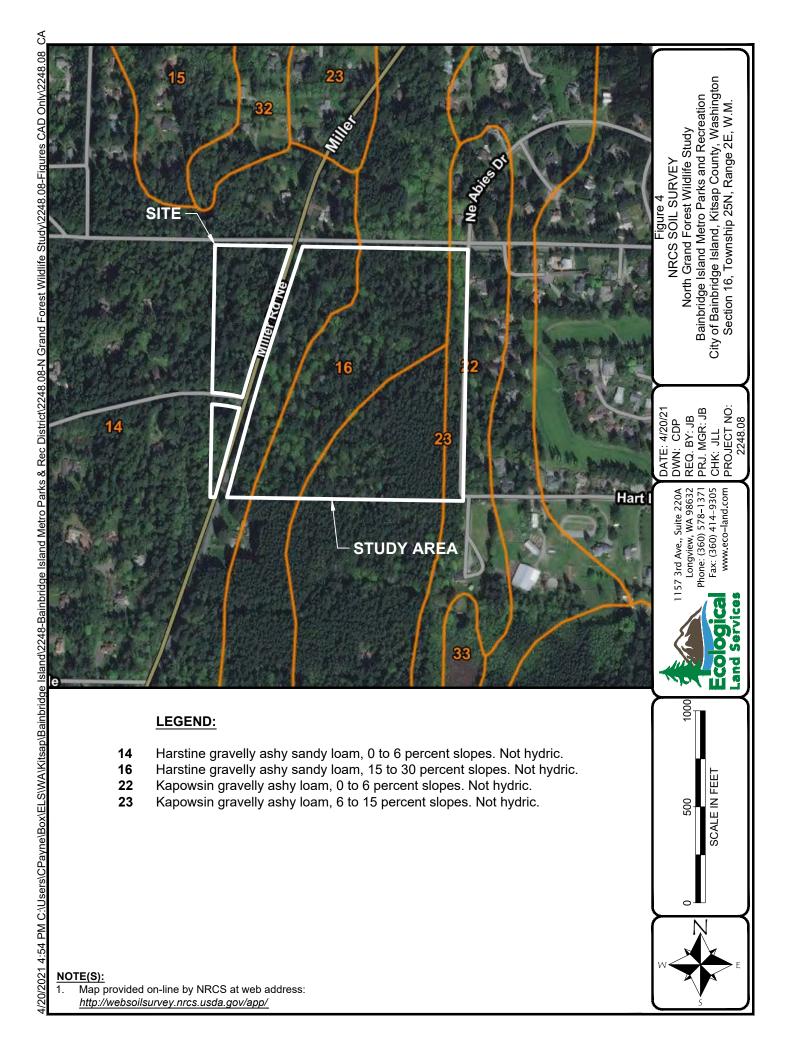
REFERENCES

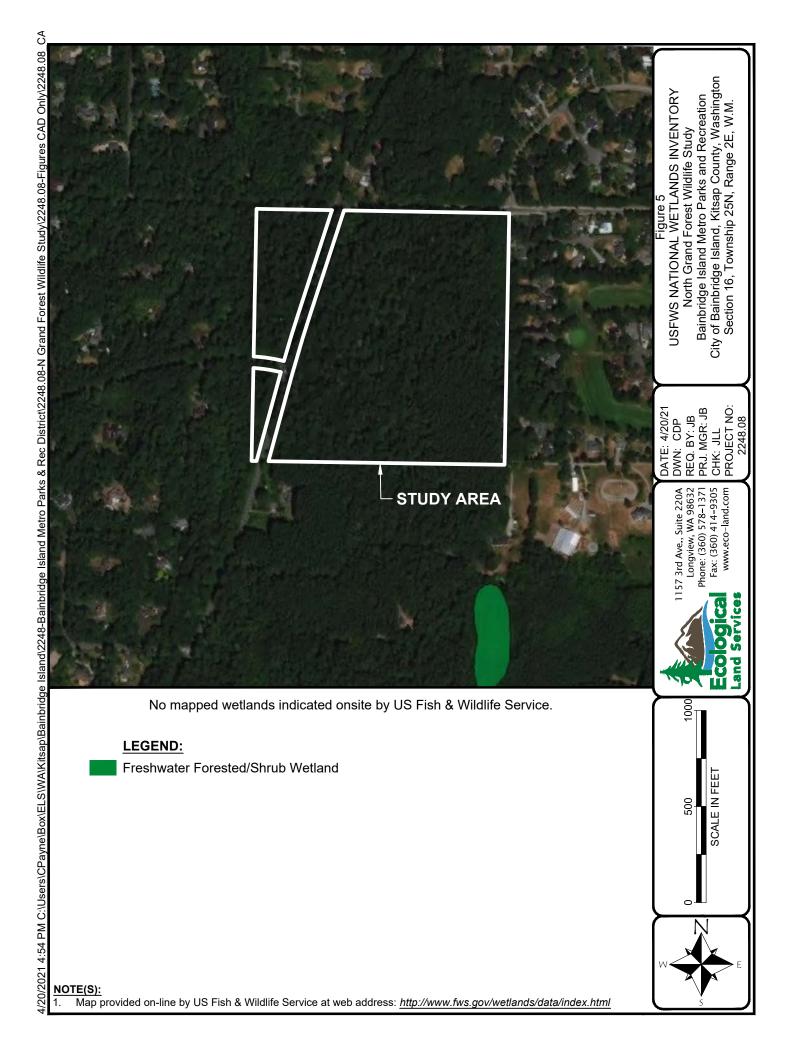
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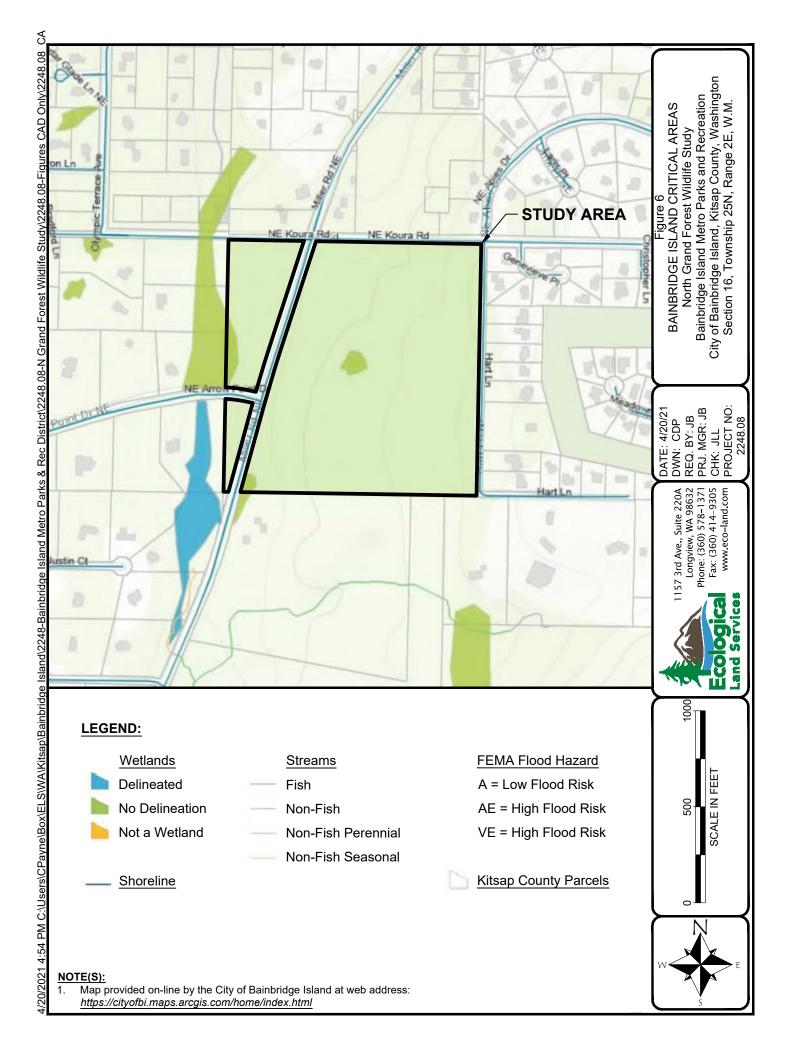


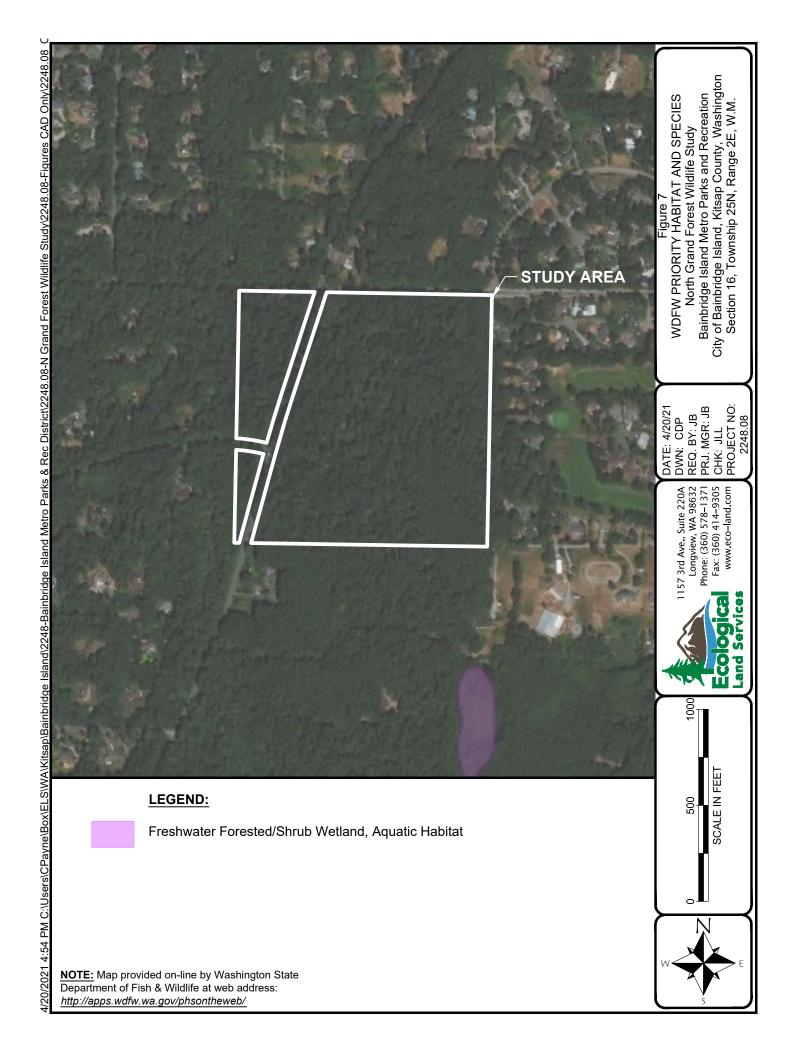


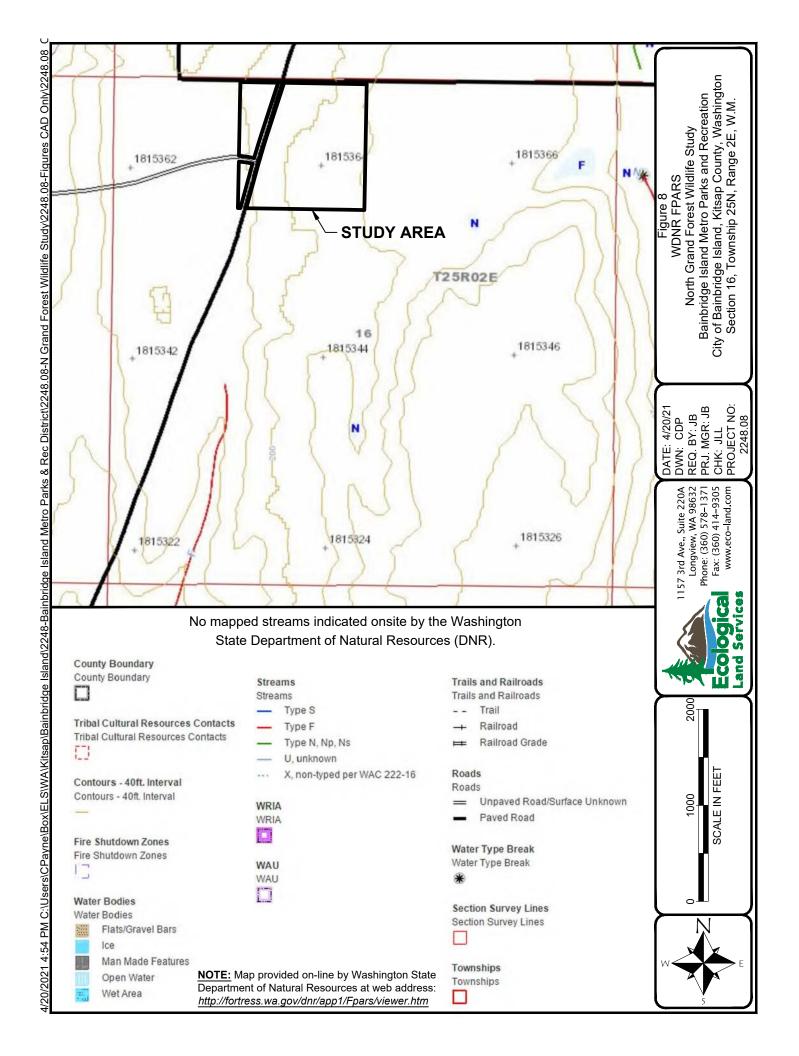


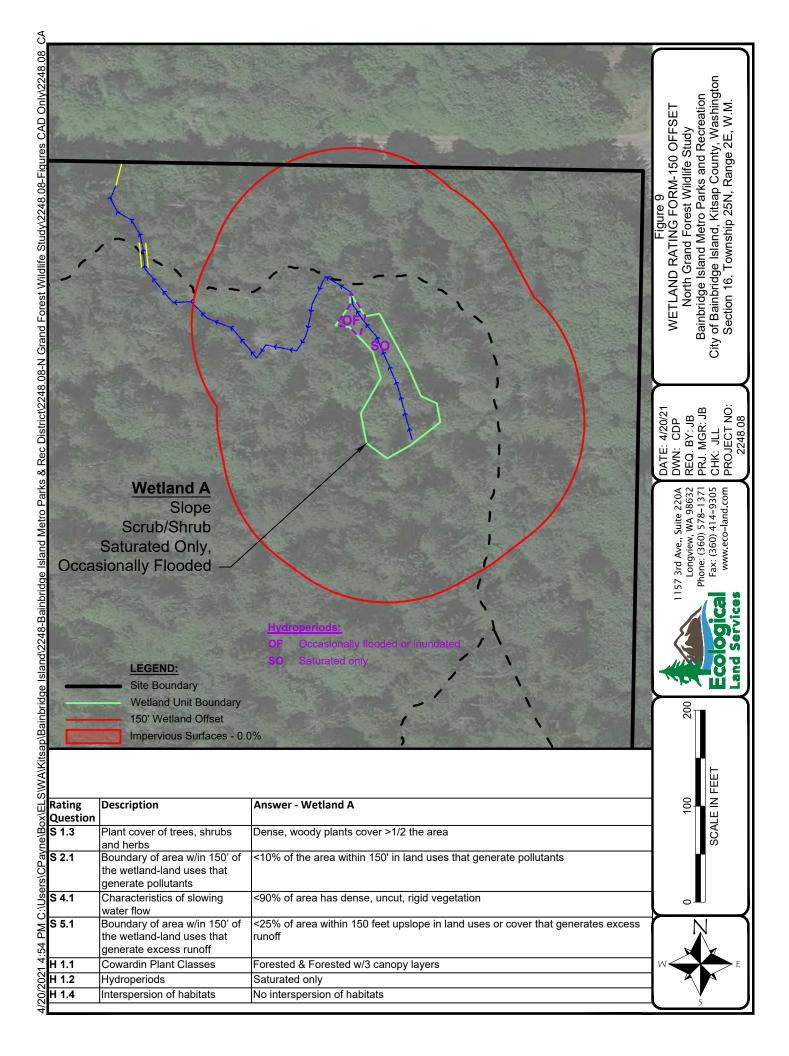


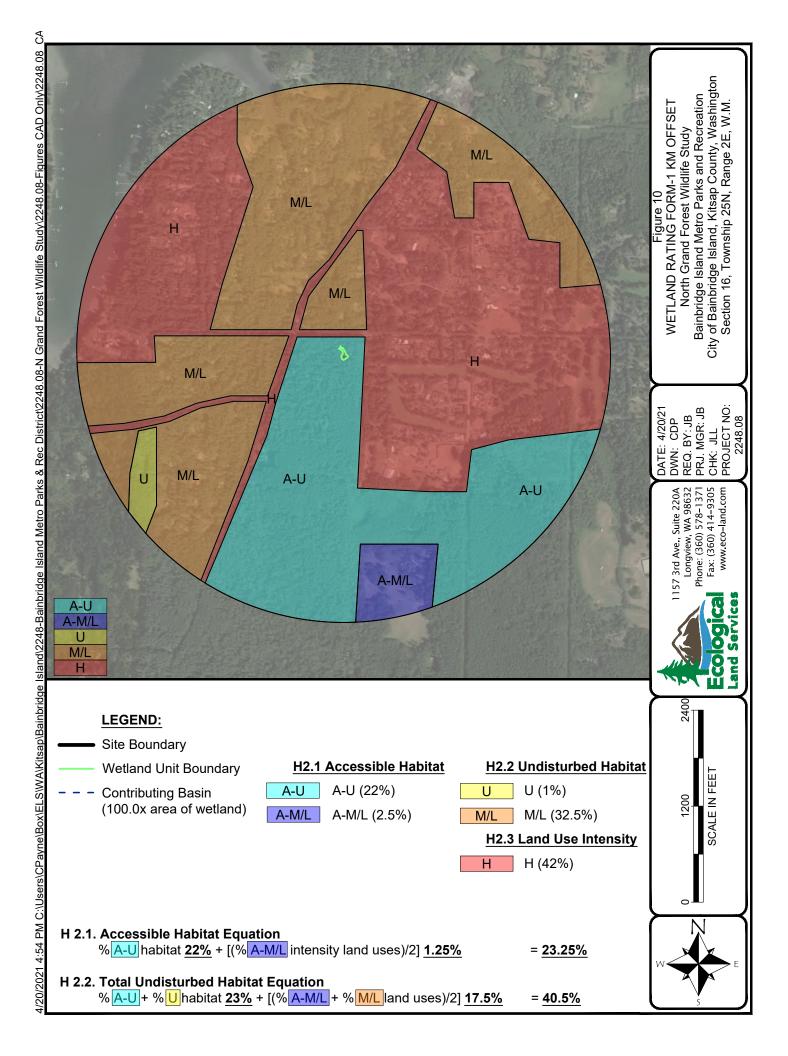












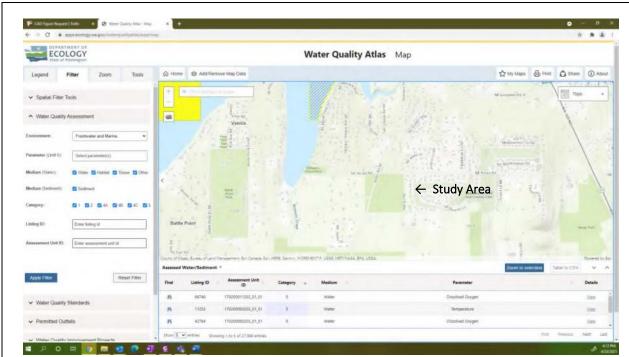


Figure 11a-303(d) Map: The wetland does not discharge into a 303(d) listed water within 1 mile.

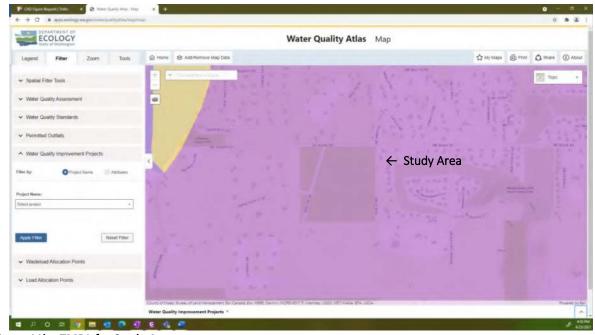


Figure 11b: TMDL for Study Area.



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DATE: 4/20/21 DWN: JB PRJ. MGR: JB

PROJ. #: 2248.08

Figure 11-Wetland Rating Form-303(d)/TMDL

North Grand Forest CAR Bainbridge Island Metro Parks and Recreation District Kitsap County, Washington



Photo 1 was taken from the northwest corner of North Grand Forest. It looks east along the northern section of the perimeter trail. This photo shows an area of dense salmonberry that does not meet the wetland criteria.



Photo 2 was taken from the same location as Photo 1. It looks southeasterly into the forested study area from the trail.



Photo 3 was taken from the same location as Photos 1 and 2. It looks into the forested study area along the north side of the park.



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DATE: 6/24/19 DWN: JB PRJ. MGR JB PROJ. #: 2248.07 Photoplate 1
Project Name: North Grand
Forest
Client: Bainbridge Island Metro
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Bainbridge Island, Washington



Photo 4 was taken from near the southwest corner of the North Grand Forest and it looks north along the western portion of the perimeter trail. The conditions in this photo are indicative of the views of the forested study area from the trail.



Photo 5 was taken from the southern portion of the perimeter trail and shows an area of the forest that lacks dense shrub cover.



Photo 6 was taken along a section of the perimeter trail on the North Grand Forest. In this photo, bigleaf maple is present in the canopy with sword fern dominating the understory.



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DATE: 6/24/19 DWN: JB PRJ. MGR JB PROJ. #: 2248.07 Photoplate 2
Project Name: North Grand
Forest
Client: Bainbridge Island Metro
Parks and Recreation
Bainbridge Island, Washington



Photo 7 provides a view of the forest that lies within the interior of the park as viewed from the perimeter trail. Many areas are dominated by conifer trees with sword fern dominating the understory, so this photo is typical of the forested conditions within the study area.



Photo 8 shows the soil at one of the eight test plots conducted across the North Grand Forest. The soil was composed of gravelly sandy loam with dark brown to reddish brown chromas that met none of the hydric soil indicators.



Photo 9 shows an area of the forest where salmonberry dominates the shrub layer. Test plots were completed in some of these areas and no wetland conditions were observed. This photo is indicative of areas where the canopy is more open, and a high shrub layer has developed.



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DATE: 6/24/19 DWN: JB PRJ. MGR JB PROJ. #: 2248.07 Photoplate 3
Project Name: North Grand
Forest
Client: Bainbridge Island Metro
Parks and Recreation
Bainbridge Island, Washington



Photo 10 was taken of Wetland A from the west end. The wetland is fairly indistinguishable from the upland that surrounds it but it is present in the middle right where the shrub and herbaceous vegetation is the most dense. The wetland is a mosaic so there are high upland areas within the delineated boundary.



Photo 11 was taken from the same location as Photo 10 and looks easterly across the upland toward the delineated boundary. Flags are visible on the left side and in the right background at the edge of the wetland.



Photo 12 was taken of the area where Test Plot 11 was conducted. It is located at the edge of an occasionally flooded area at the north end of Wetland A. The soil hole was dug at the edge where the orange flag is located but includes the entire bare area of the wetland.



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DATE: 4/9/21 DWN: JB PRJ. MGR JB PROJ. #: 2248.07 Photoplate 4
Project Name: North Grand
Forest
Client: Bainbridge Island Metro
Parks and Recreation
Bainbridge Island, Washington



where Test Plot 10 was conducted. It is located on the northeast side of Wetland A and outside of flag WB A-2. This area is upland because there were no positive indicators present for any of the three wetland parameters.



Photo 14 was taken of the area where Test Plot 12 was conducted. This test plot is located southwest of Wetland A in upland outside of flag WB A-15. This area was determined to be upland because there were no positive indicators present for any of the three wetland parameters.



Photo 15 was taken from the northern segment of the perimeter trail. It looks north from the trail to document the conditions of the ephemeral drainage as it extends to Koura Road. There was no water in most of the channel because it dissipates about 100 feet west of its outlet from Wetland A.



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DATE: 4/9/21 DWN: JB PRJ. MGR JB PROJ. #: 2248.07 Photoplate 5
Project Name: North Grand
Forest
Client: Bainbridge Island Metro
Parks and Recreation
Bainbridge Island, Washington

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

Project Site:	N Grand Forest			City/Cour	nty: <u>Bainbridge Island/Kitsap</u> Sampling Date:	6/17/19
Applicant/Owner:	BI Metro Parks and Recreation				State: WA Sampling Point:	<u>TP 1</u>
Investigator(s):	J. Bartlett, K. Lacey				Section, Township, Range: <u>S 16 T 25 N R 2</u>	EWM
Landform (hillslope, te	rrace, etc.): <u>hillslope</u>		Loc	al relief (cond	cave, convex, none): <u>concave</u> Slop	e (%): <u>5-10</u>
Subregion (LRR):	MLRA 2	Lat: 47.6	664215062986	<u>4</u>	Long: <u>-122.55523451398</u> Datum:	NAD83
Soil Map Unit Name:	16 Harstine gravelly ashy sand	dy Ioam, 15-3	0% slopes		NWI classification: None	
Are climatic / hydrolog	ic conditions on the site typical fo	r this time of	year? Y	′es 🗆	No 🛛 (If no, explain in Remarks.)	
Are Vegetation ☐,	Soil ☐, or Hydrology	☐, signific	cantly disturbed	d? Are '	'Normal Circumstances" present? Yes	□ No ⊠
Are Vegetation ☐,	Soil □, or Hydrology	□, natura	lly problemation	? (If ne	eeded, explain any answers in Remarks.)	
SUMMARY OF FIN	IDINGS – Attach site map s	howing sar	mpling poin	t locations	, transects, important features, etc.	
Hydrophytic Vegetatio	n Present?	Yes 🗵	No 🗆			
Hydric Soil Present?		Yes 🗆	No ⊠	Is the Samp		□ No ⊠
Wetland Hydrology Pro	esent?	Yes 🗆		within a We	Hand?	
Remarks: The N Gra	and Forest is located in the south	east guadran	t of Miller Roa	d (to the west	t) and Koura Road (to the north). It is currenlty undeve	loped and
composed	d of upland forest with a trail arou	nd the perime	eter. The prop	erty generally	slopes down from east to west with topographic troug	
west facin	ng slope. Test Plot 1 is located in	a low area a	t the north end	wnere there	was a dominance by FAC plant species.	
VEGETATION – Us	se scientific names of plant	s				
Tree Stratum (Plot siz	e: 30' diameter)	Absolute	Dominant	Indicator	Dominance Test Worksheet:	
1		% Cover	Species?	<u>Status</u>	Number of Deminant Species	
2					Number of Dominant Species That Are OBL, FACW, or FAC:	(A)
3					Total Number of Dominant	
4.			· 	·	Species Across All Strata:	(B)
50% =, 20% =			= Total Cove	er	Percent of Dominant Species	
Sapling/Shrub Stratun	n (Plot size: 20' diameter)				That Are OBL, FACW, or FAC:	(A/B)
1. Rubus spectabilis		20	<u>yes</u>	FAC	Prevalence Index worksheet:	
2			<u> </u>		Total % Cover of: Multip	oly by:
3					OBL species x1 =	
4					FACW species x2 =	
5					FAC species x3 =	
50% = <u>10</u> , 20% = <u>4</u>		<u>20</u>	= Total Cove	r	FACU species x4 =	
Herb Stratum (Plot siz	e: 10' diameter)				UPL species x5 =	
1. <u>Urtica dioica</u>		<u>35</u>	<u>yes</u>	FAC	Column Totals:(A)	(B)
2. Polystichum munit	tum_	<u>15</u>	<u>yes</u>	FACU	Prevalence Index = B/A =	
3. <u>Tellima grandiflora</u>	<u>a</u>	<u>10</u>	no	FACU	Hydrophytic Vegetation Indicators:	
4. Geranium robertia	num	<u>10</u>	no	FACU	☐ 1 – Rapid Test for Hydrophytic Vegetation	
5. Galium aparine		<u>5</u>	no	FACU		
6. Dryopteris expans	ra	<u>5</u>	no	FACU	☐ 3 - Prevalence Index is <3.0¹	
7.	_	_	_		4. Morphological Adaptations 1 (Provide suppo	urting
8					data in Remarks or on a separate sheet)	rung
9.					☐ 5 - Wetland Non-Vascular Plants¹	
10					☐ Problematic Hydrophytic Vegetation¹ (Explain)	
11.				· 	(2) plants	
50% = <u>40</u> , 20% = <u>16</u>		80	= Total Cove	er	¹ Indicators of hydric soil and wetland hydrology must	i
Woody Vine Stratum ((Plot size:)	_			be present, unless disturbed or problematic.	
1	·					·
2.			· 	·	Hydrophytic	
50% =, 20% =			= Total Cove	er	Vegetation Yes ⊠	No 🗆
% Bare Ground in Hei					Present?	
7	·	on is met hec	ause there is o	reater than 5	0% dominance by FAC plant species.	
Remarks:	no nyaropny iro vegetation ontent	711 13 THE LUCK	4430 HIGIG IS 9	TOULOT THAT! J	670 dominando by 1710 plant apedies.	

Project Site: N Grand Forest

SOIL Sampling Point: TP 1 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Color (moist) (inches) Color (moist) % % Type¹ Loc² Texture Remarks 0-7 10YR 2/2 100 gr sa lo 7-16 10YR 4/3 90 10YR 4/6 <u>10</u> C Μ gr sa lo gr - gravelly sa - sandy lo - loam ¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix, RC=Root Channel Indicators for Problematic Hydric Soils3: Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) ³Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic Restrictive Layer (if present): Type: **Hydric Soils Present?** \boxtimes Depth (inches): Yes No Remarks: The soil profile meets none of the hydric soil indicators because of the high matrix chroma in the subsurface soil layer. **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) П Surface Water (A1) Water-Stained Leaves (B9) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) High Water Table (A2) (MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) П 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 Aguitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stresses Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? \boxtimes Yes No Depth (inches): \boxtimes Water Table Present? Yes No Depth (inches): Saturation Present? Wetland Hydrology Present? No \boxtimes Yes No \boxtimes Depth (inches): Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Hydrology was not present in this area and there was no evidence of wetland hydrology.

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

Project Site:	N Grand Forest			City/Coun	ty: <u>Bainbridge Island/Kitsap</u> Sampling Date:	6/17/19
Applicant/Owner:	BI Metro Parks and Recreation				State: WA Sampling Point:	<u>TP 2</u>
Investigator(s):	J. Bartlett, K. Lacey				Section, Township, Range: S 16 T 25 N R 2 I	<u>EWM</u>
Landform (hillslope, ter	rrace, etc.): <u>hillslope</u>		Local	relief (conc	ave, convex, none): <u>concave</u> Slope	e (%): <u>5-10</u>
Subregion (LRR):	MLRA 2	Lat: <u>47.6</u>	631147627373		Long: <u>-122.55472372856</u> Datum:	NAD83
Soil Map Unit Name:	16 Harstine gravelly ashy sand	y loam, 15-30)% slopes		NWI classification: None	
Are climatic / hydrologi	ic conditions on the site typical for	this time of y	ear? Ye	es 🗆	No 🛛 (If no, explain in Remarks.)	
Are Vegetation \square ,	Soil □, or Hydrology	☐, signific	antly disturbed	? Are "	Normal Circumstances" present? Yes	□ No ⊠
Are Vegetation \square ,	Soil □, or Hydrology	□, natural	ly problematic?	(If ne	eded, explain any answers in Remarks.)	
	•		· · ·	locations,	transects, important features, etc.	
Hydrophytic Vegetation	n Present?	Yes 🗆	No 🛛	Is the Samp	oled Area	
Hydric Soil Present?		Yes 🗆	NO 🗵	within a We		□ No ⊠
Wetland Hydrology Pre		Yes 🗌				
composed west facing	d of upland forest with a trail arour	nd the perime ar the top of	ter. The prope a westerly slopi	rty generally ing trough.) and Koura Road (to the north). It is currenlty undevel slopes down from east to west with topographic trougl This trough was examined for presence of wetland or s ion of the perimeter trail.	hs carved into the
VEGETATION - Us	se scientific names of plants					
Tree Stratum (Plot size	e: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. Thuja plicata		<u>15</u>	yes	FAC	Number of Dominant Species	(4)
2					That Are OBL, FACW, or FAC:	(A)
3					Total Number of Dominant	(D)
4					Species Across All Strata:	(B)
$50\% = \underline{7.5}, 20\% = \underline{3}$		<u>15</u>	= Total Cover		Percent of Dominant Species	(A/B)
Sapling/Shrub Stratum	n (Plot size: 20' diameter)				That Are OBL, FACW, or FAC:	(A/B)
1. Vaccinium ovatum	!	<u>15</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index worksheet:	
2					Total % Cover of: Multip	ly by:
3					OBL species x1 =	
4					FACW species x2 =	
5					FAC species x3 =	
$50\% = \underline{7.5}, 20\% = \underline{3}$		<u>15</u>	= Total Cover		FACU species x4 =	
Herb Stratum (Plot size	e: 10' diameter)				UPL species x5 =	
1. Polystichum munit	<u>tum</u>	<u>35</u>	<u>yes</u>	<u>FACU</u>	Column Totals:(A)	(B)
2					Prevalence Index = B/A =	
3					Hydrophytic Vegetation Indicators:	
4.					☐ 1 – Rapid Test for Hydrophytic Vegetation	
5					2 - Dominance Test is >50%	
6.					□ 3 - Prevalence Index is <3.0¹	
7						etio o
8					4 - Morphological Adaptations ¹ (Provide support data in Remarks or on a separate sheet)	ung
9				_	☐ 5 - Wetland Non-Vascular Plants ¹	
10					☐ Problematic Hydrophytic Vegetation¹ (Explain)	
11.					Problematic Hydrophytic Vegetation (Explain)	
50% = 17.5, 20% = 7		<u>35</u>	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must	
Woody Vine Stratum (I	Plot size·)	<u>50</u>	- 10101 00101		be present, unless disturbed or problematic.	
1	1 101 0120.					
2.					Hydrophytic	
50% =, 20% = _			= Total Cover		Vegetation Yes □	No 🛛
			- I Jiai Juvel		Present?	
% Bare Ground in Herl		n ie not mat b	ecause there	e lees than F	50% dominance by EAC plant species	
Remarks:	ne nyarophytic vegetation criterio	n is not met t	ecause there is	s iess than 5	50% dominance by FAC plant species.	

Project Site: N Grand Forest

SOIL Sampling Point: TP 2 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0-2 10YR 2/2 100 gr sa lo 2-16 10YR 4/6 100 gr sa lo gr - gravelly sa - sandy lo - loam ¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix, RC=Root Channel Indicators for Problematic Hydric Soils3: Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) ³Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic Restrictive Layer (if present): Type: **Hydric Soils Present?** \boxtimes Depth (inches): Yes No Remarks: The soil profile meets none of the hydric soil indicators because of the high matrix chroma in the subsurface soil layer. **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) П Surface Water (A1) Water-Stained Leaves (B9) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) High Water Table (A2) (MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) П 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 Aguitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stresses Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? \boxtimes Yes No Depth (inches): \boxtimes Water Table Present? Yes No Depth (inches): Saturation Present? Wetland Hydrology Present? No \boxtimes Yes No \boxtimes Depth (inches): Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Hydrology was not present in this area and there was no evidence of wetland hydrology.

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

Project Site:	N Grand Forest			City/Cour	nty: <u>Bainbridge Island/Kitsap</u> Sampling Da	ate:	6/17/19	
Applicant/Owner:	BI Metro Parks and Recreation				State: WA Sampling Po	oint:	TP 3	
Investigator(s):	J. Bartlett, K. Lacey				Section, Township, Range: <u>S 16 T 2</u>	5 N R 2 EW	VM	
Landform (hillslope, te	errace, etc.): <u>hillslope</u>		Loca	al relief (cond	cave, convex, none): <u>concave</u>	Slope (%): <u>5-10</u>	<u>)</u>
Subregion (LRR):	MLRA 2	Lat: <u>47.6</u>	63204174617	<u>3</u>	Long: <u>-122.55534573261</u>	Datum: NA	ND83	
Soil Map Unit Name:	16 Harstine gravelly ashy sand	dy Ioam, 15-3	0% slopes		NWI classification:	None		
Are climatic / hydrolog	ic conditions on the site typical fo	r this time of	year? Y	′es □	No ⊠ (If no, explain in Remarks.)			
Are Vegetation ☐,	, Soil □, or Hydrology	☐, signific	antly disturbed	d? Are	"Normal Circumstances" present?	Yes	☐ No	\boxtimes
Are Vegetation ☐,	, Soil □, or Hydrology	☐, natura	lly problematic	? (If ne	eeded, explain any answers in Remarks.)			
SUMMARY OF FIN	IDINGS – Attach site map s	howing sar	npling poin	t locations	, transects, important features, etc.			
Hydrophytic Vegetation	n Present?	Yes 🗆	No ⊠					
Hydric Soil Present?		Yes 🗆	No 🛛	Is the Sam		Yes	□ No	\boxtimes
Wetland Hydrology Pro	esent?	Yes 🗆	No 🛛	within a We	riand?			
				d (to the wes	t) and Koura Road (to the north). It is currenlty	, undevelon	ed and	
composed west facin	d of upland forest with a trail arou	nd the perime	eter. The prop	erty generally erly sloping t	y slopes down from east to west with topograph rough and below Test Plot 2. This area contain	hic troughs	carved in	
VEGETATION – Us	se scientific names of plan	s						
Tree Stratum (Plot siz	e: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:			
1					Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u>		(A)
2				—	That Ale OBE, THOW, of The.			
3					Total Number of Dominant Species Across All Strata:	<u>4</u>		(B)
4			Total Cava					
50% =, 20% = _	n (Plot size: 20' diameter)		= Total Cove	ŧI	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50</u>		(A/B)
	- '	25	1/00	EAC	Prevalence Index worksheet:			
Rubus spectabilis Vaccinium parvifol		<u>25</u>	<u>yes</u>	<u>FAC</u> FACU		Multiply	h	
3	<u>iluiri</u>	<u>15</u>	<u>yes</u>	FACU	Total % Cover of: OBL species	$\frac{\text{Multiply t}}{\text{x1}} =$	<u>oy.</u>	
4.					FACW species	x2 =		
5.					FAC species 45		135	
50% = 20, 20% = 8		40	= Total Cove		FACU species 65		260	
	ro: 10' diameter)	40	= Total Cove	÷1			200	
Herb Stratum (Plot siz	·	50		FACIL	UPL species	x5 =	205 (5)	
1. Polystichum munit		<u>50</u>	<u>yes</u>	<u>FACU</u>	Column Totals: 110 (A)	·-	395 (B)	
2. Rubus spectabilis		<u>20</u>	<u>yes</u>	<u>FAC</u>	Prevalence Index = B/A	· = <u>3.6</u>		
3				—	Hydrophytic Vegetation Indicators:			
4					1 – Rapid Test for Hydrophytic Vegeta	ition		
5					2 - Dominance Test is >50%			
6					☐ 3 - Prevalence Index is <u><</u> 3.0 ¹			
7					4 - Morphological Adaptations¹ (Provid		ng	
8					data in Remarks of on a separate s	sheet)		
9					5 - Wetland Non-Vascular Plants ¹			
10					☐ Problematic Hydrophytic Vegetation¹ (Explain)		
11					11 displayed of budgie poil and westend budgets			
50% = 35, 20% = 14		<u>70</u>	= Total Cove	er	¹ Indicators of hydric soil and wetland hydrolobe present, unless disturbed or problematic.			
Woody Vine Stratum ((Plot size:)							
1								
2					Hydrophytic Vegetation Yes	7	No	\boxtimes
50% =, 20% =			= Total Cove	er	Present?	_	140	
% Bare Ground in Her	rb Stratum 30							
ivelliains.	, , , ,	on is not met l	because the d	ominance by	FAC species is not greater than 50% and the	prevalence	index is	
greater	than 3.0.							

Project Site: N Grand Forest

SOIL Sampling Point: TP 3 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0-2 10YR 2/2 100 gr sa lo 2-16 10YR 4/6 100 gr sa lo gr - gravelly sa - sandy lo - loam ¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix, RC=Root Channel Indicators for Problematic Hydric Soils3: Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) ³Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type: **Hydric Soils Present?** \boxtimes Depth (inches): Yes No Remarks: The soil profile meets none of the hydric soil indicators because of the high matrix chroma in the subsurface soil layer. **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) П Surface Water (A1) Water-Stained Leaves (B9) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) High Water Table (A2) (MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) П 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 Aguitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stresses Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? \boxtimes Yes No Depth (inches): \boxtimes Water Table Present? Yes No Depth (inches): Saturation Present? Wetland Hydrology Present? No \boxtimes Yes No \boxtimes Depth (inches): Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Hydrology was not present in this area and there was no evidence of wetland hydrology.

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

Project Site:	N Grand Forest			City/Coun	ty: <u>Bainbridge Island/Kitsap</u> Sampling Date: <u>6/17/19</u>	
Applicant/Owner:	BI Metro Parks and Recreation				State: WA Sampling Point: TP 4	
Investigator(s):	J. Bartlett, K. Lacey				Section, Township, Range: <u>S 16 T 25 N R 2 EWM</u>	
Landform (hillslope, ter	rrace, etc.): <u>hillslope</u>		Loca	relief (conca	ave, convex, none): <u>concave</u> Slope (%): <u>5-10</u>	
Subregion (LRR):	MLRA 2	Lat: <u>47.6</u>	632870753412		Long: <u>-122.55595780541</u> Datum: <u>NAD83</u>	
Soil Map Unit Name:	14 Harstine gravelly ashy sand	y loam,0-6%	<u>slopes</u>		NWI classification: None	
Are climatic / hydrologi	ic conditions on the site typical for	r this time of y	ear? Ye	es 🗆	No 🛛 (If no, explain in Remarks.)	
Are Vegetation □,	Soil □, or Hydrology	☐, signific	antly disturbed	? Are "	Normal Circumstances" present? Yes No	\boxtimes
Are Vegetation \square ,	Soil □, or Hydrology	☐, natural	ly problematic?	(If ne	eded, explain any answers in Remarks.)	
SUMMARY OF FIN	DINGS – Attach site map sl	nowing sar	nplina point	locations.	transects, important features, etc.	
Hydrophytic Vegetation	<u> </u>	Yes □	No ⊠	•	<u> </u>	
Hydric Soil Present?		Yes 🗆	No 🖾	Is the Samp		\boxtimes
Wetland Hydrology Pre	esent?	Yes 🗆		within a We	iland?	
composed west facin	d of upland forest with a trail arour	nd the perime ear the lower o	ter. The prope	rty generally	and Koura Road (to the north). It is currenlty undeveloped and slopes down from east to west with topographic troughs carved intrough, which is where it curves to the south. This area was dominated	
VEGETATION – Us	se scientific names of plant		<u> </u>			
Tree Stratum (Plot size	e: <u>30' diameter</u>)	Absolute <u>% Cover</u>	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1					Number of Dominant Species That Are OBL, FACW, or FAC:	(A)
2 3						
4					Total Number of Dominant Species Across All Strata:	(B)
50% =, 20% = _			= Total Cover		Percent of Dominant Species	(A/D)
Sapling/Shrub Stratum	n (Plot size: 20' diameter)				That Are OBL, FACW, or FAC:	(A/B)
1. Rubus spectabilis		<u>25</u>	<u>yes</u>	<u>FAC</u>	Prevalence Index worksheet:	
2					Total % Cover of: Multiply by:	
3					OBL species x1 =	
4					FACW species x2 =	
5					FAC species x3 =	
$50\% = \underline{12.5}, 20\% = \underline{5}$		<u>25</u>	= Total Cover		FACU species x4 =	
Herb Stratum (Plot size	e: 10' diameter)				UPL species x5 =	
1. Polystichum munit	<u>um</u>	<u>35</u>	<u>yes</u>	<u>FACU</u>	Column Totals: (A) (B)
2. Pteridium aquilinui	<u>m</u>	<u>30</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A =	
3.					Hydrophytic Vegetation Indicators:	
4.		·			☐ 1 – Rapid Test for Hydrophytic Vegetation	
5					2 - Dominance Test is >50%	
6.		·			☐ 3 - Prevalence Index is <3.0¹	
7						
8					4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
9					5 - Wetland Non-Vascular Plants ¹	
10					Problematic Hydrophytic Vegetation¹ (Explain)	
11.					- Problematic Trydrophytic Vegetation (Explain)	
50% = 32.5, 20% = 13		<u>65</u>	= Total Cover	-	¹ Indicators of hydric soil and wetland hydrology must	
Woody Vine Stratum (•	<u>00</u>	- 10101 00101		be present, unless disturbed or problematic.	
	1 101 3120.					
1					Hydrophytic	
2			- Total Carre		Vegetation Yes ☐ No	\boxtimes
50% =, 20% = _			= Total Cover		Present?	
% Bare Ground in Her		un ic not mot b	occure there:	a loce than F	0% dominance by EAC plant energies	
Remarks:	ne nyurophytic vegetation criterio	ii is iiot met t	recause (Neré l	s iess man 5	0% dominance by FAC plant species.	

Project Site: N Grand Forest

nches) Color (moist) % Color (moist) % Type¹ Loc² 0-4 10YR 2/2 100 4-16 10YR 3/6 100 ype: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) setrictive Layer (if present): "pe:	Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
4-16 10YR 3/6 100 wpe: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. dric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Instrictive Layer (if present): pe: ppth (inches): Hydric Soils warks: The soil profile meets none of the hydric soil indicators because of the high matrix chroma in ### CPROLOGY estand Hydrology Indicators: mary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9)	gr sa lo gr - gravelly sa - sandy lo - loam 2Location: PL=Pore Lining, M=Matrix, RC=Root Channel Indicators for Problematic Hydric Soils³: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
//pe: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. //pe: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. //pe: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. //pe: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. //pe: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. //pe: C= Concentration, D=Depletion, RM=Reduced Matrix (S5) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A12) Depleted Matrix (F3) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Strictive Layer (if present): Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Strictive Layer (if present): Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Strictive Layer (if present): Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Strictive Layer (if present): Depleted Dark Surface (F7) Sandy Gleyed Matrix (F3) Redox Depressions (F8) Strictive Layer (if present): Depleted Dark Surface (F7) Sandy Gleyed Matrix (F2) Depleted Matrix (F3) Percondance (F7) Redox Depressions (F8) Strictive Layer (if present): Depleted Dark Surface (F7) Sandy Gleyed Matrix (F3) Redox Depressions (F8) Strictive Layer (if present): Depleted Dark Surface (F7) Sandy Gleyed Matrix (F3) Redox Dark Surface (F6) Provided Matrix (F3) Provided Matrix (gr - gravelly sa - sandy lo - loam 2Location: PL=Pore Lining, M=Matrix, RC=Root Channel Indicators for Problematic Hydric Soils³: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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Histosol (A1)	2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Histic Epipedon (A2)	Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Black Histic (A3)	The state of the
Hydrogen Sulfide (A4)	Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. IIIs Present? Yes No
Depleted Below Dark Surface (A11)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. ils Present? Yes □ No
Thick Dark Surface (A12)	wetland hydrology must be present, unless disturbed or problematic.
Sandy Mucky Mineral (S1)	wetland hydrology must be present, unless disturbed or problematic.
Sandy Gleyed Matrix (S4)	wetland hydrology must be present, unless disturbed or problematic.
Strictive Layer (if present): De: Deth (inches): The soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in the soil profile meets none of the hydric soil indicators because of the high matrix chroma in th	unless disturbed or problematic.
DROLOGY tland Hydrology Indicators: mary Indicators (minimum of one required; check all that apply) Surface Water (A1) Hydric Soils Hydric Hyd	
The soil profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators because of the high matrix chroma in the profile meets none of the hydric soil indicators have because of the hydric soil indicators have because of the hydric soil indicators have because	
DROLOGY tland Hydrology Indicators: nary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9)	
DROLOGY tland Hydrology Indicators: nary Indicators (minimum of one required; check all that apply) Surface Water (A1)	in the subsurface soil layer.
mary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9)	
Surface Water (A1)	
	Secondary Indicators (2 or more required)
High Water Table (A2) (except MLRA 1, 2, 4A, and 4B)	☐ Water-Stained Leaves (B9)
	(MLRA 1, 2, 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 (C	· · · <u> </u>
Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (R5) Recent Iron Reduction in Tilled Soils (C5)	Shallow Aquitard (D3)
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Sturfage Soil Crooks (R6)	FAC-Neutral Test (D5)
Surface Soil Cracks (B6) Stunted or Stresses Plants (D1) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	☐ Raised Ant Mounds (D6) (LRR A) ☐ Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)	☐ Flost-neave nullilllocks (D1)
Id Observations:	
face Water Present? Yes No Depth (inches):	
turation Procent?	
uration Present? Yes □ No ☒ Depth (inches): Weludes capillary fringe)	
	Wetland Hydrology Present? Yes ☐ No
scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	

Project Site:	N Grand F	-orest					City/	County:	Ba	inbridge	Island/	Kitsap	Sampling	Date:	6/1	7/19	
Applicant/Owner:	BI Metro F	Parks and Red	creation								State:	<u>WA</u>	Sampling	Point:	TP	<u>5</u>	
Investigator(s):	J. Bartlett,	, K. Lacey							,	Section,	Townsl	hip, Ranզ	ge: <u>S 16 7</u>	Γ 25 N R 2	EWM		
Landform (hillslope, ter	rrace, etc.):	: <u>hillslope</u>				Loc	al relief (concave,	, con	vex, none	e): <u>c</u>	<u>concave</u>		Slope	e (%):	<u>5-10</u>	<u>j</u>
Subregion (LRR):	MLRA 2		I	Lat: 47	7.663345	5569966	<u>S</u>	1	Long	j: <u>-122.5</u>	556394	80136		Datum:	NAD8	3	
Soil Map Unit Name:	14 Harst	tine gravelly a	shy sandy lo	<u>am,0-6</u>	3% slope	<u>s</u>					1	NWI class	sification:	None			
Are climatic / hydrologi	ic condition	s on the site	typical for thi	s time	of year?	`	Yes		No	\boxtimes	(If no,	explain ir	n Remarks	.)			
Are Vegetation \square ,	Soil	☐, or Hyd	rology \square ,	, sign	ificantly	disturbe	d?	Are "Norr	mal C	Circumsta	ances"	present?	•	Yes		No	\boxtimes
Are Vegetation □,	Soil	□, or Hyd	Irology □,	, natu	ırally pro	blematio	0?	(If neede	ed, ex	xplain any	y answe	ers in Re	marks.)				
SUMMARY OF FIN	DINGS -	Attach site	map shov	wing s	amplin	g poin	t locati	ons, tra	nse	cts, im	portar	nt featu	res, etc.				
Hydrophytic Vegetation	n Present?		,	Yes	☐ No		1-416	S 11		_							
Hydric Soil Present?			,	Yes	☐ No			Sampled a Wetlan		d				Yes		No	
Wetland Hydrology Pre	esent?		,	Yes	☐ No												
composed	d of upland ig slope. To	is located in the forest with a feet Plot 5 is located in the feet	trail around the coated near t	he peri	meter. T	The prop	erty gen	erally slop	pes c	down fror	m east	to west v	vith topogra	aphic trougl	hs car	ved in	
Tree Stratum (Plot size			Ab	bsolute Cover		ninant cies?	Indicat	Do	omin	ance Te	st Wor	rksheet:					
1 2			_			-		Νι		er of Dom re OBL, I		Species , or FAC:		<u>0</u>			(A)
3 4			_			=				lumber o				<u>2</u>			(B)
50% =, 20% = _ Sapling/Shrub Stratum		: <u>20' diameter</u>			= To	otal Cove	er			nt of Dom re OBL, I				<u>0</u>			(A/B)
1			_			_		Pr	reval	ence Inc	dex wo	rksheet:				·	
2			_			_				To	tal % C	Cover of:		Multip	ly by:		
3			_			_		OF	BL sp	pecies				x1 =			
4			_			_		FA	ACW	species				x2 =			
5			_			_		FA	AC sp	ecies				x3 =			
50% =, 20% =			·		= Tc	tal Cove	er		-	species				x4 =			
Herb Stratum (Plot size		neter)	_							pecies				x5 =			
Polystichum munit		<u>iotor</u>)	30	1	VAS		FACU						(Δ)	λ0 –		(E	3)
· · · · ·	<u>um</u>			_	<u>yes</u>			0	olumi	n Totals:				Λ _	_	(1	(د
2. Achyls triphylla			<u>30</u>		<u>yes</u>		NL (UI	· ·		- h. 4! - \/				A =			
3. <u>Dicentra formosa</u>			<u>10</u>	_	<u>no</u>		FACU					ion Indic		-4-4:			
4. <u>Tiarella trifoliata</u>			<u>10</u>	_	<u>no</u>		FAC			•		, ,	ohytic Vege	etation			
5. <u>Pteridium aquilinui</u>	<u>m</u>		<u>5</u>		<u>no</u>		<u>FACU</u>	_	_	2 - Domin	nance i	est is >5	0%				
6			_			-			3	3 - Preval	lence Ir	ndex is <u><</u>	3.0 ¹				
7 8			_		_	=] 4				tions¹ (Pro a separate	vide suppo e sheet)	rting		
9			_			_			5	- Wetlar	nd Non	-Vascula	r Plants ¹				
10			_			_] _P	Problema	tic Hyd	Irophytic	Vegetation	¹ (Explain)			
11											, ,	., ,	3	(/			
50% = <u>42.5</u> , 20% = <u>17</u>	•		85	<u> </u>	= To	tal Cove	er							ology must			
Woody Vine Stratum (Plot size:)	·	=				be	e pres	sent, unie	ess alsi	turbea or	problemat	IIC.			
1	_																
2						-		Ну	ydroj	phytic							
50% = , 20% =			_		= Tc	tal Cove	er		egeta			Ye	es		No		\boxtimes
% Bare Ground in Her		15					·	Pr	reser	nt?							
		hytic vegetation	on critorion is	not m	ot bocou	so there	ie loce t	han 50%	dom	inanco/o	ovorag	o by EAC	nlant eno	cios			
Remarks:	ne nyuropi	lylic vegetalic	in chienon is	, HOL HIR	si becau	se mere	; 15 1655 ti	nan 50 /6	uom	iii lai ice/c	overag	e by i Ac	э ріапі зре	cies.			

SOIL Sampling Point: TP 5 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0-2 10YR 2/2 100 gr sa lo 2-16 10YR 3/6 100 gr sa lo gr - gravelly sa - sandy lo - loam ¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix, RC=Root Channel Indicators for Problematic Hydric Soils3: Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) ³Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic Restrictive Layer (if present): Type: **Hydric Soils Present?** \boxtimes Depth (inches): Yes No Remarks: The soil profile meets none of the hydric soil indicators because of the high matrix chroma in the subsurface soil layer. **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) П Surface Water (A1) Water-Stained Leaves (B9) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) High Water Table (A2) (MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) П 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 Aguitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stresses Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? \boxtimes Yes No Depth (inches): \boxtimes Water Table Present? Yes No Depth (inches): Saturation Present? Wetland Hydrology Present? No \boxtimes Yes No \boxtimes Depth (inches): Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Hydrology was not present in this area and there was no evidence of wetland hydrology.

Project Site:	N Grand Forest	<u>t</u>				City/Cour	nty: <u>Bai</u>	inbridge Isla	nd/Kitsap	Sampling	Date:	6/17	<u>7/19</u>	
Applicant/Owner:	Bl Metro Parks	and Recreation						Sta	te: WA	Sampling	Point:	TP	<u>6</u>	
Investigator(s):	J. Bartlett, K. La	acey					8	Section, Tov	vnship, Ran	ge: <u>S 16 T</u>	25 N R 2	<u>EWM</u>		
Landform (hillslope, ter	rrace, etc.): <u>h</u>	<u>nillslope</u>			Local	relief (cond	cave, conv	vex, none):	concave		Slope	e (%):	<u>5-10</u>	
Subregion (LRR):	MLRA 2		Lat: 47.0	663511024	<u> 49199</u>		Long:	: <u>-122.5569</u>	95696315		Datum:	NAD8	3	
Soil Map Unit Name:	14 Harstine gr	ravelly ashy sand	y loam,0-6%	slopes					NWI clas	sification:	None			
Are climatic / hydrologi	ic conditions on t	the site typical for	r this time of	year?	Ye	es 🗆] No	⊠ (If r	no, explain i	n Remarks.)			
Are Vegetation \square ,	Soil □,	or Hydrology	□, signifi	cantly dist	urbed?	? Are '	"Normal C	Circumstance	es" present	?	Yes		No	\boxtimes
Are Vegetation \square ,	Soil □,	or Hydrology	☐, natura	lly probler	natic?	(If ne	eeded, exp	plain any an	swers in Re	emarks.)				
SUMMARY OF FIN	DINGS - Atta	ch site map sl	nowing sa	mpling p	oint	locations	, transec	cts, impor	tant featu	res, etc.				
Hydrophytic Vegetation	n Present?		Yes [No	\boxtimes									
Hydric Soil Present?			Yes [] No		Is the Sam _l within a We		1			Yes		No	\boxtimes
Wetland Hydrology Pre	esent?		Yes [] No	oxdot	WILIIIII a VVE	elianu r							
Remarks: The N Gra	and Forest is loc	ated in the south	east quadrar	t of Miller	Road	(to the west	t) and Kou	ura Road (to	the north)	It is curren	lty undevel	oned :	and	
composed	d of upland forest	t with a trail arour	nd the perim	eter. The	prope	rty generally	y slopes d	lown from e	ast to west	with topogra	aphic trougl	hs car	ed int	
west facin	g slope. Test Pl	ot 6 is located at	the end of th	ne trough in	n whic	h Test Plots	s 2-5 were	e conducted	. It is locate	ed just upslo	ope of the v	vester	n trail.	
VEGETATION – Us	o sciontific n	amos of plant												
Tree Stratum (Plot size		anies or plant	Absolute	Domina	nt	Indicator	Domine	ance Test V	Norkshoot:					
,	e. <u>50 ulameter</u>)		% Cover	Species	?	Status	Domini	ance rest v	VOI KSITEEL.					
1								er of Domina re OBL, FAC			<u>0</u>			(A)
2							mat Ai	e OBL, I AC	ov, or rac	•				
3								lumber of Do			<u>5</u>			(B)
4						—	Species	s Across All	Strata:					
50% =, 20% = _				= Total (Cover			t of Domina		_	<u>0</u>			(A/B)
Sapling/Shrub Stratum	n (Plot size: 20' d	<u>liameter</u>)					That Ar	re OBL, FAC	JVV, OF FAC					` ′
 Corylus cornuta 			<u>25</u>	<u>yes</u>		<u>FACU</u>	Prevale	ence Index						
2. Vaccinium ovatum			<u>10</u>	<u>yes</u>		<u>FACU</u>		Total ^c	% Cover of:		<u>Multip</u>	ly by:		
3							OBL sp	ecies			x1 =			
4							FACW	species			x2 =			
5							FAC sp	ecies			x3 =			
$50\% = \underline{17.5}, 20\% = \underline{7}$			<u>35</u>	= Total (Cover		FACU s	species			x4 =			
Herb Stratum (Plot size	e: 10' diameter)						UPL sp	ecies			x5 =			
1. Polystichum munit	<u>um</u>		<u>20</u>	<u>yes</u>		<u>FACU</u>	Column	n Totals:		(A)			(E	3)
2. Achyls triphylla			<u>10</u>	yes		NL (UPL)			Prevalence	Index = B/A	A =			
3. Rubus ursinus			<u>10</u>	yes		FACU	Hydrop	ohytic Vege	tation Indi	cators:				
4. Dryoptis expansa			5	no		FACW		- Rapid Te			etation			
5. <u>Asarum caudatum</u>			<u>5</u>	no		FACU	□ 2	- Dominano	e Test is >5	50%				
6.							□ 3	- Prevalenc	o Indovis a	-2 n1				
7									_					
8								- Morpholog	gical Adapta emarks or oi			rting		
9							□ 5	- Wetland N		•	,			
10											1/=			
							L P	roblematic I	Hydrophytic	Vegetation	' (Explain)			
11					_		1Indicat	tors of hydri	c soil and w	etland hydr	oloav must			
50% = <u>25</u> , 20% = <u>10</u>	D		<u>50</u>	= Total (Cover			sent, unless						
Woody Vine Stratum (Plot size: 10' dia	imeter)	_											
1. <u>Hedera helix</u>			<u>5</u>	<u>yes</u>		<u>FACU</u>	Hydrop	abutio						
2							Vegeta	-	Υ	es		No		\boxtimes
$50\% = \underline{2.5}, 20\% = \underline{1}$			<u>5</u>	= Total (Cover		Presen		•	- =	_			_
% Bare Ground in Her	b Stratum <u>50</u>													
Remarks: T	he hydrophytic v	egetation criterio	n is not met	because t	here is	s less than t	50% domi	inance/cove	rage by FA	CW plant sp	ecies.			

Depth	Matrix			Color	(maint)	Redox Feat		Loc ²	— Toyturo			Domork	•	
nches)	Color (moist) 10YR 2/2		% 00	Color	(moist))	Type ¹		Texture			Remark	S	
<u>0-4</u> <u>4-16</u>	10YR 4/6	_	00	_					gr sa lo gr sa lo					
110	<u>1011C 1/10</u>	<u>-</u>	<u>00</u>						ground					
										gr - gra	velly			
										sa - sar	<u>ndy</u>			
		_								lo - loar	<u>m</u>			
/pe: C= Co	oncentration, D=De	epletion	, RM=F	Reduced I	Matrix,	CS=Covered or Co	ated Sand	Grains. ² I	_ocation: PL=	Pore Lining, M	∕l=Matrix, l	RC=Roo	t Channe	I
dric Soil	Indicators: (Appli	cable t	o all LF	RRs, unle	ss oth	erwise noted.)			Indic	ators for Pro	blematic	Hydric S	Soils³:	
Histos	ol (A1)] s	Sandy Redox (S5)				2 cm Muck	(A10)			
Histic I	Epipedon (A2)] s	Stripped Matrix (S6)				Red Parent	Material (TF2)		
Black I	Histic (A3)] L	oamy Mucky Minera	al (F1) (ex c	cept MLRA 1)		Very Shallo	w Dark Su	ırface (T	F12)	
Hydrog	gen Sulfide (A4)] L	oamy Gleyed Matrix	x (F2)			Other (Expla	ain in Rem	narks)		
Deplet	ed Below Dark Su	rface (A	.11)] D	Depleted Matrix (F3)								
Thick [Dark Surface (A12))] R	Redox Dark Surface	(F6)		0					
Sandy	Mucky Mineral (S	1)] D	Depleted Dark Surfa	ce (F7)			cators of hydro etland hydrolo				
Sandy	Gleyed Matrix (S4	.)] R	Redox Depressions	(F8)			nless disturbed			,	
strictive I	_ayer (if present):	:												
e:														
marks:	The soil profile m	eets no	ne of th	he hydric	soil ind	icators because of t	the high ma	atrix chroma in	the subsurfac	ce soil layer.				
/DROLO	GΥ		ne of th	he hydric	soil ind	icators because of t	the high ma	atrix chroma in	the subsurfac	ce soil layer.				
DROLO	GY drology Indicator	s:					the high ma	atrix chroma in						
'DROLO etland Hye mary Indic	GY drology Indicators cators (minimum of	s:		check all	that ap	ylqc		atrix chroma in	Second	dary Indicators			ed)	
DROLO tland Hye mary Indic Surfac	GY drology Indicator: cators (minimum of ce Water (A1)	s:		check all	that ap	oply) Vater-Stained Leave	es (B9)		Second	dary Indicators Water-Stained	Leaves (E	39)	ed)	
DROLO tland Hyw mary Indic Surfac High V	GY drology Indicators cators (minimum of ce Water (A1) Vater Table (A2)	s:		check all	that ap	oply) Vater-Stained Leave except MLRA 1, 2,	es (B9)		Second V	dary Indicators Water-Stained MLRA 1, 2, 4,4	Leaves (E A, and 4B	39))	ed)	
DROLO tland Hyd mary Indid Surfac High V	GY drology Indicators cators (minimum of the Water (A1) Vater Table (A2) ation (A3)	s:		check all	that ap	oply) Vater-Stained Leave except MLRA 1, 2, Salt Crust (B11)	es (B9) 4A, and 4 l		Second (dary Indicators Water-Stained MLRA 1, 2, 4 Drainage Patte	Leaves (E A, and 4B erns (B10)	39))	ed)	
DROLO tland Hyd nary Indio Surfac High V Satura Water	GY drology Indicators cators (minimum of ce Water (A1) Vater Table (A2) ation (A3) Marks (B1)	s:		check all	that ap	oply) Vater-Stained Leave except MLRA 1, 2, Salt Crust (B11) equatic Invertebrates	es (B9) 4A, and 4 l s (B13)		Second (dary Indicators Water-Stained MLRA 1, 2, 4, Drainage Patte Dry-Season W	Leaves (E A, and 4B erns (B10) ater Table	39))	•	
TDROLO tland Hyd mary Indic Surfac High V Satura Water Sedim	GY drology Indicators cators (minimum of ce Water (A1) Vater Table (A2) ation (A3) Marks (B1) ent Deposits (B2)	s:		check all	that ap	oply) Vater-Stained Leave except MLRA 1, 2, Salt Crust (B11) equatic Invertebrates dydrogen Sulfide Oc	es (B9) 4A, and 4 l s (B13) dor (C1)	В)	Second ()	dary Indicators Water-Stained MLRA 1, 2, 4 A Drainage Patte Dry-Season W. Saturation Visil	Leaves (EA, and 4Berns (B10) atter Table ble on Aer	39)) e (C2) rial Image	•	
DROLO tland Hym mary Indic Surfac High V Satura Water Sedim Drift D	GY drology Indicators cators (minimum of ce Water (A1) Vater Table (A2) ation (A3) Marks (B1) lent Deposits (B2) deposits (B3)	s:		check all	that ap	oply) Vater-Stained Leave except MLRA 1, 2, Salt Crust (B11) equatic Invertebrates dydrogen Sulfide Oc oxidized Rhizospher	es (B9) 4A, and 4 I s (B13) dor (C1) res along L	B) .iving Roots (C	Second () () () () () () () () () () () () ()	dary Indicators Water-Stained MLRA 1, 2, 44 Drainage Patte Dry-Season W. Saturation Visil	Leaves (EA, and 4B erns (B10) ater Table ble on Aer position (D2	39)) e (C2) rial Image	•	
TDROLO Itland Hyu mary Indio Surfac High V Satura Water Sedim Drift D	GY drology Indicators cators (minimum of ce Water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) deposits (B3) Mat or Crust (B4)	s:		check all	that ap	oply) Vater-Stained Leave except MLRA 1, 2, Salt Crust (B11) equatic Invertebrates dydrogen Sulfide Oc Dxidized Rhizospher Presence of Reduce	es (B9) 4A, and 4 I s (B13) dor (C1) res along L d Iron (C4)	B) .iving Roots (C	Second () () () () () () () () () () () () ()	dary Indicators Water-Stained MLRA 1, 2, 4,4 Drainage Patte Dry-Season W. Saturation Visil Geomorphic Po	Leaves (EA, and 4B) erns (B10) ater Table ble on Aer osition (D2) rd (D3)	39)) e (C2) rial Image	•	
YDROLO stland Hyd mary Indic Surfac High V Satura Water Sedim Drift D Algal I	drology Indicators cators (minimum of ce Water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) meposits (B3) Mat or Crust (B4) meposits (B5)	s: fone re		check all	that ap W G S H C P R	oply) Vater-Stained Leave except MLRA 1, 2, Salt Crust (B11) equatic Invertebrates dydrogen Sulfide Octo exidized Rhizospher eresence of Reduced	es (B9) 4A, and 4l s (B13) dor (C1) res along L d Iron (C4) on in Tilled	B) Living Roots (C) Soils (C6)	Second V (1 C C C C C C C C C	dary Indicators Water-Stained MLRA 1, 2, 4A Drainage Patte Dry-Season W. Saturation Visil Geomorphic Po Shallow Aquita FAC-Neutral To	Leaves (EAA, and 4BA rms (B10) ater Table ble on Aer position (D2 rd (D3) est (D5)	39) (C2) rial Image (2)	ery (C9)	
TDROLO tland Hydrary Indic Surface High V Satura Water Sedim Drift D Algal I Iron D Surface	GY drology Indicators cators (minimum of ce Water (A1) Vater Table (A2) ation (A3) Marks (B1) atent Deposits (B2) atent Deposits (B3) Mat or Crust (B4) atent Crust (B4) atent Crust (B5) atent Crust (B6)	s: fone re	quired;	check all	that ap	oply) Vater-Stained Leave except MLRA 1, 2, Galt Crust (B11) equatic Invertebrates dydrogen Sulfide Octo Dxidized Rhizospher Presence of Reduce- Recent Iron Reduction	es (B9) 4A, and 4l s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1	B) Living Roots (C) Soils (C6)	Second () () () () () () () () () () () () ()	dary Indicators Water-Stained MLRA 1, 2, 4A Drainage Patte Dry-Season W. Saturation Visil Geomorphic Po Shallow Aquita FAC-Neutral To Raised Ant Mo	Leaves (EA, and 4B) arms (B10) atter Table ble on Aerosition (D2) rd (D3) est (D5) unds (D6)	(C2) rial Image (LRR A	ery (C9)	
DROLO tland Hyd mary Indic Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda	GY drology Indicators cators (minimum of ce Water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) meposits (B3) Mat or Crust (B4) meposits (B5) me Soil Cracks (B6) metalogous (B6) metalogous (B6) metalogo	s: fone re	quired;	check all [[[[[[[[[[[[[[[[[[that ap	oply) Vater-Stained Leave except MLRA 1, 2, Salt Crust (B11) equatic Invertebrates dydrogen Sulfide Octo exidized Rhizospher eresence of Reduced	es (B9) 4A, and 4l s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1	B) Living Roots (C) Soils (C6)	Second () () () () () () () () () () () () ()	dary Indicators Water-Stained MLRA 1, 2, 4A Drainage Patte Dry-Season W. Saturation Visil Geomorphic Po Shallow Aquita FAC-Neutral To	Leaves (EA, and 4B) arms (B10) atter Table ble on Aerosition (D2) rd (D3) est (D5) unds (D6)	(C2) rial Image (LRR A	ery (C9)	
MOROLO Itland Hymary Indice Surface High V Satura Water Sedim Drift D Algal I Iron D Surface Inunda Spars	GY drology Indicators cators (minimum of the Water (A1) Vater Table (A2) ation (A3) Marks (B1) tent Deposits (B2) teposits (B3) Mat or Crust (B4) teposits (B5) te Soil Cracks (B6) ation Visible on Ae tely Vegetated Con	s: fone re	quired;	check all [[[[[[[[[[[[[[[[[[that ap	oply) Vater-Stained Leave except MLRA 1, 2, Galt Crust (B11) equatic Invertebrates dydrogen Sulfide Octo Dxidized Rhizospher Presence of Reduce- Recent Iron Reduction	es (B9) 4A, and 4l s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1	B) Living Roots (C) Soils (C6)	Second () () () () () () () () () () () () ()	dary Indicators Water-Stained MLRA 1, 2, 4A Drainage Patte Dry-Season W. Saturation Visil Geomorphic Po Shallow Aquita FAC-Neutral To Raised Ant Mo	Leaves (EA, and 4B) arms (B10) atter Table ble on Aerosition (D2) rd (D3) est (D5) unds (D6)	(C2) rial Image (LRR A	ery (C9)	
PROLO etland Hyd mary Indio Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Spars	drology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ation (A3) Marks (B1) Atient Deposits (B2) Atient Deposits (B3) Mat or Crust (B4) Atient Deposits (B5) Atient Deposits (B5) Atient Deposits (B6) Atien	s: f one re	quired; gery (E urface (check all	that ap	oply) Vater-Stained Leave except MLRA 1, 2, Salt Crust (B11) Aquatic Invertebrates dydrogen Sulfide Oct Dixidized Rhizospher Presence of Reduce- Recent Iron Reduction Stunted or Stresses Other (Explain in Red	es (B9) 4A, and 4l s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1	B) Living Roots (C) Soils (C6)	Second () () () () () () () () () () () () ()	dary Indicators Water-Stained MLRA 1, 2, 4A Drainage Patte Dry-Season W. Saturation Visil Geomorphic Po Shallow Aquita FAC-Neutral To Raised Ant Mo	Leaves (EA, and 4B) arms (B10) atter Table ble on Aerosition (D2) rd (D3) est (D5) unds (D6)	(C2) rial Image (LRR A	ery (C9)	
YDROLO stland Hyd mary Indic Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Spars	drology Indicators cators (minimum of ce Water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) ment Deposits (B3) Mat or Crust (B4) ment Deposits (B5) ment Deposits (B5) ment Deposits (B6)	s: fone re frial Ima	quired; gery (Burface	check all	that ap	oply) Vater-Stained Leave except MLRA 1, 2, Salt Crust (B11) equatic Invertebrates dydrogen Sulfide Octo except Reduced except Iron Reduction Stunted or Stresses Other (Explain in Red Depth (inches):	es (B9) 4A, and 4l s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1	B) Living Roots (C) Soils (C6)	Second () () () () () () () () () () () () ()	dary Indicators Water-Stained MLRA 1, 2, 4A Drainage Patte Dry-Season W. Saturation Visil Geomorphic Po Shallow Aquita FAC-Neutral To Raised Ant Mo	Leaves (EA, and 4B) arms (B10) atter Table ble on Aerosition (D2) rd (D3) est (D5) unds (D6)	(C2) rial Image (LRR A	ery (C9)	
Surface Water Table turation Pi	GY drology Indicator: cators (minimum of the Water (A1) Vater Table (A2) ation (A3) Marks (B1) tent Deposits (B2) teposits (B3) Mat or Crust (B4) teposits (B5) te Soil Cracks (B6) ation Visible on Ae tely Vegetated Continuations: ter Present? Present?	s: f one re	quired; gery (E urface (check all	that ap	oply) Vater-Stained Leave except MLRA 1, 2, Salt Crust (B11) Aquatic Invertebrates dydrogen Sulfide Oct Dixidized Rhizospher Presence of Reduce- Recent Iron Reduction Stunted or Stresses Other (Explain in Red	es (B9) 4A, and 4l s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1	B) Living Roots (C Soils (C6)) (LRR A)	Second () () () () () () () () () () () () ()	dary Indicators Water-Stained MLRA 1, 2, 4A Drainage Patte Dry-Season W. Saturation Visil Geomorphic Po Shallow Aquita FAC-Neutral To Raised Ant Mo	Leaves (E A, and 4B Irms (B10) ater Table ble on Aer position (D2 rd (D3) est (D5) unds (D6) ummocks	(C2) rial Image (LRR A	ery (C9)	
Manual Ma	drology Indicators cators (minimum of the Water (A1) Vater Table (A2) Ation (A3) Marks (B1) Ation (B2) Ation (B3) Mat or Crust (B4) Ation (B5) Ation Visible on Ae Ati	s: f one re frial Ima cave Si Yes Yes Yes	gery (Burface	check all	that ap	Depty) Vater-Stained Leave except MLRA 1, 2, Salt Crust (B11) Equatic Invertebrates dydrogen Sulfide Oct Dixidized Rhizospher Presence of Reducer Recent Iron Reduction Stunted or Stresses Other (Explain in Red Depth (inches):	es (B9) 4A, and 4l s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1 marks)	B) Living Roots (C Soils (C6)) (LRR A)	Second () () () () () () () () () () () () ()	dary Indicators Water-Stained MLRA 1, 2, 44 Drainage Patte Dry-Season W. Saturation Visil Geomorphic Po Shallow Aquita FAC-Neutral To Raised Ant Mo Frost-Heave He	Leaves (E A, and 4B Irms (B10) ater Table ble on Aer position (D2 rd (D3) est (D5) unds (D6) ummocks	(D7)	ery (C9)	0
Manual Ma	drology Indicators cators (minimum of the Water (A1) Vater Table (A2) Ation (A3) Marks (B1) Ation (B2) Ation (B3) Mat or Crust (B4) Ation (B5) Ation Visible on Ae Ati	s: f one re frial Ima cave Si Yes Yes Yes	gery (Burface	check all	that ap	poply) Vater-Stained Leave except MLRA 1, 2, salt Crust (B11) equatic Invertebrates dydrogen Sulfide Octo except Reduces except Iron Reductio stunted or Stresses other (Explain in Red Depth (inches): Depth (inches):	es (B9) 4A, and 4l s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1 marks)	B) Living Roots (C Soils (C6)) (LRR A)	Second () () () () () () () () () () () () ()	dary Indicators Water-Stained MLRA 1, 2, 44 Drainage Patte Dry-Season W. Saturation Visil Geomorphic Po Shallow Aquita FAC-Neutral To Raised Ant Mo Frost-Heave He	Leaves (E A, and 4B Irms (B10) ater Table ble on Aer position (D2 rd (D3) est (D5) unds (D6) ummocks	(D7)	ery (C9)	io

Project Site:	N Grand Forest			City/Cour	nty: <u>Bainbridge Island/Kitsap</u> Sampling Date:	6/17/19
Applicant/Owner:	BI Metro Parks and Recreation				State: WA Sampling Point:	<u>TP 7</u>
Investigator(s):	J. Bartlett, K. Lacey				Section, Township, Range: <u>S 16 T 25 N R 2</u>	2 EWM
Landform (hillslope, te	rrace, etc.): <u>hillslope</u>		Loca	al relief (cond	cave, convex, none): <u>concave</u> Slo	ppe (%): <u>5-10</u>
Subregion (LRR):	MLRA 2	Lat: 47.6	61977926413	<u>7</u>	Long: <u>-122.55660405285</u> Datum:	NAD83
Soil Map Unit Name:	14 Harstine gravelly ashy sand	ly loam,0-6%	slopes		NWI classification: <u>None</u>	
Are climatic / hydrolog	ic conditions on the site typical fo	r this time of	year? Y	es 🗆	No 🛛 (If no, explain in Remarks.)	
Are Vegetation □,	Soil ☐, or Hydrology	☐, signific	cantly disturbed	d? Are '	'Normal Circumstances" present? Yes	i □ No ☒
Are Vegetation ☐,	Soil ☐, or Hydrology	☐, natura	lly problematic	? (If ne	eeded, explain any answers in Remarks.)	
SUMMARY OF FIN	DINGS – Attach site map s	howing sar	mpling poin	locations	, transects, important features, etc.	
Hydrophytic Vegetation	n Present?	Yes 🗆	No ⊠			
Hydric Soil Present?		Yes 🗆	No ⊠	Is the Samp within a We		s □ No ⊠
Wetland Hydrology Pre	esent?	Yes 🗆	No ⊠			
composed	d of upland forest with a trail arou	nd the perime	eter. The prop	erty generally	t) and Koura Road (to the north). It is currenlty under y slopes down from east to west with topographic trou Forest. It is upslope of the trail and is generally low in	ighs carved into the
	se scientific names of plant	S Absolute	Dominant	Indicator	T	
Tree Stratum (Plot size	e: <u>30' diameter</u>)	% Cover	Species?	Status	Dominance Test Worksheet:	
Acer macrophyllur 2	<u>m</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	(A)
3					Total Number of Deminant	
4.					Total Number of Dominant Species Across All Strata:	(B)
50% = 7.5, 20% = 3		15	= Total Cove		Percent of Dominant Species	
Sapling/Shrub Stratum	n (Plot size: 20' diameter)	_			That Are OBL, FACW, or FAC:	(A/B)
Gaultheria shallon		<u>5</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index worksheet:	
2					Total % Cover of: Mult	iply by:
3					OBL species x1 =	
4					FACW species x2 =	
5					FAC species x3 =	
50% = <u>2.5</u> , 20% = <u>1</u>		<u>5</u>	= Total Cove	r	FACU species x4 =	
Herb Stratum (Plot siz	e: 10' diameter)				UPL species x5 =	
1. <u>Circaea alpina</u>		<u>50</u>	<u>yes</u>	FAC	Column Totals:(A)	(B)
2. Polystichum munit	<u>tum</u>	<u>20</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A =	=
3. Rubus ursinus		<u>10</u>	<u>no</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators:	
4. Achyls triphylla		<u>5</u>	<u>no</u>	NL (UPL)	☐ 1 – Rapid Test for Hydrophytic Vegetation	
5. Claytonia sibirica		<u>5</u>	<u>no</u>	<u>FAC</u>	☐ 2 - Dominance Test is >50%	
6					☐ 3 - Prevalence Index is <3.0¹	
7					4 Marphalogical Adaptations 1 (Provide supp	oortina
8					data in Remarks or on a separate sheet)	o.ug
9					5 - Wetland Non-Vascular Plants ¹	
10					☐ Problematic Hydrophytic Vegetation¹ (Explain	1)
11					, , , , , , , , ,	•
50% = <u>45</u> , 20% = <u>18</u>		<u>90</u>	= Total Cove	r	¹ Indicators of hydric soil and wetland hydrology mu be present, unless disturbed or problematic.	st
Woody Vine Stratum (Plot size: 10' diameter)				be present, unless distarbed or problematic.	
1						
2					Hydrophytic	=
50% =, 20% =			= Total Cove	r	Vegetation Yes ☐ Present?	No 🛚
% Bare Ground in Her	b Stratum 10				110001111	
Remarks: T	he hydrophytic vegetation criterio	n is not met	because there	is less than s	50% dominance/coverage by FAC plant species.	

oches) Color (m 0-4 10YR 4-16 7.5YR	2/2	% 100 100	Color (m	noist) %	Type ¹ Loc ²	Texture				
· · · · · · · · · · · · · · · · · · ·		· <u></u>			- 	gr sa lo		Remarks		
						gr sa lo				
						<u>g. oa .o</u>				
			<u></u>							
	<u> </u>									
	_						gr - gravelly			
							sa - sandy			
							<u>lo - loam</u>			
pe: C= Concentration	ı, D=Deplet	ion, RM=f	Reduced Ma	atrix, CS=Covered or C	Coated Sand Grains. ² L	ocation: PL=P	ore Lining, M=Matri	x, RC=Root	Channel	
dric Soil Indicators:	(Applicabl	e to all L	RRs, unless	otherwise noted.)		Indica	tors for Problemat	ic Hydric S	oils³:	
Histosol (A1)				Sandy Redox (S5)			2 cm Muck (A10)			
Histic Epipedon (A	.2)			Stripped Matrix (Se	6)		Red Parent Materia	al (TF2)		
Black Histic (A3)				Loamy Mucky Min	eral (F1) (except MLRA 1)		Very Shallow Dark	Surface (TF	12)	
Hydrogen Sulfide	(A4)			Loamy Gleyed Ma	trix (F2)		Other (Explain in R	temarks)		
Depleted Below Da	ark Surface	(A11)		Depleted Matrix (F	73)					
Thick Dark Surface	e (A12)			Redox Dark Surface	ce (F6)	0				
Sandy Mucky Mine	eral (S1)			Depleted Dark Sur	face (F7)		ators of hydrophytic tland hydrology mus			
Sandy Gleyed Mat	rix (S4)			Redox Depression	ıs (F8)		ess disturbed or pro		,	
strictive Layer (if pre	esent):									
e:	_									
YDROLOGY etland Hydrology Ind	icators:									
etland Hydrology Ind		required;	; check all th	at apply)		Seconda	ary Indicators (2 or ı	more require	ed)	
tland Hydrology Ind	num of one	required;	; check all th	at apply) Water-Stained Lea	aves (B9)		ary Indicators (2 or i		ed)	
tland Hydrology Ind mary Indicators (minir	mum of one 1)	required;				□ w		s (B9)	ed)	
tland Hydrology Ind mary Indicators (minir Surface Water (A	mum of one 1)	required;		Water-Stained Lea		□ W	ater-Stained Leaves	s (B9) 4B)	od)	
tland Hydrology Ind mary Indicators (minin Surface Water (A High Water Table	mum of one 1) (A2)	required;		Water-Stained Lea	2, 4A, and 4B)	□ W (N □ Dr	ater-Stained Leaves	s (B9) 4B) 10)	od)	
tland Hydrology Ind mary Indicators (minin Surface Water (A High Water Table Saturation (A3)	mum of one 1) (A2)	required;		Water-Stained Lea (except MLRA 1, 2 Salt Crust (B11)	2, 4A, and 4B) tes (B13)	W (N Dr	ater-Stained Leaves ILRA 1, 2, 4A, and rainage Patterns (B	s (B9) 4B) 10) ble (C2)	•	
tland Hydrology Ind mary Indicators (minin Surface Water (A High Water Table Saturation (A3) Water Marks (B1)	num of one (A2) (S (B2)	e required;		Water-Stained Lea (except MLRA 1, Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (2, 4A, and 4B) tes (B13)	□ W (N □ Dr □ Dr □ Sa	later-Stained Leaves ILRA 1, 2, 4A, and rainage Patterns (Bary-Season Water Ta	s (B9) 4B) 10) ble (C2) Aerial Image	•	
tland Hydrology Ind mary Indicators (minin Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit	mum of one 1) (A2) ss (B2)	required;		Water-Stained Lea (except MLRA 1, Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (tes (B13) Odor (C1) heres along Living Roots (C3	W (N Dr Dr Sa Sa Ga Ga Ga Ga Ga Ga	rater-Stained Leaves ILRA 1, 2, 4A, and rainage Patterns (Bry-Season Water Ta aturation Visible on A	s (B9) 4B) 10) ble (C2) Aerial Image (D2)	•	
tland Hydrology Ind mary Indicators (minir Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3	mum of one (A2) (SS (B2) (B4)	required;		Water-Stained Lea (except MLRA 1, Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Redu	tes (B13) Odor (C1) heres along Living Roots (C3	W (N	rater-Stained Leaves ILRA 1, 2, 4A, and rainage Patterns (Bry-Season Water Ta atturation Visible on a eomorphic Position	s (B9) 4B) 10) ble (C2) Aerial Image (D2)	•	
tland Hydrology Ind mary Indicators (minir Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3 Algal Mat or Crust	mum of one (1) (A2) ss (B2)) t (B4)	e required;		Water-Stained Lea (except MLRA 1, Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduce Recent Iron Reduce	2, 4A, and 4B) tes (B13) Odor (C1) neres along Living Roots (C3) ced Iron (C4)	W (N	atter-Stained Leaves ILRA 1, 2, 4A, and rainage Patterns (Br ry-Season Water Ta atturation Visible on a eomorphic Position nallow Aquitard (D3)	s (B9) 4B) 10) ble (C2) Aerial Image (D2)	ry (C9)	
tland Hydrology Ind mary Indicators (mining Surface Water (Ar High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5)	mum of one (A2) (SS (B2)) t (B4)) ks (B6)			Water-Stained Lea (except MLRA 1, Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduce Recent Iron Reduce	tes (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) btion in Tilled Soils (C6) bts Plants (D1) (LRR A)	W (N (N Dr Dr Dr Dr Sa Sa Ga Sr F#	atter-Stained Leaves ILRA 1, 2, 4A, and rainage Patterns (B' ry-Season Water Ta aturation Visible on a eomorphic Position hallow Aquitard (D3) AC-Neutral Test (D5	(B9) 4B) 10) ble (C2) Aerial Image (D2) (D2)	ry (C9)	
Mary Indicators (minimary Indi	mum of one (A2) (S (B2)) t (B4)) ks (B6) on Aerial In	magery (E		Water-Stained Lea (except MLRA 1, Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse	tes (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) ction in Tilled Soils (C6) es Plants (D1) (LRR A)	W (N (N Dr Dr Dr Dr Sa Sa Ga Sr F#	rater-Stained Leaves ILRA 1, 2, 4A, and rainage Patterns (Br ry-Season Water Ta attration Visible on re eomorphic Position hallow Aquitard (D3) AC-Neutral Test (D5 aised Ant Mounds (I	(B9) 4B) 10) ble (C2) Aerial Image (D2) (D2)	ry (C9)	
mary Indicators (minir Surface Water (A High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3 Algal Mat or Crust Iron Deposits (B5) Surface Soil Crac Inundation Visible Sparsely Vegetate	mum of one (A2) (S (B2)) t (B4)) ks (B6) on Aerial In	magery (E		Water-Stained Lea (except MLRA 1, Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduc Recent Iron Reduc Stunted or Stresse	tes (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) ction in Tilled Soils (C6) es Plants (D1) (LRR A)	W (N (N Dr Dr Dr Dr Sa Sa Ga Sr F#	rater-Stained Leaves ILRA 1, 2, 4A, and rainage Patterns (Br ry-Season Water Ta attration Visible on re eomorphic Position hallow Aquitard (D3) AC-Neutral Test (D5 aised Ant Mounds (I	(B9) 4B) 10) ble (C2) Aerial Image (D2) (D2)	ry (C9)	
mary Indicators (minir Surface Water (A: High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3 Algal Mat or Crust Iron Deposits (B5) Surface Soil Cract Inundation Visible Sparsely Vegetate	mum of one 1) (A2) ss (B2)) t (B4)) ks (B6) e on Aerial Ir	magery (E		Water-Stained Lea (except MLRA 1, Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Redur Recent Iron Reduc Stunted or Stresse Other (Explain in F	tes (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) ction in Tilled Soils (C6) es Plants (D1) (LRR A) Remarks)	W (N (N Dr Dr Dr Dr Sa Sa Ga Sr F#	rater-Stained Leaves ILRA 1, 2, 4A, and rainage Patterns (Br ry-Season Water Ta attration Visible on re eomorphic Position hallow Aquitard (D3) AC-Neutral Test (D5 aised Ant Mounds (I	(B9) 4B) 10) ble (C2) Aerial Image (D2) (D2)	ry (C9)	
mary Indicators (minimary Indi	mum of one 1) (A2) ss (B2)) t (B4)) ks (B6) e on Aerial Ir	magery (E		Water-Stained Lea (except MLRA 1, Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Stunted or Stresse Other (Explain in F	tes (B13) Odor (C1) neres along Living Roots (C3) ced Iron (C4) ction in Tilled Soils (C6) es Plants (D1) (LRR A) Remarks)):	W (N (N Dr Dr Dr Dr Sa Sa Ga Sr F#	rater-Stained Leaves ILRA 1, 2, 4A, and rainage Patterns (Br ry-Season Water Ta attration Visible on re eomorphic Position hallow Aquitard (D3) AC-Neutral Test (D5 aised Ant Mounds (I	(B9) 4B) 10) ble (C2) Aerial Image (D2) (D2)	ry (C9)	
etland Hydrology Indicators (minimary Indicators (M	mum of one 1) (A2) ss (B2)) t (B4)) ks (B6) on Aerial Ir ed Concave Yes Yes Yes	magery (Ee Surface		Water-Stained Lea (except MLRA 1, Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Stunted or Stresse Other (Explain in Final Depth (inches Depth (inches Depth (inches Depth (inches States))	tes (B13) Odor (C1) neres along Living Roots (C3) ced Iron (C4) ction in Tilled Soils (C6) es Plants (D1) (LRR A) Remarks)):):):):	W (N	rater-Stained Leaves ILRA 1, 2, 4A, and rainage Patterns (Br ry-Season Water Ta attration Visible on re eomorphic Position hallow Aquitard (D3) AC-Neutral Test (D5 aised Ant Mounds (I	(B9) 4B) 10) ble (C2) Aerial Image (D2) (D2)	ry (C9)	
mary Indicators (mining Surface Water (Ar High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cract Inundation Visible Sparsely Vegetate (Id Observations: Inface Water Present? Inter Table Present? Ituration Present?	mum of one 1) (A2) ss (B2)) t (B4)) ks (B6) on Aerial Ir ed Concave Yes Yes Yes	magery (Ee Surface		Water-Stained Lea (except MLRA 1, Salt Crust (B11) Aquatic Invertebra Hydrogen Sulfide (Oxidized Rhizosph Presence of Reduce Recent Iron Reduce Stunted or Stresse Other (Explain in Final Depth (inches Depth (inches Depth (inches Depth (inches States))	tes (B13) Odor (C1) heres along Living Roots (C3) ced Iron (C4) ction in Tilled Soils (C6) es Plants (D1) (LRR A) Remarks) :	W (N	rater-Stained Leaves ILRA 1, 2, 4A, and rainage Patterns (Br ry-Season Water Ta aturation Visible on a eomorphic Position nallow Aquitard (D3) AC-Neutral Test (D5 aised Ant Mounds (I ost-Heave Hummod	s (B9) 4B) 10) ble (C2) Aerial Image (D2)) D6) (LRR A)	ery (C9)	

Project Site:	N Grand Forest			City/Cour	nty: <u>Bainbridge Island/Kitsap</u> Sampling Date:	6/17/19
Applicant/Owner:	BI Metro Parks and Recreation				State: WA Sampling Point:	<u>TP 8</u>
Investigator(s):	J. Bartlett, K. Lacey				Section, Township, Range: S 16 T 25 N R 2 E	<u>WM</u>
Landform (hillslope, te	errace, etc.): <u>hillslope</u>		Loc	al relief (cond	cave, convex, none): <u>concave</u> Slope	(%): <u>5-10</u>
Subregion (LRR):	MLRA 2	Lat: <u>47.6</u>	61936731755	<u>2</u>	Long: <u>-122.55511501705</u> Datum: <u>N</u>	IAD83
Soil Map Unit Name:	23 Kapowsin gravelly ashy loa	ım, 6-15% slo	pes		NWI classification: None	
Are climatic / hydrolog	gic conditions on the site typical for		-	′es □	No ⊠ (If no, explain in Remarks.)	
Are Vegetation		_	cantly disturbed		"Normal Circumstances" present? Yes	□ No ⊠
Are Vegetation	, Soil □, or Hydrology	☐, natura	lly problemation	? (If ne	eeded, explain any answers in Remarks.)	
SUMMARY OF FIN	NDINGS – Attach site map s	howing sa	mpling poin	t locations	, transects, important features, etc.	
Hydrophytic Vegetation	on Present?	Yes 🗆	No ⊠			
Hydric Soil Present?		Yes 🗆	No ⊠	Is the Sam		□ No ⊠
Wetland Hydrology Pr	esent?	Yes 🗆	No ⊠			
Remarks: The N Gr	and Forest is located in the south	east quadran	t of Miller Roa	d (to the wes	t) and Koura Road (to the north). It is currenlty undevelo	ped and
	d of upland forest with a trail aroung slope. Test Plot 8 is located no				y slopes down from east to west with topographic trough	s carved into the
Woot lasii	19 010 000 1 000 1 100 10 10 10 10 10 10 1	our the count		and diddy and	u.	
VEGETATION – U	se scientific names of plant					
Tree Stratum (Plot siz	ze: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1					Number of Dominant Species	(A)
2					That Are OBL, FACW, or FAC:	(4
3					Total Number of Dominant	(B)
4					Species Across All Strata:	
50% =, 20% =			= Total Cove	er	Percent of Dominant Species That Are OBL, FACW, or FAC: 0	(A/B)
	n (Plot size: 20' diameter)	0.5		E4011	·	
Gaultheria shallor Vassinium sustum	-	<u>25</u>	<u>yes</u>	FACU FACU	Prevalence Index worksheet:	, b. a
2. <u>Vaccinium ovatun</u>	<u>II</u>	<u>20</u>	<u>yes</u>	<u>FACU</u>	<u>Total % Cover of:</u> <u>Multiply</u> OBL species x1 =	<u>/ by:</u>
3 4					FACW species x1 =	
5.					FAC species x3 =	
50% = <u>22.5</u> , 20% = <u>9</u>		<u>45</u>	= Total Cove		FACU species x4 =	
	zo: 10' diamotor)	40	= Total Cove	÷1	UPL species x5 =	
Herb Stratum (Plot siz	·	20		FACIL		(D)
		<u>20</u>	<u>yes</u>	FACU	Column Totals:(A)	(B)
2. <u>Dryopteris expans</u>	<u>Sa</u>	<u>5</u>	<u>no</u>	<u>FACW</u>	Prevalence Index = B/A =	
3					Hydrophytic Vegetation Indicators:	
4					1 – Rapid Test for Hydrophytic Vegetation	
5					2 - Dominance Test is >50%	
6					☐ 3 - Prevalence Index is <3.01	
7					4 - Morphological Adaptations ¹ (Provide support data in Remarks or on a separate sheet)	ing
8 9.					5 - Wetland Non-Vascular Plants¹	
10.						
					☐ Problematic Hydrophytic Vegetation¹ (Explain)	
11		25	= Total Cove		¹ Indicators of hydric soil and wetland hydrology must	
50% = 12.5, 20% = 5	(Plot size: 10' diameter)	<u>25</u>	= Total Cove	;1	be present, unless disturbed or problematic.	
-	(Flot Size. <u>10 diameter</u>)					
1					Hydrophytic	
2			Total Cava		Vegetation Yes □	No 🛛
50% =, 20% =			= Total Cove	;1	Present?	
% Bare Ground in He						
Remarks:	The hydrophytic vegetation criterion	on is not met	because there	is less than	50% dominance/coverage by FACW plant species.	

SOIL Sampling Point: TP 8 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0-2 10YR 2/2 100 gr sa lo 2-8 10YR 3/3 100 gr sa lo 8-16 10YR 4/6 100 gr sa lo gr - gravelly sa - sandy lo - loam ²Location: PL=Pore Lining, M=Matrix, RC=Root Channel ¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Indicators for Problematic Hydric Soils3: Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) ³Indicators of hydrophytic vegetation and Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic Restrictive Layer (if present): Type: **Hydric Soils Present?** \boxtimes Depth (inches): Yes No Remarks: The soil profile meets none of the hydric soil indicators because of the high matrix chroma in the subsurface soil layer. **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) П Surface Water (A1) Water-Stained Leaves (B9) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) High Water Table (A2) (MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) П 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 Aguitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Stunted or Stresses Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? \boxtimes Yes No Depth (inches): \boxtimes Water Table Present? Yes No Depth (inches): Saturation Present? Wetland Hydrology Present? No \boxtimes Yes No \boxtimes Depth (inches): Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Hydrology was not present in this area and there was no evidence of wetland hydrology.

Project Site:	N Grand Forest			City/Coun	ty: <u>Bainbridge Island/Kitsap</u> Sampling	Date:	<u>4/7/21</u>	
Applicant/Owner:	BI Metro Parks and Recreation				State: <u>WA</u> Sampling	Point:	<u>TP 10</u>	
Investigator(s):	J. Bartlett, K. Lacey				Section, Township, Range: <u>S 16</u>	T 25 N R 2 EV	<u>//M</u>	
Landform (hillslope, ter	rrace, etc.): <u>hillslope</u>		Loca	relief (conca	ave, convex, none): <u>concave</u>	Slope ((%): <u>5-1</u>	<u>0</u>
Subregion (LRR):	MLRA 2	Lat: <u>47.6</u>	<u>64460</u>		Long: <u>-122.554352</u>	Datum: N/	<u>AD83</u>	
Soil Map Unit Name:	16 Harstine gravelly ashy sand	y loam, 15-30	% slopes		NWI classification:	None		
Are climatic / hydrologi	ic conditions on the site typical for	this time of y	rear? Ye	es 🗆	No 🛛 (If no, explain in Remarks	;.)		
Are Vegetation □,	Soil ☐, or Hydrology	, signific	antly disturbed	? Are "I	Normal Circumstances" present?	Yes	☐ No	\boxtimes
Are Vegetation □,	Soil ☐, or Hydrology	□, natural	y problematic?	(If ne	eded, explain any answers in Remarks.)			
SUMMARY OF FIN	DINGS – Attach site map sh	nowing san	npling point	locations,	transects, important features, etc.			
Hydrophytic Vegetation	n Present?	Yes	No 🛛	Is the Samp	lad Araa			
Hydric Soil Present?		Yes		within a We		Yes	☐ No	\boxtimes
Wetland Hydrology Pre	esent?	Yes 🗌	No 🛛					
					and Koura Road (to the north). It is curre			
	l of upland forest with a trail aroun g slope. Test Plot 10 is located in				slopes down from east to west with topogr	aphic troughs	carved in	nto the
		. a.o apiana i						
VEGETATION - Us	se scientific names of plants	3						
Tree Stratum (Plot size	e: <u>30' diameter</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:			
1. Acer macrophyllun	n	<u>20</u>	yes	FACU	Number of Dominant Species			
2. Thuja plicata	-	10	yes	FAC	That Are OBL, FACW, or FAC:	<u>1</u>		(A)
3					Total Number of Dominant			
4.					Species Across All Strata:	<u>3</u>		(B)
50% = <u>15</u> , 20% = <u>6</u>		30	= Total Cover		Percent of Dominant Species			
	n (Plot size: 20' diameter)				That Are OBL, FACW, or FAC:	<u>33</u>		(A/B)
1					Prevalence Index worksheet:			
2.					Total % Cover of:	Multiply	by:	
3.					OBL species	x1 =		
4.					FACW species	x2 =		
5					FAC species	x3 =		
50% =, 20% = _			= Total Cover		FACU species	x4 =		
Herb Stratum (Plot size					UPL species	x5 =		
1. Polystichum munit		<u>50</u>	<u>yes</u>	FACU	Column Totals: (A)			(B)
2					Prevalence Index = B	/Δ =		(=)
					Hydrophytic Vegetation Indicators:			
3 4.					1 – Rapid Test for Hydrophytic Veg	etation		
					2 - Dominance Test is >50%	Clation		
5 6.								
_					☐ 3 - Prevalence Index is ≤3.0 ¹			
7					4 - Morphological Adaptations ¹ (Production data in Remarks or on a separate		ng	
8					_			
9					_			
10					☐ Problematic Hydrophytic Vegetation	า¹ (Explain)		
11					¹ Indicators of hydric soil and wetland hyd	rology must		
50% = <u>25,</u> 20% = <u>10</u>	DI 4 1 401 11 4 1	<u>50</u>	= Total Cover		be present, unless disturbed or problema	0,		
	Plot size: <u>10' diameter</u>)							
1					Hydrophytic			
2					Vegetation Yes		No	
50% =, 20% =	_		= Total Cover		Present?			
% Bare Ground in Her	b Stratum <u>75</u>							
Remarks: T	he hydrophytic vegetation criterio	n is not met b	ecause there i	s less than 5	0% dominance by FAC plant species.			

	Color (moist)	Q	%	Col	or (mc	oist)	%	Type ¹	Loc ²	Texture	е		Remark	ks		
0-10	10YR 2/2	1	00			<u> </u>	·			<u>gr sa</u>	lo					
<u>10-16</u>	10YR 4/4	<u>1</u>	<u>00</u>	_		_				gr sa	<u></u>	_				
		_		_		_						_				
				_		_						_				
				_		_						_				
				_		_					gr - gı	ravell <u>y</u>				
	·	_		-		_					<u>sa - s</u>	<u>andy</u>				
				-		_					<u>lo - lo</u>	<u>am</u>				
pe: C= Co	ncentration, D=De	epletion	, RM=F	Reduce	d Matr	rix, CS=Co\	ered or Co	oated Sand	d Grains.	² Location: PL	.=Pore Lining,	M=Matrix,	RC=Ro	ot Ch	annel	
dric Soil I	ndicators: (Appli	cable to	o all Li	RRs, ur	nless	otherwise	noted.)				icators for Pr	oblematic	Hydric	Soils	s³:	
Histoso	I (A1)					Sandy Re	edox (S5)				2 cm Muc	k (A10)				
Histic E	pipedon (A2)					Stripped	Matrix (S6))			Red Parer	nt Material	(TF2)			
Black H	listic (A3)					Loamy M	ucky Miner	ral (F1) (e x	xcept MLRA	1) 🗆	Very Shall	low Dark S	urface (TF12)	
	en Sulfide (A4)					Loamy G	leyed Matri	ix (F2)			Other (Exp	plain in Re	marks)			
Deplete	d Below Dark Su	face (A	.11)			Depleted	Matrix (F3)								
Thick D	ark Surface (A12))				Redox Da	ark Surface	e (F6)		2.						
Sandy l	Mucky Mineral (S	1)				•	Dark Surfa	. ,			licators of hyd wetland hydro					
Sandy	Gleyed Matrix (S4)				Redox De	epressions	(F8)	T		unless disturb			,		
strictive L	ayer (if present):															
e:																
	s):								Hydric Soi							
emarks:	The soil profile m	eets no	ne of the	he hydri	ic soil	indicators b	ecause of	the high n			ace soil layer.					
emarks:	The soil profile m	eets no	ne of the	he hydri	ic soil	indicators t	pecause of	the high n			ace soil layer.					
/DROLO	The soil profile m		ne of the	he hydri	ic soil	indicators t	ecause of	the high n			ace soil layer.					
/DROLO	The soil profile m	s:					pecause of	the high n		in the subsurf	ace soil layer.		ore requi	ired)		
/DROLOG	The soil profile m	s:				t apply)	pecause of			in the subsurf	,	ors (2 or me		ired)		
DROLOG tland Hyd mary Indica Surface	The soil profile m GY rology Indicators ators (minimum of	s:			all tha	t apply) Water-St		res (B9)	matrix chroma	in the subsurf	ndary Indicato	ors (2 or mo	(B9)	ired)		
'DROLOG tland Hyd mary Indic: Surface High W	GY rology Indicators ators (minimum of	s:			all tha	t apply) Water-St	ained Leav	res (B9)	matrix chroma	in the subsurf	ndary Indicato Water-Staine	ors (2 or mo d Leaves (4 A , and 4 I	(B9)	ired)		
DROLOG tland Hyd mary Indica Surface High W Satura	GY rology Indicators ators (minimum of water (A1) //ater Table (A2)	s:			all tha	t apply) Water-St: (except ! Salt Crus	ained Leav	res (B9) , 4A , and 4	matrix chroma	Seco	ndary Indicato Water-Staine (MLRA 1, 2,	ors (2 or mo d Leaves (4A, and 4 E tterns (B10	(B9) 3)	ired)		
TDROLOG tland Hyd mary Indic Surface High W Satura Water	The soil profile m GY rology Indicators ators (minimum of a Water (A1) /ater Table (A2) tion (A3)	s:			all tha	t apply) Water-St: (except I Salt Crus Aquatic II	ained Leav MLRA 1, 2, t (B11)	res (B9) , 4A, and 4	matrix chroma	Seco	ndary Indicato Water-Staine (MLRA 1, 2, Drainage Pat	ors (2 or mo d Leaves (4A, and 4 I tterns (B10 Water Tabl	(B9) 3) (b) (c)	•	(C9)	
TDROLOG tland Hyd mary Indica Surface High W Satura Water Sedime	GY rology Indicators ators (minimum of e Water (A1) //ater Table (A2) tion (A3) Marks (B1)	s:			all tha	t apply) Water-St: (except I Salt Crus Aquatic II Hydroger	ained Leav MLRA 1, 2, t (B11) nvertebrate n Sulfide O	res (B9) , 4A , and 4 es (B13) dor (C1)	matrix chroma	Seco	ndary Indicato Water-Staine (MLRA 1, 2, Drainage Pat Dry-Season \	ors (2 or mo d Leaves (4A, and 4E tterns (B10 Water Tabl sible on Ae	(B9) 3) (C2) (B1)	•	(C9)	
TDROLOG tland Hyd mary Indica Surface High W Satura Water Sedime Drift De	The soil profile m	s:			all tha	t apply) Water-St: (except ! Salt Crus Aquatic li Hydroger Oxidized	ained Leav MLRA 1, 2, t (B11) nvertebrate n Sulfide O	res (B9) , 4A , and 4 es (B13) dor (C1) eres along	matrix chroma 4B) Living Roots	Seco	ndary Indicate Water-Staine (MLRA 1, 2, Drainage Pat Dry-Season V	ors (2 or mo ed Leaves (4A, and 4E tterns (B10 Water Tabl sible on Ae Position (D	(B9) 3) (C2) (B1)	•	(C9)	
TDROLOG Strand Hyd mary Indica Surface High W Satura Water Sedime Drift De Algal M	The soil profile many profile m	s:			all tha	t apply) Water-St: (except ! Salt Crus Aquatic II Hydroger Oxidized Presence	ained Leav MLRA 1, 2, t (B11) nvertebrate n Sulfide O Rhizosphe e of Reduce	res (B9) , 4A, and 4 es (B13) dor (C1) eres along ed Iron (C4	matrix chroma 4B) Living Roots	Seco	ndary Indicate Water-Staine (MLRA 1, 2, Drainage Pat Dry-Season V Saturation Vi Geomorphic	ors (2 or model Leaves (4A, and 4B) tterns (B10 Water Table sible on Ae Position (D tard (D3)	(B9) 3) (C2) (B1)	•	(C9)	
TDROLOG tland Hyd mary Indic: Surface High W Satura: Water Sedime Drift De Algal M Iron De	The soil profile m The so	s: one re			all that	t apply) Water-St: (except I Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir	ained Leav MLRA 1, 2, t (B11) nvertebrate n Sulfide Or Rhizosphe t of Reduce on Reducti	res (B9) 4A, and 4 es (B13) dor (C1) eres along ed Iron (C4 ion in Tille	matrix chroma 4B) Living Roots 4)	Seco	ndary Indicate Water-Staine (MLRA 1, 2, Drainage Pat Dry-Season Vi Saturation Vi Geomorphic Shallow Aqui	ors (2 or mode) d Leaves (4A, and 4B, and 4B, and Table) Water Table on Aerosition (D) tard (D3) Test (D5)	(B9) 3)) e (C2) erial Imag	gery	(C9)	
TDROLOC tland Hyd mary Indica Surface High W Satura Water Sedime Drift De Algal M Iron De Surface	The soil profile many profile m	s:	quired;	check :	all tha	t apply) Water-Sta (except I Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted o	ained Leav MLRA 1, 2, t (B11) nvertebrate n Sulfide Or Rhizosphe t of Reduce on Reducti	res (B9) , 4A, and 4 es (B13) dor (C1) eres along ed Iron (C4 ion in Tilled Plants (D	matrix chroma 4B) Living Roots 4) d Soils (C6)	Seco	ndary Indicato Water-Staine (MLRA 1, 2, Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral	ors (2 or modulated Leaves (44, and 48 tterns (B10 Water Tables) as a position (D1) terd (D3) Test (D5) founds (D6)	(B9) (B9) (B9) (B9) (B9) (B9) (B9) (B9)	gery	(C9)	
"DROLOG etland Hyd mary Indica Surface High W Satura Water Sedime Drift De Algal M Iron De Surface Inunda	The soil profile many profile m	s: one re	quired;	; check :	all tha	t apply) Water-Sta (except I Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted o	ained Leav MLRA 1, 2, t (B11) nvertebrate n Sulfide Or Rhizosphe of Reduce on Reducti or Stresses	res (B9) , 4A, and 4 es (B13) dor (C1) eres along ed Iron (C4 ion in Tilled Plants (D	matrix chroma 4B) Living Roots 4) d Soils (C6)	Seco	ndary Indicate Water-Staine (MLRA 1, 2, Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ors (2 or modulated Leaves (44, and 48 tterns (B10 Water Tables) as a position (D1) terd (D3) Test (D5) founds (D6)	(B9) (B9) (B9) (B9) (B9) (B9) (B9) (B9)	gery	(C9)	
"DROLOG etland Hyd mary Indica Surface High W Satura Water Sedime Drift De Algal M Iron De Surface Inunda Sparse	The soil profile management of the soil cracks (B4) are soil cracks (B6) a	s: one re	quired;	; check :	all tha	t apply) Water-Sta (except I Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted o	ained Leav MLRA 1, 2, t (B11) nvertebrate n Sulfide Or Rhizosphe of Reduce on Reducti or Stresses	res (B9) , 4A, and 4 es (B13) dor (C1) eres along ed Iron (C4 ion in Tilled Plants (D	matrix chroma 4B) Living Roots 4) d Soils (C6)	Seco	ndary Indicate Water-Staine (MLRA 1, 2, Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ors (2 or modulated Leaves (44, and 48 tterns (B10 Water Tables) as a position (D1) terd (D3) Test (D5) founds (D6)	(B9) (B9) (B9) (B9) (B9) (B9) (B9) (B9)	gery	(C9)	
Mary Indicated High Water Sedime Drift De Surface Inunda Sparse	The soil profile m The soil prof	s: one re	quired;	; check :	all tha	t apply) Water-St: (except ! Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted c	ained Leav MLRA 1, 2, t (B11) nvertebrate n Sulfide Or Rhizosphe of Reduce on Reducti or Stresses	res (B9) , 4A, and 4 es (B13) dor (C1) eres along ed Iron (C4 ion in Tilled Plants (Demarks)	matrix chroma 4B) Living Roots 4) d Soils (C6)	Seco	ndary Indicate Water-Staine (MLRA 1, 2, Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ors (2 or modulated Leaves (44, and 48 tterns (B10 Water Tables) as a position (D1) terd (D3) Test (D5) founds (D6)	(B9) (B9) (B9) (B9) (B9) (B9) (B9) (B9)	gery	(C9)	
MOLOGO Surface High W Satura Water Sedime Drift De Algal M Iron De Surface Inunda Sparse	The soil profile many of the soil content	s: one rec	quired; gery (E	37) (B8)	all tha	t apply) Water-St: (except I Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted C Other (Ex	ained Leav MLRA 1, 2, t (B11) nvertebrate n Sulfide Or Rhizosphe e of Reduce on Reducti or Stresses splain in Re	res (B9) 4A, and 4 es (B13) dor (C1) eres along ed Iron (C4 ion in Tiller Plants (Demarks)	matrix chroma 4B) Living Roots 4) d Soils (C6)	Seco	ndary Indicate Water-Staine (MLRA 1, 2, Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ors (2 or modulated Leaves (44, and 48 tterns (B10 Water Tables) as a position (D1) terd (D3) Test (D5) founds (D6)	(B9) (B9) (B9) (B9) (B9) (B9) (B9) (B9)	gery	(C9)	
MOLOGO Strand Hyde Mary Indica Surface High W Satura Water Sedime Drift De Algal M Iron De Surface Inunda Sparse Id Observe rface Water turation Pre	The soil profile m The soil prof	s: fone ref	quired;	37) (B8)	all that	t apply) Water-St: (except ! Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted of Other (Ex	ained Leav MLRA 1, 2, t (B11) nvertebrate n Sulfide Or Rhizosphe e of Reduce on Reducti or Stresses xplain in Re	res (B9) , 4A, and 4 es (B13) dor (C1) eres along ed Iron (C4 ion in Tille Plants (D emarks)	4B) Living Roots 4) d Soils (C6) 1) (LRR A)	Seco	ndary Indicate Water-Staine (MLRA 1, 2, Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave	ors (2 or more d Leaves (4A, and 4E tterns (B10 Water Tabl sible on Ae Position (D tard (D3) Test (D5) flounds (D6 Hummocks	(B9) (B9) (B9) (B9) (B9) (B9) (B9) (B9)	gery		
TDROLOG Itland Hyde mary Indic: Surface High W Satura: Water Sedime Drift De Algal M Iron De Surface Inunda Sparse Id Observe face Water iter Table Feduration Pre- cludes cap	The soil profile m The soil prof	rial Ima cave Si Yes Yes	gery (E	check : 37) (B8) No No	all tha	t apply) Water-St: (except I Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted c Other (Ex	ained Leav MLRA 1, 2, t (B11) nvertebrate n Sulfide Or Rhizosphe e of Reduce on Reducti or Stresses cplain in Re h (inches): h (inches):	res (B9) 4A, and 4 es (B13) dor (C1) eres along ed Iron (C4 ion in Tiller Plants (D emarks)	4B) Living Roots 4) d Soils (C6) 1) (LRR A)	Seco	ndary Indicate Water-Staine (MLRA 1, 2, Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave	ors (2 or more d Leaves (4A, and 4E tterns (B10 Water Tabl sible on Ae Position (D tard (D3) Test (D5) flounds (D6 Hummocks	(B9) (B9) (B9) (B9) (B9) (B9) (C2) (B9) (C2) (C3) (C3) (C4) (C4) (C4) (C4) (C4) (C4) (C4) (C4	gery		
MOROLOG Strand Hyde Mary Indica Surface High W Satura Water Sedime Drift De Algal M Iron De Surface Inunda Sparse sld Observe rface Water ater Table Feturation Preciudes cap	The soil profile management of	rial Ima cave Si Yes Yes	gery (E	check : 37) (B8) No No	all tha	t apply) Water-St: (except I Salt Crus Aquatic II Hydroger Oxidized Presence Recent Ir Stunted c Other (Ex	ained Leav MLRA 1, 2, t (B11) nvertebrate n Sulfide Or Rhizosphe e of Reduce on Reducti or Stresses cplain in Re h (inches): h (inches):	res (B9) 4A, and 4 es (B13) dor (C1) eres along ed Iron (C4 ion in Tiller Plants (D emarks)	4B) Living Roots 4) d Soils (C6) 1) (LRR A)	Seco	ndary Indicate Water-Staine (MLRA 1, 2, Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave	ors (2 or more d Leaves (4A, and 4E tterns (B10 Water Tabl sible on Ae Position (D tard (D3) Test (D5) flounds (D6 Hummocks	(B9) (B9) (B9) (B9) (B9) (B9) (C2) (B9) (C2) (C3) (C3) (C4) (C4) (C4) (C4) (C4) (C4) (C4) (C4	gery		

Project Site:	N Grand Forest			City/Cour	ty: <u>Bainbridge Island/Kitsap</u> Sam	npling Date:	4/7/21	
Applicant/Owner:	BI Metro Parks and Recreation				State: <u>WA</u> Sam	npling Point:	<u>TP 11</u>	
Investigator(s):	J. Bartlett, K. Lacey				Section, Township, Range:	S 16 T 25 N R 2 F	<u>EWM</u>	
Landform (hillslope, te	errace, etc.): <u>hillslope</u>		Loca	al relief (conc	ave, convex, none): <u>concave</u>	Slope	e (%): <u>5-</u>	<u>10</u>
Subregion (LRR):	MLRA 2	Lat: <u>47.6</u>	64433		Long: <u>-122.554457</u>	Datum: <u>I</u>	NAD83	
Soil Map Unit Name:	16 Harstine gravelly ashy sand	<u>ly loam, 15-3</u>	0% slopes		NWI classifica	tion: <u>None</u>		
Are climatic / hydrolog	ic conditions on the site typical fo	r this time of	year? Y	es 🛛	No	narks.)		
Are Vegetation ☐,	, Soil □, or Hydrology	☐, signific	antly disturbed	l? Are "	Normal Circumstances" present?	Yes	⊠ No	o 🗆
Are Vegetation ,	, Soil □, or Hydrology	☐, natural	lly problematic	? (If ne	eded, explain any answers in Remark	s.)		
SUMMARY OF FIN	IDINGS – Attach site map s	howing sar	npling point	locations.	transects, important features,	etc.		
Hydrophytic Vegetatio	· · · · · · · · · · · · · · · · · · ·	Yes 🏻	· · · ·		· '			
Hydric Soil Present?		Yes 🏻	No 🗆	Is the Samp		Yes	⊠ No	• □
Wetland Hydrology Pr	resent?	Yes 🛛		within a We	etiano ?			
Remarks: The N Gra	and Forest is located in the south	east guadran	t of Miller Road	I (to the west) and Koura Road (to the north). It is	currenity undevel	oped and	
composed	d of upland forest with a trail arou	nd the perime	eter. The prope	erty generally	slopes down from east to west with to	opographic trough		
west facir	ng slope. Test Plot 11 is located a	an occasior	nally flooded po	ortion of vveti	and A where there is very sparse vego	etation.		
VEGETATION - U	se scientific names of plant							
Tree Stratum (Plot siz	e: <u>30' diameter</u>)	Absolute <u>% Cover</u>	Dominant Species?	Indicator <u>Status</u>	Dominance Test Worksheet:			
1					Number of Dominant Species	<u>3</u>		(A)
2					That Are OBL, FACW, or FAC:	<u>~</u>		(* ')
3					Total Number of Dominant	<u>3</u>		(B)
4			—		Species Across All Strata:	_		` '
50% =, 20% =			= Total Cove	r	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u>		(A/B)
	n (Plot size: <u>20' diameter</u>)							
1					Prevalence Index worksheet:	8.4 100 1		
2					Total % Cover of:	<u>Multipl</u>	y by:	
3					OBL species	x1 =		
4		-			FACW species	x2 = x3 =		
5					FACULTURE STATE OF THE STATE OF			
50% =, 20% =			= Total Cover	ſ	FACU species	x4 =		
Herb Stratum (Plot siz		_			UPL species	x5 =		
1. Athyrium cyclosom		<u>5</u>	<u>yes</u>	<u>FAC</u>	Column Totals:(A)			(B)
2. <u>Veronica america</u>		<u>5</u>	<u>ves</u>	OBL	Prevalence Index			
3. <u>Tolmiea menzeisii</u>	Ĺ	<u>5</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators			
4					1 – Rapid Test for Hydrophytic	: Vegetation		
5					2 - Dominance Test is >50%			
6					☐ 3 - Prevalence Index is ≤3.01			
7					4 - Morphological Adaptations data in Remarks or on a se		rting	
8					_	. ,		
9			—		5 - Wetland Non-Vascular Plan	nts'		
10					☐ Problematic Hydrophytic Vege	tation¹ (Explain)		
11					¹ Indicators of hydric soil and wetland	d hydrology must		
50% = <u>7.5,</u> 20% = <u>3</u>		<u>15</u>	= Total Cove	r	be present, unless disturbed or prob			
-	(Plot size: <u>10' diameter</u>)							
1			—		Hydrophytic			
2			_		Vegetation Yes		No	
50% =, 20% =			= Total Cover	r	Present?			
% Bare Ground in Her						LODI		
Remarks:	ı ne nyaropnytıc vegetation criterio	n is met in th	is area becaus	e tnere is gre	eater than 50% dominance by FAC an	a OBL species.		

nches) (Color (moist)	%	Color (r	noist)	%	Type ¹	Loc ²	Texture	Remarks
<u>0-10</u>	10YR 2/1	100				- 71-		gr sa lo	- -
<u>10-16</u>	10YR 4/1	<u>95</u>	10YR	<u>4/6</u>	<u></u>	<u>C</u>	<u>M</u>	gr sa lo	-
				_					<u></u>
				_					
				_					
				_					gr - gravelly
				_					<u>sa - sandy</u>
				_					<u>lo - loam</u>
•	entration, D=Depl	-				oated Sand	Grains. ² Lo	cation: PL=	=Pore Lining, M=Matrix, RC=Root Channel
	cators: (Applica	ble to all L	_		-				cators for Problematic Hydric Soils ³ :
Histosol (A	-			-	y Redox (S5)				2 cm Muck (A10)
Histic Epip					ed Matrix (S6)				Red Parent Material (TF2)
Black Histi					-		cept MLRA 1)		Very Shallow Dark Surface (TF12)
	Sulfide (A4)				y Gleyed Matri				Other (Explain in Remarks)
-	Below Dark Surfa	ce (A11)		-	eted Matrix (F3	•			
	Surface (A12)				x Dark Surface			31 m alia	actors of budroubutio varieties and
	cky Mineral (S1)			-	eted Dark Surfa				cators of hydrophytic vegetation and retland hydrology must be present,
	yed Matrix (S4)			Redox	x Depressions	(F8)		ur	nless disturbed or problematic.
-	er (if present):								
e:									× 5
marks: Th	e soil profile mee surface layer.	ts hydric s	oil indicator ,	A11 becau	use there is a c	dark surface	Hydric Soils P e layer below wh		Yes ⊠ No [
the	surface layer.	ts hydric s	oil indicator /	A11 becau	use there is a c	dark surface			-
marks: The the	surface layer.					dark surface		ch is a dep	oleted matrix. Organic material was visible with
marks: The t	ogy Indicators: s (minimum of o		ł; check all tł	nat apply)				ch is a dep	oleted matrix. Organic material was visible with
Marks: The t	ogy Indicators: 's (minimum of or			nat apply) Water	r-Stained Leav	res (B9)	e layer below wh	Secon	oleted matrix. Organic material was visible with which was a visible with a second control of the second contr
Marks: The t	ogy Indicators: s (minimum of or later (A1)		ł; check all tł	nat apply) Water (exce		res (B9)	e layer below wh	Secon	ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
DROLOGY tland Hydrol mary Indicator Surface W High Wate Saturation	ogy Indicators: s (minimum of or fater (A1) er Table (A2) (A3)		t; check all tr □	nat apply) Water (exce	r-Stained Leav ept MLRA 1, 2, Crust (B11)	res (B9) , 4A, and 4 l	e layer below wh	Secon	ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
TDROLOGY tland Hydrol mary Indicator Surface W High Wate Saturation Water Mar	ogy Indicators: s (minimum of or fater (A1) er Table (A2) (A3)		l; check all th	nat apply) Water (exce Salt C Aquat	r-Stained Leav pt MLRA 1, 2,	res (B9) , 4A, and 4 l es (B13)	e layer below wh	Secon	ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
TDROLOGY tland Hydrol mary Indicator Surface W High Wate Saturation Water Mar	ogy Indicators: ss (minimum of orlater (A1) er Table (A2) (A3) rks (B1) Deposits (B2)		t; check all tr	nat apply) Water (exce Salt C Aquat Hydro	r-Stained Leav ept MLRA 1, 2, Crust (B11) tic Invertebrate ogen Sulfide O	res (B9) , 4A, and 4 l es (B13) dor (C1)	e layer below wh	Secon	ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
TDROLOGY tland Hydrol mary Indicator Surface W High Wate Saturation Water Mar Sediment Drift Depo	ogy Indicators: ss (minimum of orlater (A1) er Table (A2) (A3) rks (B1) Deposits (B2)		d; check all th	mat apply) Water (exce Salt C Aquat Hydro	r-Stained Leav ept MLRA 1, 2, Crust (B11) tic Invertebrate ogen Sulfide O	res (B9) , 4A, and 4 l es (B13) dor (C1) eres along L	B)	Secon	ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
TDROLOGY tland Hydrol mary Indicator Surface W High Wate Saturation Water Mar Sediment Drift Depo	ogy Indicators: s (minimum of or fater (A1) er Table (A2) (A3) eks (B1) Deposits (B2) sits (B3) or Crust (B4)		i; check all th	mat apply) Water (exce Salt C Aquat Hydro Oxidiz Prese	r-Stained Leav ept MLRA 1, 2, Crust (B11) tic Invertebrate ogen Sulfide O	res (B9) , 4A, and 4 l es (B13) dor (C1) eres along L ed Iron (C4)	B) Living Roots (C3)	Secon (ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Marks: The t	ogy Indicators: s (minimum of or fater (A1) er Table (A2) (A3) eks (B1) Deposits (B2) sits (B3) or Crust (B4)		i; check all th	nat apply) Water (exce Salt C Aquat Hydro Oxidiz Prese Recer	r-Stained Leav pt MLRA 1, 2, Crust (B11) tic Invertebrate pgen Sulfide O zed Rhizosphe ence of Reduce	res (B9) , 4A , and 4 l es (B13) dor (C1) eres along L ed Iron (C4) ion in Tilled	B) Living Roots (C3)	Secon (ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
"DROLOGY tland Hydrol mary Indicator Surface W High Water Mar Sediment Drift Depo Algal Mat Iron Depo	ogy Indicators: s (minimum of or ater (A1) r Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)	ne required	t; check all tr	mat apply) Water (exce Salt C Aquat Hydro Oxidiz Prese Recer	r-Stained Leav pt MLRA 1, 2, Crust (B11) tic Invertebrate ogen Sulfide Or zed Rhizosphe ence of Reduce nt Iron Reducti	res (B9) 4A, and 4 es (B13) dor (C1) eres along Led Iron (C4) ion in Tilled Plants (D1	B) Living Roots (C3)	Secon C C C C C C C C C C C C C C C C C C C	ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
TOROLOGY ttland Hydrol mary Indicator Surface W High Water Mar Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior	ogy Indicators: s (minimum of orlater (A1) r Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6)	ne required	i; check all th	mat apply) Water (exce Salt C Aquat Hydro Oxidiz Prese Recer	r-Stained Leavent MLRA 1, 2, Crust (B11) tic Invertebrate or Sulfide Or Zed Rhizosphe ence of Reduce the Iron Reductied or Stresses	res (B9) 4A, and 4 es (B13) dor (C1) eres along Led Iron (C4) ion in Tilled Plants (D1	B) Living Roots (C3)	Secon C C C C C C C C C C C C C C C C C C C	ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Marks: The t	ogy Indicators: s (minimum of or ater (A1) er Table (A2) (A3) cks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) visible on Aeria /egetated Conca	ne required	i; check all th	mat apply) Water (exce Salt C Aquat Hydro Oxidiz Prese Recer	r-Stained Leavent MLRA 1, 2, Crust (B11) tic Invertebrate or Sulfide Or Zed Rhizosphe ence of Reduce the Iron Reductied or Stresses	res (B9) 4A, and 4 es (B13) dor (C1) eres along Led Iron (C4) ion in Tilled Plants (D1	B) Living Roots (C3)	Secon C C C C C C C C C C C C C C C C C C C	ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Marks: The t	ogy Indicators: s (minimum of or fater (A1) er Table (A2) (A3) eks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) a Visible on Aeria fegetated Conca	ne required	i; check all th	mat apply) Water (exce Salt C Aquat Hydro Oxidiz Prese Recer Stunte Other	r-Stained Leavent MLRA 1, 2, Crust (B11) tic Invertebrate or Sulfide Or Zed Rhizosphe ence of Reduce the Iron Reductied or Stresses	res (B9) 4A, and 4I es (B13) dor (C1) eres along L ed Iron (C4) ion in Tilled Plants (D1 emarks)	B) Living Roots (C3)	Secon C C C C C C C C C C C C C C C C C C C	ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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"DROLOGY tland Hydrol mary Indicator Surface W High Water Mar Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely V Id Observation face Water P ter Table Presected secapillar	ogy Indicators: s (minimum of or later (A1) r Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) l Visible on Aeria legetated Concal leget	I Imagery (ve Surface es es es es	i; check all tr	nat apply) Water (exce Salt C Aquat Hydro Oxidiz Prese Recer Stunte Other	r-Stained Leaver the MLRA 1, 2, 2, 2 crust (B11) tic Invertebrate or Sulfide Or Zed Rhizosphe ence of Reduction Reduction Reduction or Stresses (Explain in Research (inches): Depth (inches):	res (B9) 4A, and 4 es (B13) dor (C1) eres along L ed Iron (C4) ion in Tilled Plants (D1 emarks) 1 surface	B) Living Roots (C3)) I Soils (C6)) (LRR A)	Secon Control	ndary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project Site:	N Grand Forest			City/Coun	ty: <u>Bainbridge Island/Kitsap</u> Sar	mpling Date:	<u>4/7/21</u>
Applicant/Owner:	BI Metro Parks and Recreation	<u>n</u>			State: <u>WA</u> Sai	mpling Point:	<u>TP 12</u>
Investigator(s):	J. Bartlett, K. Lacey				Section, Township, Range:	S 16 T 25 N R 2 EV	<u>WM</u>
Landform (hillslope, ter	rrace, etc.): <u>hillslope</u>		Loca	l relief (conca	ave, convex, none): <u>concave</u>	Slope	(%): <u>5-10</u>
Subregion (LRR):	MLRA 2	Lat: <u>47.6</u>	64431		Long: <u>-122.554542</u>	Datum: <u>N</u>	AD83
Soil Map Unit Name:	16 Harstine gravelly ashy sa	ndy loam, 15-3	0% slopes		NWI classifica	ation: <u>None</u>	
Are climatic / hydrologic	c conditions on the site typical	for this time of	year? Ye	es 🗆	No 🛛 (If no, explain in Re	marks.)	
Are Vegetation □,	Soil ☐, or Hydrology	☐, signific	antly disturbed	? Are "I	Normal Circumstances" present?	Yes	□ No ⊠
Are Vegetation □,	Soil ☐, or Hydrology	☐, natura	lly problematic?	(If ne	eded, explain any answers in Remar	ks.)	
SUMMARY OF FINI	DINGS – Attach site map	showing sar	npling point	locations,	transects, important features,	, etc.	
Hydrophytic Vegetation	n Present?	Yes	_	Is the Samp	alad Araa		
Hydric Soil Present?		Yes		within a We		Yes	□ No ⊠
Wetland Hydrology Pre	esent?	Yes	No 🛛				
) and Koura Road (to the north). It is		
	l of upland forest with a trail arc g slope. Test Plot 12 is located				slopes down from east to west with	copographic troughs	s carved into the
		are apiana					
VEGETATION – Us	se scientific names of plan	nts					
Tree Stratum (Plot size	e: <u>30' diameter</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:		
Pseudotsuga menz	zeisii	10	<u>yes</u>	FACU	Number of Dominant Species		
2.		<u> </u>			That Are OBL, FACW, or FAC:	<u>0</u>	(A)
3					Total Number of Dominant		
4.					Species Across All Strata:	<u>4</u>	(B)
50% = <u>5</u> , 20% = <u>2</u>		10	= Total Cover		Percent of Dominant Species		
Sapling/Shrub Stratum	(Plot size: <u>20' diameter</u>)	<u>—</u>			That Are OBL, FACW, or FAC:	<u>0</u>	(A/B)
1. Vaccinium ovatum		<u>20</u>	<u>yes</u>	FACU	Prevalence Index worksheet:		
Mahonia nervosa		<u>10</u>	<u>yes</u>	FACU	Total % Cover of:	Multiply	by:
3		<u> </u>			OBL species	x1 =	
4					FACW species	x2 =	
5					FAC species	x3 =	
50% = <u>15,</u> 20% = <u>6</u>		<u>30</u>	= Total Cover		FACU species	x4 =	
Herb Stratum (Plot size	e: 10' diameter)	<u>—</u>			UPL species	x5 =	
Polystichum munitu		<u>35</u>	<u>yes</u>	FACU	Column Totals:(A)		(B)
2.	<u>****</u>	<u>55</u>	<u>100</u>	.,,,,,,		ex = B/A =	(5)
					Hydrophytic Vegetation Indicator		
3 4.					☐ 1 – Rapid Test for Hydrophyti		
					2 - Dominance Test is >50%	c vegetation	
5 6.							
_					☐ 3 - Prevalence Index is <3.01		
7					4 - Morphological Adaptations data in Remarks or on a s		ing
8							
9					_		
10					☐ Problematic Hydrophytic Veg	etation¹ (Explain)	
11					¹ Indicators of hydric soil and wetlar	nd hydrology must	
50% = <u>25</u> , 20% = <u>10</u>	D	<u>50</u>	= Total Cover		be present, unless disturbed or pro		
Woody Vine Stratum (F	Plot size: <u>10' diameter</u>)						
1					Hydrophytic		
2					Vegetation Yes		No 🛛
50% =, 20% =	_		= Total Cover		Present?		_
% Bare Ground in Herb	b Stratum <u>65</u>						
Remarks:	he hydrophytic vegetation crite	rion is not met l	because there i	s less than 5	50% dominance by FAC. FACW, or C	BL plant species.	

nches) Color (moist)	ix %		Color (m	Redox Fear	Type ¹ Lo	c ² Text	ura			Remark	e	
0-16 10YR 2/2			70101 (111	0131) /0	Type Lo		sa lo	very ar	avelly/rocl		3	
<u>0-10</u> <u>1011(2/2</u>	10	<u>o</u>				<u> </u>	<u>3a 10</u>	very gra	avelly/10cl	<u>vā</u>		
			-									
												
						_						
								gr - gra	velly			
				<u> </u>	<u> </u>	_		sa - saı	nd <u>y</u>			
				<u> </u>				lo - loar	<u>m</u>			
pe: C= Concentration, D=D	Depletion,	RM=Redu	ced Mat	trix, CS=Covered or Co	ated Sand Grains.	² Location:	PL=Po	re Lining, N	Л=Matrix,	RC=Roo	t Channel	I
dric Soil Indicators: (App	licable to	all LRRs,	unless	otherwise noted.)		I	ndicate	ors for Pro	blematic	Hydric S	Soils³:	
Histosol (A1)				Sandy Redox (S5)		[_ :	2 cm Muck	(A10)			
Histic Epipedon (A2)				Stripped Matrix (S6)		[_	Red Parent	Material ((TF2)		
Black Histic (A3)				Loamy Mucky Miner	al (F1) (except MLI	RA 1) [_ `	ery Shallo	w Dark Sเ	urface (T	F12)	
Hydrogen Sulfide (A4)				Loamy Gleyed Matri	x (F2)	[– (Other (Expl	ain in Ren	narks)		
Depleted Below Dark St	urface (A1	1)		Depleted Matrix (F3)							
Thick Dark Surface (A12	2)			Redox Dark Surface	(F6)	_						
Sandy Mucky Mineral (S	31)			Depleted Dark Surfa	ace (F7)	3		ors of hydro and hydrolo				
Sandy Gleyed Matrix (S	4)			Redox Depressions	(F8)			ss disturbed			ιτ,	
strictive Layer (if present):											
De:												
oth (inches):					Hydric	Soils Present?	?		Yes		No	D
	neets non	e of the hy	dric soil	indicators because the	e matrix chroma is n	ot depleted and	d there	are no redo	oximorphi	c concen	trations.	
rmarks: The soil profile r		e of the hy	/dric soil	indicators because the	e matrix chroma is n	ot depleted and	d there	are no redo	oximorphi	c concen	trations.	
marks: The soil profile r	rs:				e matrix chroma is n							
The soil profile r TOROLOGY Stland Hydrology Indicato mary Indicators (minimum of	rs:		ck all tha	at apply)		Se	conda	y Indicators	s (2 or mo	re requir		
TOROLOGY Itland Hydrology Indicato mary Indicators (minimum of Surface Water (A1)	rs:			at apply) Water-Stained Leav	es (B9)		condai Wa	y Indicators ter-Stained	s (2 or mo Leaves (F	re requir 39)		
TDROLOGY Itland Hydrology Indicato mary Indicators (minimum of Surface Water (A1) High Water Table (A2)	rs:		ck all tha	at apply) Water-Stained Leav (except MLRA 1, 2,	es (B9)	Se	econdai Wa (ML	y Indicators ter-Stained .RA 1, 2, 4,	s (2 or mo Leaves (I	re requir 39)		
TDROLOGY Itland Hydrology Indicato mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)	rs:		ck all tha	at apply) Water-Stained Leav (except MLRA 1, 2, Salt Crust (B11)	es (B9) 4A, and 4B)	Se	econdar Wa (ML Dra	y Indicators ter-Stained . RA 1, 2, 4 , inage Patte	s (2 or mo Leaves (E A, and 4B erns (B10)	ore requir 39)		
DROLOGY tland Hydrology Indicato mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	rs: of one requ		ck all tha	at apply) Water-Stained Leav (except MLRA 1, 2, Salt Crust (B11) Aquatic Invertebrate	es (B9) 4A, and 4B) s (B13)	Se	condal Wa (ML Dra Dry	y Indicators ter-Stained . RA 1, 2, 4 inage Patte -Season W	s (2 or mo Leaves (I A, and 4B erns (B10) later Table	re requir 39) 3) e (C2)	ed)	
TDROLOGY tland Hydrology Indicato mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	rs: of one requ		ck all tha	at apply) Water-Stained Leav (except MLRA 1, 2, Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide On	es (B9) 4A, and 4B) s (B13) dor (C1)	Se	condar Wa (ML Dra Dry Sat	y Indicators ter-Stained . RA 1, 2, 4, inage Patte -Season W uration Visi	s (2 or mo Leaves (t A, and 4B erns (B10) ater Table ble on Ae	ore requir 39) 3) a (C2) rial Imag	ed)	
TDROLOGY Itland Hydrology Indicato mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	rs: of one requ		ck all tha	at apply) Water-Stained Leav (except MLRA 1, 2, Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Oc Oxidized Rhizosphe	es (B9) 4A, and 4B) s (B13) dor (C1) res along Living Ro	Se	Condar Wa (ML Dra Dry Sat Geo	y Indicators ter-Stained .RA 1, 2, 4, inage Patte -Season W uration Visi omorphic Po	s (2 or mo Leaves (I A, and 4B erns (B10) ater Table ble on Ael osition (D:	ore requir 39) 3) a (C2) rial Imag	ed)	
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TDROLOGY Itland Hydrology Indicato mary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6 Inundation Visible on A Sparsely Vegetated Co	rs: of one required)	uired; ched	ck all tha	at apply) Water-Stained Leav (except MLRA 1, 2, Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Stunted or Stresses	es (B9) 4A, and 4B) s (B13) dor (C1) res along Living Road Iron (C4) on in Tilled Soils (Ci	Se	condar War (ML Dra Dry Sat Geo Sha FAO Rai	y Indicators ter-Stained .RA 1, 2, 4, inage Patte -Season W uration Visi omorphic Pe illow Aquita C-Neutral T sed Ant Mo	s (2 or mo Leaves (I A, and 4B erns (B10) ater Table ble on Ae osition (D2) ard (D3) est (D5) bunds (D6)	ore requir 39) 3) a (C2) rial Imag 2)	ed) ery (C9)	
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The soil profile remarks: The soil profile r	rs: of one required 3) erial Imagencave Sur Yes Yes Yes	ery (B7) face (B8)	ck all that	at apply) Water-Stained Leav (except MLRA 1, 2, Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizosphe Presence of Reduce Recent Iron Reducti Stunted or Stresses Other (Explain in Re Depth (inches): Depth (inches):	es (B9) 4A, and 4B) s (B13) dor (C1) res along Living Roted Iron (C4) on in Tilled Soils (Ci Plants (D1) (LRR A	ots (C3)	Wa (ML Dra Dry Sat Gec Sha FAC Rai Fro	y Indicators ter-Stained .RA 1, 2, 4, inage Patte -Season W uration Visi omorphic Po allow Aquita C-Neutral T sed Ant Mo st-Heave H	s (2 or mo Leaves (f A, and 4B erns (B10) later Table ble on Ael osition (D3) est (D5) ounds (D6) ummocks	e (C2) rial Imag 2) (LRR A	ed) ery (C9)	0

RATING SUMMARY – Western Washington

Name of wetland (or ID #): $_$	Wetland A		Dat	e of site visit: <u>4/7/21</u>		
Rated by: <u> J. Bartlett</u>	Trained by Ecol	ogy? <u>X</u>	_ Yes	No Date of training:	11/2014	
HGM Class used for rating:_	Slope	Wetla	nd has i	multiple HGM classes?_	Y <u>X</u>	N

NOTE: **Form is not complete without the figures requested** (*figures can be combined*). Source of base aerial photo/map: Google Earth

OVERALL WETLAND CATEGORY IV (based on functions X or special characteristics__)

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 – 27

Category II – Total score = 20 – 22

Category III – Total score = 16 – 19

X Category IV – Total score = 9 – 15

FUNCTION		nprov ter Q	ing uality	Н	ydrol	ogic		Habi	tat	
Circle the appropriate ratings										
Site Potential	Н	M (Н	М		Н	М		
Landscape Potential	Н	М (Ū	Н	М		H	\mathbf{M}	L	
Value	(\pm)) M	L	Н	М		H	M) L	TOTAL
Score Based on Ratings		5			3			6		14

Score for each function based on three ratings (order of ratings is not *important*) 9 = H,H,H8 = H,H,M7 = H,H,L7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L5 = M,M,L4 = M, L, L3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY	
Estuarine	I II	
Wetland of High Conservation Value	I	
Bog33	I	
Mature Forest	I	
Old Growth Forest	I	
Coastal Lagoon	I II	
Interdunal	I II III IV	
None of the above	X	

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	9
Hydroperiods	H 1.2	9
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	9
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	9
(can be added to figure above)		
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	9
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	10
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	11
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	11

HGM Classification of Wetlands in Western Washington

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

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

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

NO – go to 2

YES – the wetland class is **Tidal Fringe** – go to 1.1

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

NO - Saltwater Tidal Fringe (Estuarine)

YES - Freshwater Tidal Fringe

If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.

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

NO – go to 3

YES – The wetland class is **Flats**

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

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

NO – go to 4

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

- 4. Does the entire wetland unit **meet all** of the following criteria?
 - X The wetland is on a slope (*slope can be very gradual*),
 - X The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
 - X The water leaves the wetland **without being impounded**.

NO - go to 5

YES – The wetland class is Slope

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

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

Wetland name or number: _A

NO - go to 6

YES - The wetland class is Riverine

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

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

NO - go to 7

YES – The wetland class is **Depressional**

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

NO - go to 8

YES - The wetland class is Depressional

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

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

HGM classes within the wetland unit	HGM class to
being rated	use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other	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 improve water quality	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)	2
Slope is 1% or less points = 3	
Slope is > 1%-2% points = 2	
Slope is > 2%-5% points = 1	
Slope is greater than 5% points = 0	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.	1
Dense, uncut, herbaceous plants > 90% of the wetland area points = 6 Dense, uncut, herbaceous plants > ½ of area points = 3	
Dense, woody, plants > ½ of area points = 2	
Dense, uncut, herbaceous plants > ¼ of area points = 1	
Does not meet any of the criteria above for plants points = 0	
Total for S 1 Add the points in the boxes above	3

Rating of Site Potential If score is: 12 = H 6-11 = M X 0-5 = L

Record the rating on the first page

S 2.0. Does the landscape have the potential to support the water quality fu	nction of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land use	s that generate pollutants?	0
	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	
Total for S 2	Add the points in the boxes above	0

Rating of Landscape Potential If score is: ____1-2 = M ___X_0 = L

Record the rating on the first page

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

Rating of Value If score is: X 2-4 = H ___1 = M ___0 = L

Record the rating on the first page

Wetland name or number: A

SLOPE WETLANDS Hydrologic Functions - Indicators that the site functions to reduce flooding and stream eros	ion
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows. Dense, uncut, rigid plants cover > 90% of the area of the wetland points = 1	0
Rating of Site Potential If score is:1 = M0 = L	the first page
S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	0
Rating of Landscape Potential If score is:1 = M0 = L Record the rating on the score is:1 = M0 = L	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., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream points = 0	0

S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?

Rating of Value If score is: ____2-4 = H ____1 = M __X __0 = L

Record the rating on the first page

Yes = 2 No = 0

Add the points in the boxes above

NOTES and FIELD OBSERVATIONS:

Total for S 6

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

Wetland name or number: A

Wedand name of number. A		
H 1.5. Special habitat features:		2
Check the habitat features that are present in the wetland. <i>The number of checks</i> is	is the number of points.	
X Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).		
X Standing snags (dbh > 4 in) within the wetland	J.	
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants	s extends at least 3.3 ft (1 m)	
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (
Stable steep banks of fine material that might be used by beaver or muskrat in		
slope) OR signs of recent beaver activity are present (cut shrubs or trees that	= :	
where wood is exposed)	,	
At least ¼ ac of thin-stemmed persistent plants or woody branches are presen	nt in areas that are	
permanently or seasonally inundated (structures for egg-laying by amphibia		
Invasive plants cover less than 25% of the wetland area in every stratum of p	lants (see H 1.1 for list of	
strata)		
Total for H 1 Add th	ne points in the boxes above	4
Rating of Site Potential If score is:15-18 = H7-14 = MX0-6 = L	Record the rating on	the first page
H 2.0. Does the landscape have the potential to support the habitat functions of	the site?	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).		2
Calculate: % undisturbed habitat 22 + [(% moderate and low intensity land u	ises)/2] 1 25 = 23 25 %	_
If total accessible habitat is:	23C3// 2] <u>1.23</u> – <u>23.23</u> /0	
$> \frac{1}{3}$ (33.3%) of 1 km Polygon	noints = 2	
20-33% of 1 km Polygon	points = 3	
	points = 2	
10-19% of 1 km Polygon	points = 1	
< 10% of 1 km Polygon	points = 0	2
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.		2
Calculate: % undisturbed habitat 23 + [(% moderate and low intensity land		
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		0
> 50% of 1 km Polygon is high intensity land use	points = (- 2)	
≤ 50% of 1 km Polygon is high intensity	points = 0	
	ne points in the boxes above	4
Rating of Landscape Potential If score is: X 4-6 = H 1-3 = M < 1 = L	Record the rating on t	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>Cl</i>	hoose only the highest score	
that applies to the wetland being rated.	noose only the highest score	
Site meets ANY of the following criteria:	points = 2	
— It has 3 or more priority habitats within 100 m (see next page)	ponits – 2	
It mas 5 of more priority habitats within 100 in (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 		
 It has been categorized as an important habitat site in a local or regional comp 	prehensive plan, in a	
Shoreline Master Plan, or in a watershed plan		
Site has 1 or 2 priority habitats (listed on next page) within 100 m	points = 1	
Site does not meet any of the criteria above	points = 0	
Rating of Value If score is:2 = HX1 = M0 = L	Record the rating or	the first page

Wetland name or number: A

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.
- X **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.
- X **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

Wattend Time	C-1
Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Estuarine wetlands	
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?	Cat I
Yes = Category I No - Go to SC 1.2	Cat. I
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	6-4-1
than 10% cover of non-native plant species. (If non-native species are Spartina, see page 25)	Cat. I
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	Cat. II
— 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	Cat. I
SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?	
Yes = Category I No No Not a 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 go to SC 2.4 No = Not a WHCV	
Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a 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 a WHCV	
SC 3.0. Bogs	
Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key</i>	
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 – 60 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.	Cat. I
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	
	<u> </u>

SC 4.0. Forested Wetlands	
Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i> — 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	Cat. I
SC 5.0. Wetlands in Coastal Lagoons	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks	
 The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom) Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon 	
SC 5.1. Does the wetland meet all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).	
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.	
— The wetland is larger than $^{1}/_{10}$ ac (4350 ft ²) Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If</i> 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	Cat. II
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	Cat. III
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	Cat. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

Wetland name or number: A

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