#### **SCHOTT & ASSOCIATES**



**Ecologists & Wetlands Specialists** 

21018 NE Hwy 99E • P.O. Box 589 • Aurora, OR 97002 • (503) 678-6007 • FAX: (503) 678-6011

## JURISDICTIONAL WETLAND DELINEATION REPORT FOR

Logan's Landing

T5N, R1W, Section 13, Parcels 50730, 50720, 50714, 50680023 Woodland, Cowlitz County, Washington

## Prepared for

Shayne Olsen Logan Partners, LLC P.O. Box 1940 Bend, OR 97709

## Prepared by

Kim Biafora &
Juniper Tagliabue of
Schott & Associates, Inc.

#### Date:

February 2022

**Project #: 2818** 

## **TABLE OF CONTENTS**

I. I	NTRODUCTION	l
II. N	METHODS	ĺ
A.	Mapping Method	2
III.	RESULTS AND DISCUSSION	2
A.	SITE DESCRIPTION	2
	Precipitation Data and Analysis	
В.	FINDINGS 4	
1 2		
3		
4		
5		
6 7		
C.	WETLAND RATINGS	
IV.	SUMMARY AND CONCLUSIONS	)
A.	DISCLAIMER	)
V. L	ITERATURE CITATIONS10	)
	LIST OF TABLES	
	1. PRECIPITATION SUMMARY FOR THE DATE OF FIELDWORK AND PRECEDING WATER	
	EAR (OCTOBER 1, 2019 – DATE OF FIELDWORK)	
	2. Precipitation assessment for the three months preceding fieldwork 4 3. Wetland Summary	
IADLL	J. WEILAND GUNIWARI	,
	APPENDICES	
	NDIX A: FIGURES	
	RE 1: LOCATION MAP RE 2: USGS 7.5 MINUTE TOPOGRAPHICAL QUADRANGLE	
	RE 3: WETLAND INVENTORY MAP	
FIGUI	RE 4: USDA/NRCS SOIL SURVEY MAP	
	RE 5A: RECENT AERIAL IMAGE	
	RE 5B: HISTORICAL AERIAL IMAGE	
	RE 6A-D: WETLAND DELINEATION MAPS NDIX B: GROUND LEVEL PHOTOGRAPHS	
	NDIX C: WETLAND DELINEATION DATA FORMS	
	NDIX D: WETLAND RATING FORMS	

#### I. Introduction

Schott & Associates (S&A) was contracted to conduct wetland delineation on a 21.46acre study site located at the south end of Franklin Street in Woodland, Cowlitz County, WA (T5N, R1W, Section 13, Parcels 50730, 50720, 50714, 50680023; Figures 1 and 2). A wetland investigation of the study site was initiated by the landowner in support of their proposed mixed use commercial project.

The purpose of this study was to document the presence and extent of existing onsite wetlands and other waters that may be regulated under the Clean Water Act (CWA) by the U.S. Army Corps of Engineers (Corps) and under the Shoreline Management Act and Water Pollution Act by the Washington State Department of Ecology (Ecology). This report follows guidance issued by both agencies for wetland delineation reports and jurisdictional determinations for the purpose of regulating fill and removal within waters of the state. This report will be used to establish federal and state wetland jurisdictional boundaries for project permitting and local jurisdictional requirements.

The findings of this report are based upon information gathered during field investigation and upon state and federal laws regulating wetland areas. S&A staff utilized the Corps of Engineers Wetlands Delineation Manual (USACE 1987) along with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region, Version 2 (USACE 2010) to conduct wetland delineations. Study site wetlands were rated using the Washington State Wetland Rating System for Western Washington: 2014 Update (Hruby 2014) to inform preliminary wetland requirements as outlined by the City of Woodland Critical Areas Regulation, WMC 15.08.

#### II. Methods

Delineation methods included both desktop review and onsite data collection. Prior to the field investigation, the following existing data and information was reviewed:

- Cowlitz County GIS
- United States Geological Survey (USGS) 7.5-minute topographic quadrangle Deer Island and Woodland (Figure 2)
- U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI), Washington Department of Natural Resources (WDNR) forest practices wetland and stream mapping (Figure 3)
- Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) online mapper (https://geodataservices.wdfw.wa.gov/hp/phs/)
- Washington Natural Heritage Program (WNHP) rare plant and high-quality ecosystem GIS data available at https://www.dnr.wa.gov/natural-heritageprogram
- U.S. Department of Agriculture (USDA) National Resource Conservation Service (NRCS) gridded Soil Survey Geographic (gSSURGO) database for Cowlitz County (Figure 4)

Schott & Associates Ecologists and Wetland Specialists PO Box 589, Aurora, OR. 97002 P: (503) 678-6007  Recent and historical aerial photographs provided by Google Earth (Figures 5a-5b)

Delineation fieldwork was conducted on October 8, 2020. Vegetation, soils, and hydrology data were collected according to methods described in the 1987 Manual and the Regional Supplement to the Corps of Engineers Delineation Manual: Western Mountains, Valleys, and Coast (Version 2.0). Fifty-four (54) sample plots were established throughout the site to determine the presence or absence of wetlands (Appendix C). Plant indicator status was determined using the 2018 National Wetland Plant List (Corps 2018). Onsite streams, if present, were delineated via the ordinary highwater mark (OHWM) as indicated by top of bank, wrack or scour lines, change in vegetation communities, or gage elevation where applicable.

All identified wetlands and waters were classified according to the USFWS *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979) and rated by hydrogeomorphic (HGM) class according to the western Washington wetland rating system (Hruby 2014).

Representative ground level photographs were recorded to document site conditions (Appendix B; Figure 6).

#### A. Mapping Method

Wetland, OHWM, photo point, sample plot, and study site locations were recorded with a handheld Trimble GPS unit capable of sub-meter accuracy following differential correction with Pathfinder Office desktop software. These data were converted to ESRI shapefile and mapped using ArcMap 10.6 desktop software. Wetland/stream buffers were mapped using ArcMap's buffer function.

#### III. Results and Discussion

#### A. Site Description

The study site consisted of four contiguous parcels located between Old Pacific Highway and Interstate-5 at the south terminus of Franklin Street. The site consisted of a vacant field vegetated largely by reed canarygrass (*Phalaris arundinacea*), creeping bentgrass (*Agrostis stolonifera*), and scattered thickets of spiraea (*Spiraea douglasii*) and Himalayan blackberry (*Rubus armeniacus*). The margins of the field were forested primarily by black cottonwood (*Populus basamifera*) with some red alder (*Alnus rubra*) and an understory of hazelnut (*Corylus cornuta*), English hawthorn (*Crataegus mongyna*), Himalayan blackberry, and western swordfern (*Polystichum munitum*), along with areas of redosier dogwood (*Cornus sericea*) and English ivy (*Hedera helix*). A ditch ran along the eastern boundary of the site, was conducted through a culvert at the northeastern corner, and then followed the northern boundary of the site, apparently just beyond the parcel boundary. A gravel access road runs along the southern boundary of tax lot 50714. At the time of delineation, the study site was zoned for mixed use commercial.

Page 2 S&A# 2818

Topography within the study site was generally flat with little variation. Three soil series were mapped within the study site according to the USDA NRCS soil survey for Cowlitz County. The majority of the site was mapped with Newberg fine sandy loam, 0 to 3 percent slopes. The western portion of the site was mapped with Maytown silt loam, 0 to 3 percent slopes. The eastern margin of Parcel 50714 was mapped with Kelso silt loam, 15 to 30 percent slopes. All mapped soils onsite are non-hydric.

According to WDNR mapping and the NWI, a temporarily flooded emergent (PEM1A) wetland is mapped over most of the site. Also present were seasonally flooded palustrine scrub/shrub wetland (PSSC) and seasonally flooded emergent wetland (PEM1C) along the eastern perimeter and palustrine forested temporarily flooded wetland (PFOA) along the northern perimeter. WDNR hydrography data shows a Type U water extending northnorthwest, portions of which are located within the northern portion of the study site. Type U is an identifier for unknown water features that need to be verified and identified on proposed forest practice activity maps. Onsite verification did not identify any portions of this waterway onsite, though a manmade ditch was identified in the general location (described below).

No PHS priority habitats outside of wetlands were identified on the property according to PHS mapping. One PHS species, the big brown bat (Eptesicus fuscus), was identified as a PHS Listed Occurrence, but this mapping was based on township scale (the entire township is mapped as an occurrence area), not on individual site scale. The site does not feature typical bat habitat including Douglas fir or Ponderosa pine forest, large dead trees or snags, caves, cliffs, mines, bridges or buildings. No WHNP species were mapped within or near the site (WDFW 2022).

Aerial photographs for the time period between 1990 and 2021, available from Google Earth, were reviewed to assess site history. In the earliest available aerial photograph (1990; Figure 5b), the site appears to contain the same conditions as during the time of fieldwork (Figure 5a).

#### 1. Precipitation Data and Analysis

Precipitation data for the date of fieldwork and the time period preceding it were reviewed to evaluate observed wetland hydrology conditions relative to actual and statistically normal precipitation. Precipitation that deviates from normal ranges can affect site conditions and impact observed wetland hydrology indicators. Precipitation data was acquired from the NRCS Agricultural Applied Climate Information System (AgACIS) for the Vancouver 4NNE station to provide context for observed hydrological conditions of the study area at the time of the site visit (AgACIS 2019-2020). Tables 1 and 2 provide current year precipitation data, comparison to the normal water year average, as well as normal monthly ranges of precipitation representing 70% probability as reported for the Vancouver 4NNE NRCS WETS station (NRCS 1990-2020).

> Schott & Associates Ecologists and Wetland Specialists PO Box 589, Aurora, OR. 97002 P: (503) 678-6007 S&A# 2818

Page 3

Table 1. Precipitation summary for the date of fieldwork and preceding water year (October 1, 2019 – Date of Fieldwork)

	Observed Precipitation*			
Date of Field Work	Date of Visit (in.)	2 weeks prior (in.)	Previous Water Year (in.)	
October 8, 2020	0.00	1.04	36.63	

<sup>\*</sup>Data provided by NRCS AgACIS data from the Vancouver 4NNE Station, WA, 2019-2020 Previous water year data Oct. 2019 – Sept. 2020

Table 2. Precipitation assessment for the three months preceding fieldwork

Month	Total Precipitation (inches) <sup>1</sup>	WETS Normal Range (inches) <sup>2</sup>	Condition (Value)	Month Weight	Weighted Condition (value*weight)³
September	1.61	0.65-1.82	Normal (2)	3	6
August	0.24	0.27-0.73	Dry (1)	2	2
July	0.85	0.20-0.53	Wet (3)	1	3
	11 (Normal)				

<sup>&</sup>lt;sup>1</sup>Data provided by NRCS AgACIS data from the Vancouver 4NNE Station, WA, 2020

Fieldwork took place on October 8, 2020. No precipitation was observed on that day or within the month of October thus far. In the two weeks preceding fieldwork, 1.04 inches of precipitation was observed, in the first three days of the two-week period. Precipitation observed in the three months prior to fieldwork was generally within WETS normal range (though August was slightly below). Based on a weighted summary of weather conditions in the three months preceding fieldwork, hydrological conditions were estimated to be normal during the time of fieldwork.

#### B. Findings

Based on soils, vegetation, hydrology, and OHWM data gathered in the field, eight wetlands were identified within the study site. Wetland area onsite totaled 1.58 acres. Wetland, sample plots, and photo point locations are shown in Appendix A on Figure 6. The wetlands are described in detail below.

#### 1. Wetland 1

Wetland 1 (1.24-acre) consisted of a broad flat with narrow, shallow swales extending to the west and south. It was bordered by a ditch along the east property line. The wetland extended offsite to the north and east. The wetland was estimated to be sustained by groundwater discharge and runoff from areas upslope. The wetland was a slope HGM with a Cowardin class of seasonally saturated, palustrine forested (PFOB). The overstory

<sup>&</sup>lt;sup>2</sup>Data provided by NRCS WETS station for the Vancouver 4NNE Station, WA, 1990-2020

<sup>&</sup>lt;sup>3</sup>Sum = 6-9: Dry conditions, Sum = 10-14: normal conditions, Sum = 15-18: wet conditions

was dominated by black cottonwood with reed canarygrass (FACW) and patches of spiraea (FACW) and redosier dogwood (FACW).

Soil samples met the Corps hydric soil indicator for sandy redox (S5) and redox dark surface (F6) indicating that iron in the soil has been removed and translocated under saturated, anoxic conditions. Soil layers were generally dark grayish brown (10 YR 3/2 or 10YR2/2) with yellow-red redoximorphic concentrations occurring as soft masses. Soil texture was silt loam, sandy loam and loamy sand. Hydrology was generally based on secondary Corps wetland hydrological indicators including geomorphic position (D2) and FAC-neutral test (D5).

Wetland 1 boundaries reflected the gradual slopes of the wetland swale features. The boundaries were defined by topographic breaks, a lack of hydric soil or hydrology indicators, and the transition into vegetation communities dominated by hazelnut (FACU) and snowberry (FACU), Himalayan blackberry (FAC), sweet vernal grass (*Anthoxanthum odoratum*; FACU) (SP24) and English ivy (FACU) (SP43).

#### 2. Wetland 2

Wetland 2 (0.04-acre) consisted of an isolated, semi-permanently, flooded palustrine emergent (PEMF) depressional wetland in the southeastern portion of Parcel 50729. The wetland was estimated to be sustained by groundwater discharge and runoff from areas upslope impounded by topography and it contained several inches of ponded surface water during the time of fieldwork. Vegetation consisted largely of reed canarygrass as well as slough sedge (*Carex obnupta*; OBL) and some Sitka willow (*Salix sitchensis*; FACW) and redosier dogwood, which grew along the edges of the wetland. Black cottonwoods provided canopy cover but were not rooted within the wetland.

Soil sample met the Corps hydric soil indicator S5 indicating that iron in the soil has been removed and translocated under saturated, anoxic conditions. Soil layers were dark grayish brown (10 YR 3/2) with yellow-red redoximorphic concentrations occurring as soft masses. Soil texture was loamy sand. Hydrology was based on secondary Corps wetland hydrological indicators including D2 and D5.

Upland boundaries were characterized by a defined topographic break as well as a lack of hydric soil or hydrology indicators. Reed canarygrass continued to be the dominant vegetation beyond the wetland boundary.

#### 3. Wetland 3

Wetland 3 (0.006-acre) consisted of a very small, very shallow, isolated depression. The wetland was estimated to be sustained largely by groundwater discharge as well as impounded precipitation and runoff. It was assessed as a Cowardin class of seasonally saturated, palustrine scrub-shrub (PSSB). Vegetation was dominated by Douglas spiraea and reed canarygrass.

Schott & Associates
Ecologists and Wetland Specialists
PO Box 589, Aurora, OR. 97002 P: (503) 678-6007

S& 4# 2818

Page 5

The soil sample met the Corps hydric soil indicator F6 indicating that iron in the soil has been removed and translocated under saturated, anoxic conditions. Soil layers were dark grayish brown with yellow-red redoximorphic concentrations occurring as soft masses. Soil texture was sandy silt loam. Hydrology was based on secondary Corps wetland hydrological indicators including D2 and D5.

Upland boundaries were characterized by slight topographic break as well as a lack of hydric soil or hydrology indicators. Reed canarygrass continued to be the dominant vegetation beyond the wetland boundary.

#### 4. Wetland 4

Wetland 4 consisted of a linear 0.12-acre shallow swale along the northern boundary of Parcel 50714. The wetland was classified as a depressional HGM class with a Cowardin class of PEMB. The wetland was estimated to be sustained by groundwater discharge and runoff from areas upslope. Vegetation was dominated by reed canarygrass with scattered soft rush (*Juncus effusus*; FACW) and redosier dogwood.

Soil samples met the Corps hydric soil indicator F6 indicating that iron in the soil has been removed and translocated under saturated, anoxic conditions. Soil layers were dark grayish brown with yellow-red redoximorphic concentrations occurring as soft masses. Soil texture was silt loam. Hydrology was based on secondary Corps wetland hydrological indicators including D2 and D5.

Upland boundaries were characterized by slight topographic break as well as a lack of hydric soil or hydrology indicators. Reed canarygrass continued to be the dominant vegetation beyond the wetland boundary.

#### 5. Wetland 5

Wetland 5 (0.05-acre) consisted of a ditched, linear wetland extending west from a small depression near the center of Parcel 50714. The wetland was classified as a slope HGM class with a Cowardin class of PFOBd. The wetland was estimated to be sustained by groundwater discharge and runoff from areas upslope. The ditched wetland drained north into an upland ditch which extended offsite and along the eastern property boundary of Parcel 50729. Vegetation included an overstory of black cottonwood, with an understory of Sitka willow, English hawthorn, reed canarygrass, soft rush, and birds foot trefoil (*Lotus corniculatus*; FAC).

Soil samples met the Corps hydric soil indicator S5 indicating that iron in the soil has been removed and translocated under saturated, anoxic conditions. Soil layers were dark grayish brown and grayish brown (10 YR 4/2) with yellow-red redoximorphic concentrations occurring as soft masses. Soil texture was loamy sand. Hydrology was based on secondary Corps wetland hydrological indicators including D2 and D5.

Upland boundaries were characterized by slight topographic break as well as a lack of hydric soil or hydrology indicators and transition in vegetation community. Upland

vegetation included hazelnut, serviceberry (*Amelanchier alnifolia*; FAC), and Himalayan blackberry.

#### 6. Wetland 6

Wetland 6 (0.03 acre) consisted of an isolated, small, very shallow PFOB depressional wetland in the center of Parcel 50714. The wetland was estimated to be sustained by groundwater discharge and runoff from areas upslope. Vegetation was dominated by black cottonwood, redosier dogwood, reed canarygrass and soft rush.

The soil sample met the Corps hydric soil indicator S5 indicating that iron in the soil has been removed and translocated under saturated, anoxic conditions. Soil layers were light gray (10YR5/2) with yellow-red redoximorphic concentrations occurring as soft masses. Soil texture was sand. Hydrology was based on secondary Corps wetland hydrological indicators including D2 and D5.

Upland boundaries were characterized by slight topographic break as well as a lack of hydric soil or hydrology indicators. Cottonwood and reed canarygrass continued to be the dominant vegetation beyond the wetland boundary.

#### 7. Wetland 7

Wetland 7 was a 0.09-acre ditched slope wetland located at the eastern boundary of Parcel 50714. The wetland drained gradually to the east offsite into a roadside ditch along Old Pacific Highway. Vegetation was dominated by reed canarygrass and Cowardin class was seasonally saturated, partially ditched, palustrine emergent (PEMBd). The wetland was estimated to be sustained by groundwater discharge and runoff from areas upslope.

Soil sample met the Corps hydric soil indicator F6 indicating that iron in the soil has been removed and translocated under saturated, anoxic conditions. Soil layers were dark grayish brown (10 YR 3/2) with yellow-red redoximorphic concentrations occurring as soft masses. Soil texture was loam. Hydrology was based on secondary Corps wetland hydrological indicators including D2 and D5.

Upland boundaries to the west were characterized by slight topographic break as well as a transition to Himalayan blackberry and lack of hydric soil or hydrology indicators. Reed canarygrass continued beyond the wetland boundary. To the east the wetland boundary was defined by the toe of slope to the adjacent roadway.

#### C. Wetland Ratings

Wetlands 1-7 were rated as a Category IV slope or depression wetlands according to the western Washington wetland rating system (forms and figures included as Appendix D).

Wetland 1 was rated moderate for water quality function and hydrologic function due the very gentle slope, high cover of persistent ungrazed vegetation. The landscape potential to support the functions was rated low, however, as the relatively undisturbed surroundings do not contribute pollutants or stormwater discharge into the wetland. Site

value was rated low as there is no aquatic resource in the basin on the 303(d) list or with a TMDL. Habitat function was rated moderate due to low species richness, high habitat interspersion and habitat type, and one special habitat feature. Habitat landscape potential was rated moderate due to some undisturbed surroundings and accessible habitat. Site value was rated low due to lack of significant habitat.

Wetland 2 was rated moderate for water quality function as it is a depressional wetland with no outlet and seasonal ponding in greater than ½ the total area. Landscape potential to support the functions was rated low as the relatively undisturbed adjacent landscape does not contribute pollutants or stormwater discharge into the wetland. Site value was rated low as there is no aquatic resource in the basin on the 303(d) list or with a TMDL. Hydrologic function rated high due to lack of outlet, large proportion of seasonally ponded area, moderate storage depth, and low contributing basin ratio. Landscape potential to support the functions was rated low as the relatively undisturbed adjacent landscape does not contribute pollutants or stormwater discharge into the wetland. Habitat potential for Wetland 2 was rated low due to low species richness, habitat type and interspersion. Habitat landscape potential was rated moderate due to some undisturbed surroundings and accessible habitat. Site value was rated low due to lack of significant habitat.

Wetland 3 was rated moderate for water quality function as it is a depressional wetland with no outlet and seasonal ponding in greater than ½ the total area. Landscape potential to support the functions was rated low as the relatively undisturbed adjacent landscape does not contribute pollutants or stormwater discharge into the wetland. Site value was rated low as there is no aquatic resource in the basin on the 303(d) list or with a TMDL. Hydrologic function rated low due to limited storage and high contributing basin ratio. Habitat function was rated low due to low species richness, habitat type and interspersion. Habitat landscape potential was rated moderate due to some undisturbed surroundings and accessible habitat. Site value was rated low due to lack of significant habitat.

Wetland 4 was rated moderate for water quality function as it is a depression wetland with no outlet and high percentage of persistent ungrazed vegetative cover. Hydrologic function rated low due to limited storage and high contributing basin ratio. Landscape potential to support the functions was rated moderate due to presence of pollutants discharging from adjacent uplands. Site value was rated low for water quality as there is no aquatic resource in the basin on the 303(d) list or with a TMDL and moderate for hydrologic function. Habitat function was rated low due to low species richness, habitat type and interspersion. Habitat landscape potential was rated moderate due to some undisturbed surroundings and accessible habitat. Site value was rated low due to lack of significant habitat.

Wetland 5 was rated moderate for water quality function due to minimal slope and high percentage of uncut herbaceous vegetation. Landscape potential to support the functions was rated moderate due to presence of pollutants discharging from some adjacent uplands. Site value was rated low for water quality as there is no aquatic resource in the

basin on the 303(d) list or with a TMDL. Hydrologic function rated low due to low percentage of rigid uncut vegetation within the wetland. Landscape potential was low due to low excess runoff from adjacent lands. Value was moderate due to potential to alleviate surface flooding downstream in the watershed. Habitat function was rated low due to low species richness, habitat type and interspersion. Habitat landscape potential was rated moderate due to some undisturbed surroundings and accessible habitat. Site value was rated low due to lack of significant habitat.

Wetland 6 was rated moderate for water quality function as it is a depressional wetland with no outlet and high percentage of persistent ungrazed vegetative cover. Hydrologic function rated low due to limited storage and high contributing basin ratio. Landscape potential to support the functions was rated moderate due to presence of pollutants discharging from some adjacent uplands. Site value was rated low for water quality as there is no aquatic resource in the basin on the 303(d) list or with a TMDL and moderate for hydrologic function. Habitat function was rated low due to low species richness, habitat type and interspersion. Habitat landscape potential was rated moderate due to some undisturbed surroundings and accessible habitat. Site value was rated low due to lack of significant habitat.

Wetland 7 was rated moderate for water quality function due to minimal slope and high percentage of uncut herbaceous vegetation. Landscape potential to support the functions was rated moderate due to presence of pollutants discharging from some adjacent uplands. Site value was rated low as there is no aquatic resource in the basin on the 303(d) list or with a TMDL. Hydrologic function rated low due to low percentage of rigid uncut vegetation within the wetland. Landscape potential was moderate due to percentage of adjacent lands generating excess runoff. Value was moderate due to potential to alleviate surface flooding downstream in the watershed. Habitat function was rated low due to low number of habitat types and low interspersion. Habitat landscape potential was rated moderate due to some undisturbed surroundings and accessible habitat. Site value was rated low due to lack of significant habitat.

According to Woodland Municipal Code 15.08.400 and associated tables, wetland buffer widths are based on the wetland category rating and land use intensity of the proposed development activity. A Category IV wetland and anticipated "high" land use intensity activity are accorded a standard buffer width of 50 feet. Wetlands 2 and 3 meet criteria for exempted wetlands per 15.08.400(L) and were not accorded a buffer (Figure 6a-d). Wetland buffer area onsite totaled 2.99 acres.

#### IV. Summary and Conclusions

Based on vegetation, soils, and hydrology data, seven wetlands totaling 1.58 acres were present onsite. Wetlands 1, 5 and 7 were classified as slope wetlands and Wetlands 2, 3, 4 and 6 were classified as depressional wetlands. Wetland 2 was assessed as PFO Cowardin class and Wetlands 3 and 6 were assessed as PSS. The remaining wetlands were assessed as PEM Cowardin class.

Schott & Associates
Ecologists and Wetland Specialists
PO Box 589, Aurora, OR. 97002 P: (503) 678-6007

Page 9

All wetlands were rated as Category IV wetlands according to the western Washington wetland rating system and accorded a buffer width of 50 feet per Woodland Municipal code except for Wetlands 2 and 3, which met City criteria for exempted wetlands and were not accorded a buffer.

Wetlands are assumed to be state and federally jurisdictional unless an official jurisdictional determination specifies otherwise. Wetland buffers are assumed to be regulated by City of Woodland. Any proposed impacts to wetlands/waters or buffers will likely require permitting through the appropriate regulatory agencies.

Table 3. Wetland Summary

Wetland	Size (ac)	HGM	Cowardin	Rating	Buffer
					Width (ft)
1	1.24	Slope	PFOB	IV	50
2	0.04	Depression	PEMF	IV	exempt
3	0.006	Depression	PSSB	IV	exempt
4	0.12	Depression	PEMB	IV	50
5	0.05	Slope	PFOBd	IV	50
6	0.03	Depression	PFOB	IV	50
7	0.09	Slope	PEMBd	IV	50

#### A. Disclaimer

This report documents the investigation, best professional judgment, and conclusions of the investigators. It is correct and complete to the best of our knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Washington Department of Ecology and the U.S. Army Corps of Engineers.

#### V. Literature Citations

Environmental Laboratory, 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineers Waterways Experiment Station, Vicksburg, MS.

Environmental Laboratory, 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, Coast Region (Version 2.0), Wetlands Regulatory Assistance Program ERDC/EL TR-10-3 U.S. Army Engineer Research and Development Center. Vicksburg, MS.

Federal Register, 1980. 40 CFR Part 230: Section 404(b)(1), Guidelines for Specification of Disposal Sites of Dredged or Fill Material, Vol. 45, No. 249, pp. 85352-85353, U.S. Govt. Printing Office, Multnomah, D.C.

Federal Register, 1982. Title 33, Navigation and Navigable Waters; Chapter II, Regulatory Programs of the Corps of Engineers. Vol. 47, No. 138, p. 31810, U.S. Govt. Printing Office, Multnomah, D.C.

Page 10

- Federal Register, 1986. 33 CFR Parts 320 through 330, Regulatory Programs of the Corps of Engineers; Final Rule, Vol. 51, No. 219 pp. 41206-41259, U.S. Govt. Printing Office, Multnomah, D.C.
- Gridded Soil Survey Geographic (gSSURGO) Database for Washington. United States Department of Agriculture, Natural Resources Conservation Service. Available online at https://gdg.sc.egov.usda.gov/.
- Hruby, T. (2014). Washington State Wetland Rating System for Western Washington: 2014 Update. (Publication #14-06-029). Olympia, WA: Washington Department of Ecology
- Kollmorgen Corporation, 1975. Munsell Soil Color Charts. Macbeth Division of Kollmorgen Corporation, Baltimore, MD.
- Natural Resource Conservation Service Water Agricultural Applied Climate Information Center: Vancouver 1990-2020. U.S. Department of Agriculture. Available: http://agacis.rcc-acis.org
- U.S. Army Corps of Engineers 2018.National Wetland Plant List, version 3.4 http://wetland-plants.usace.army.mil/U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH
- U. S. Fish and Wildlife Service. 2022. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. http://www.fws.gov/wetlands/
- U.S. Geological Survey. 7.5 Minute Topographical Quadrangle. Deer Creek and Woodland. U.S Department of the Interior. Reston, VA. Available online at <a href="https://ngmdb.usgs.gov/topoview/">https://ngmdb.usgs.gov/topoview/</a>
- Washington Department of Fish and Wildlife. 2022. Priority Habitats and Species on the Web. Available online at: https://geodataservices.wdfw.wa.gov/hp/phs/.
- Washington Department of Natural Resources. DNR Hydrography Watercourses Forest Practices Regulation. 2021 https://fortress.wa.gov/dnr/adminsa/GisData/metadata/ROPA\_WCHYDRO.pdf
- Washington Department of Natural Resources. Forest Practices Wetlands. 1995. https://fortress.wa.gov/dnr/adminsa/gisdata/metadata/fpwet metadata.pdf
- Washington Department of Natural Resources. Washington LiDAR Portal. South Cascades, 2014. Available online at: https://lidarportal.dnr.wa.gov/

Ecologists and Wetland Specialists

PO Box 589, Aurora, OR. 97002 P: (503) 678-6007

Page 11 S&A# 2818

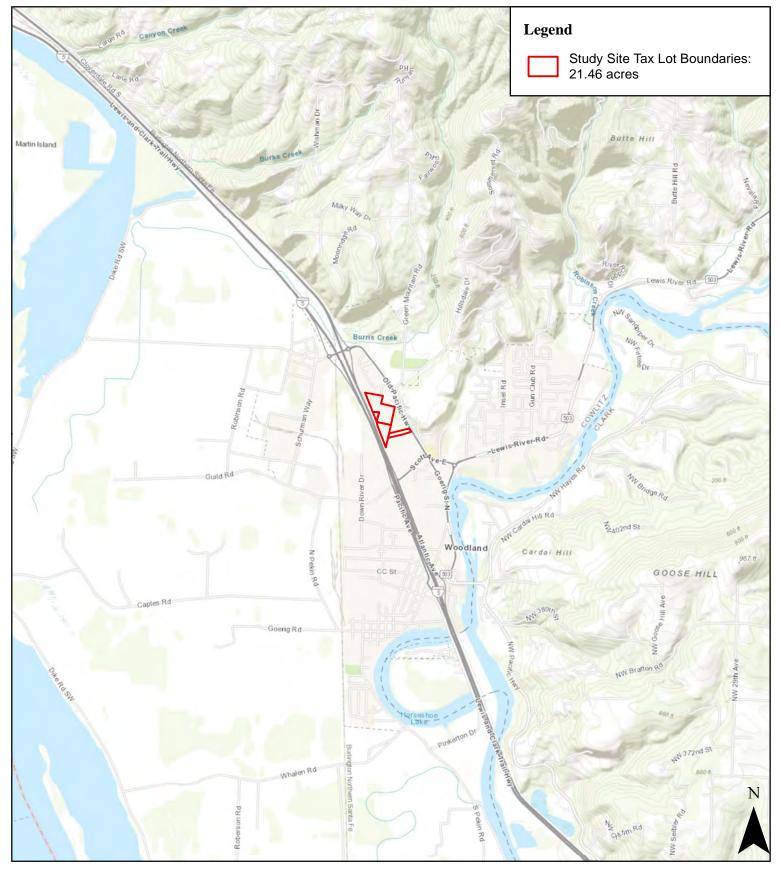
Schott & Associates



Page 12 S&A# 2818

### APPENDIX A. FIGURES

## FIGURE 1: LOCATION MAP



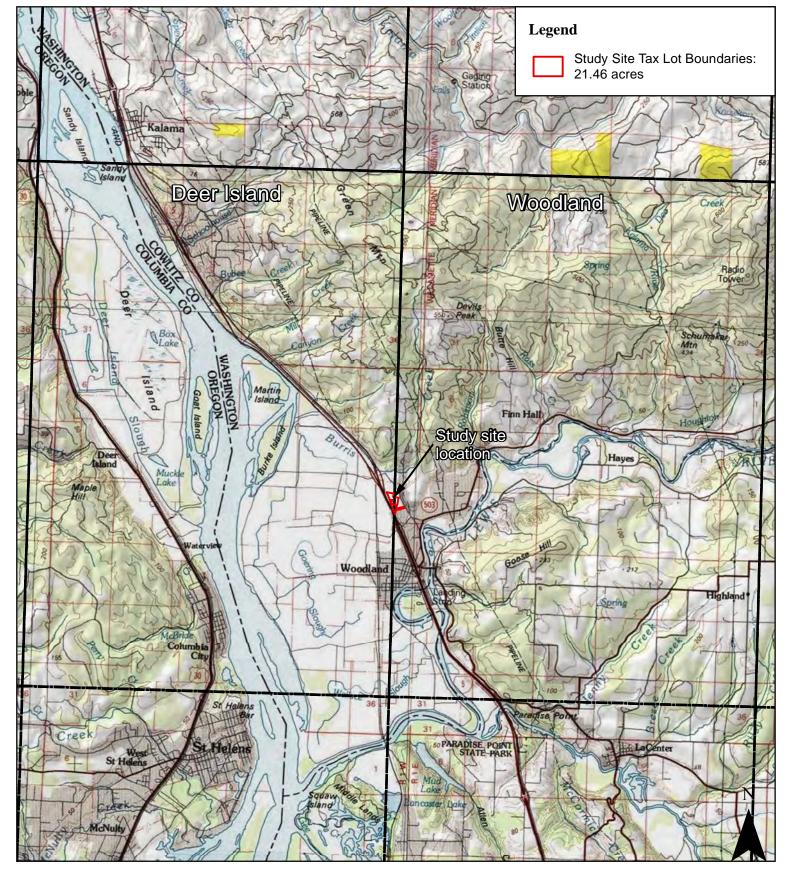
Data Source: ESRI, 2022; Cowlitz County GIS

Dept., 2022; USGS, 2020

Figure 1. Location Map



# FIGURE 2: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAP – DEER ISLAND AND WOODLAND



Date: 2/17/2022

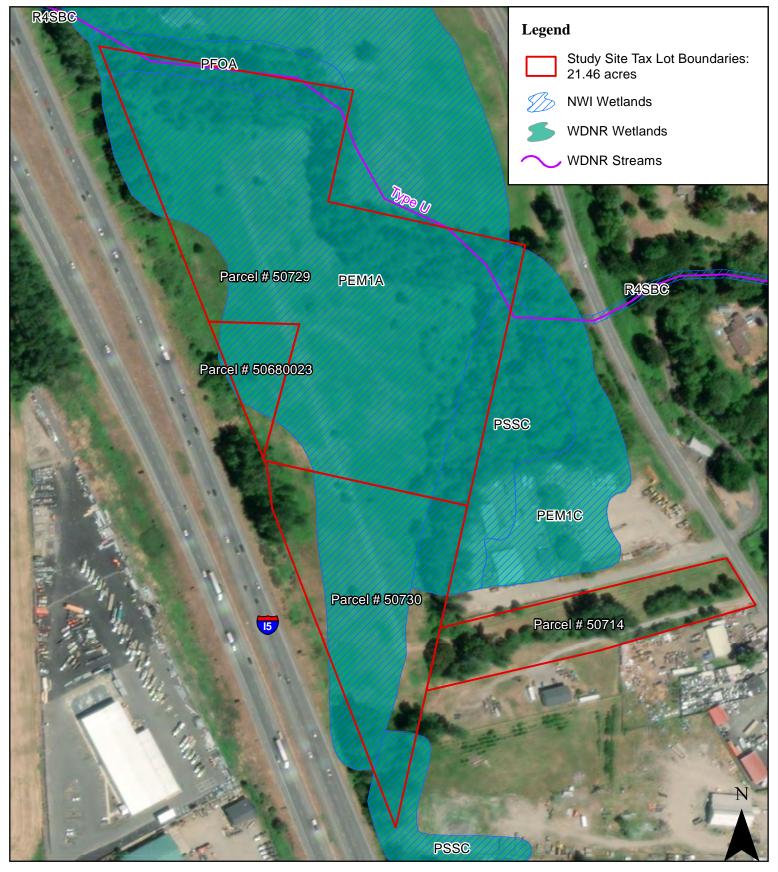
Data Source: ESRI, 2022; Cowlitz County GIS

Dept., 2022; USGS, 2020

Figure 2. USGS Topographic Quadrangles - Deer Island and Woodland



## FIGURE 3: WETLAND INVENTORY MAP

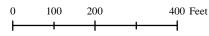


Date: 2/17/2022

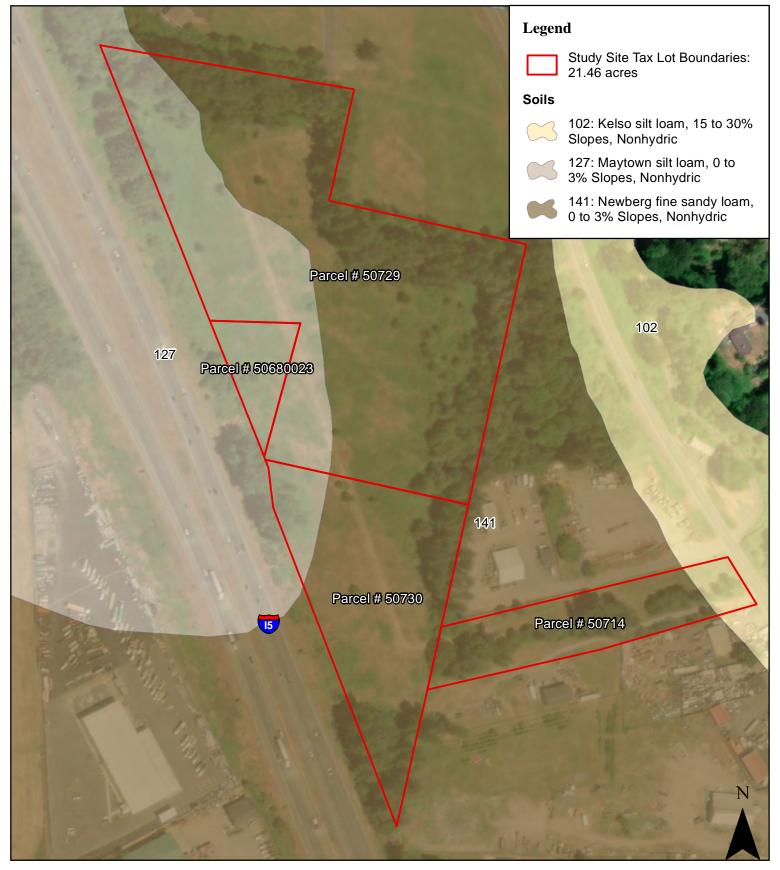
Data Source: ESRI, 2022; Cowlitz County GIS Dept., 2022; USFWS, NWI, 2022; WDNR, 2022

Figure 3. Wetland Inventory Map





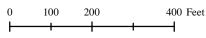
# FIGURE 4: USDA/NRCS SOIL SURVEY MAP



Date: 2/17/2022

Figure 4. USDA/NRCS Soil Survey Map of Cowlitz County

Data Source: ESRI, 2022; Cowlitz County GIS Dept., 2022; Soil Survey Staff, USDA, NRCS, 2/17/2022



# FIGURE 5A: RECENT AERIAL IMAGE

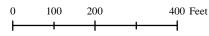


Date: 2/17/2022

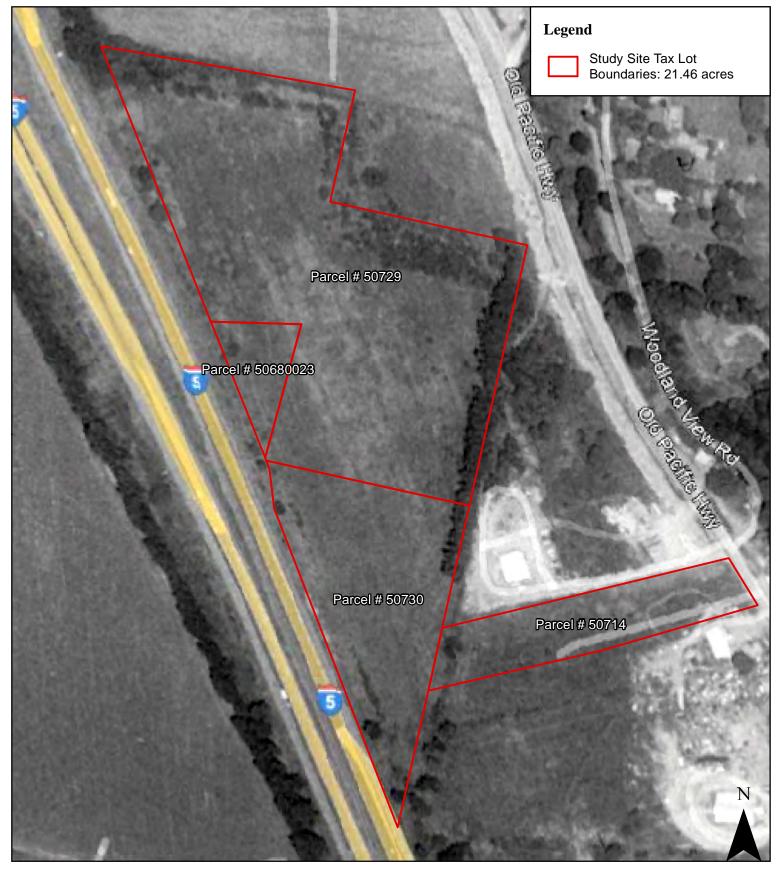
Data Source: ESRI, 2021; Cowlitz County GIS Dept., 2019

Figure 5a. Recent Aerial Imagery - July 18, 2021





## FIGURE 5B: HISTORICAL AERIAL IMAGE

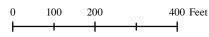


Date: 2/17/2022

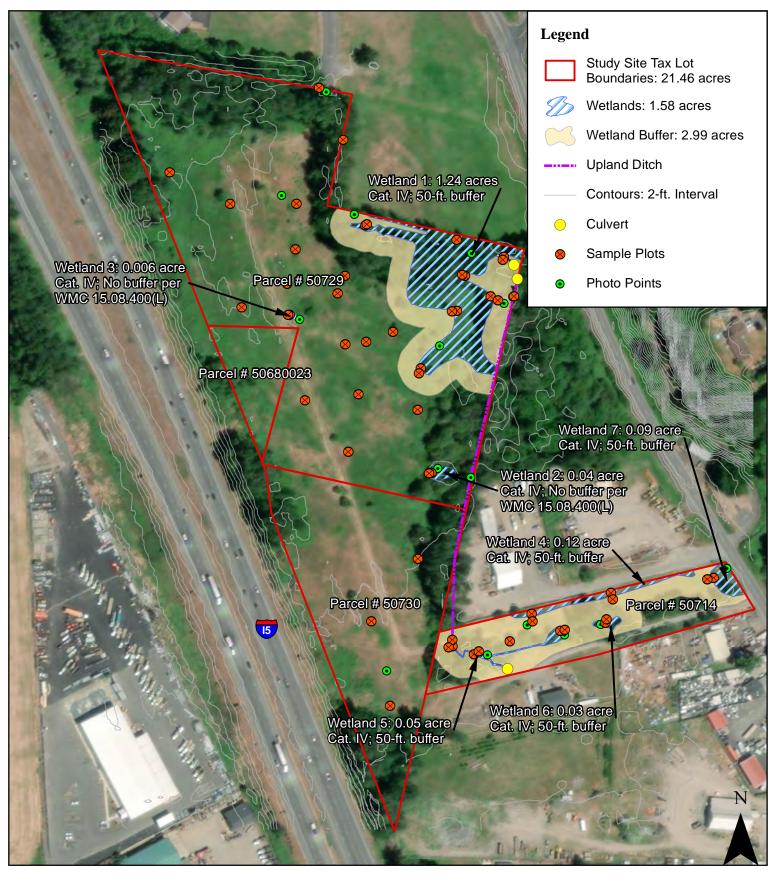
Data Source: Google Earth 2022; Cowlitz County GIS Dept., 2022

Figure 5b. Historical Aerial Imagery - July 14, 1990





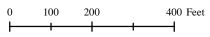
## FIGURE 6A-D: WETLAND DELINEATION MAPS

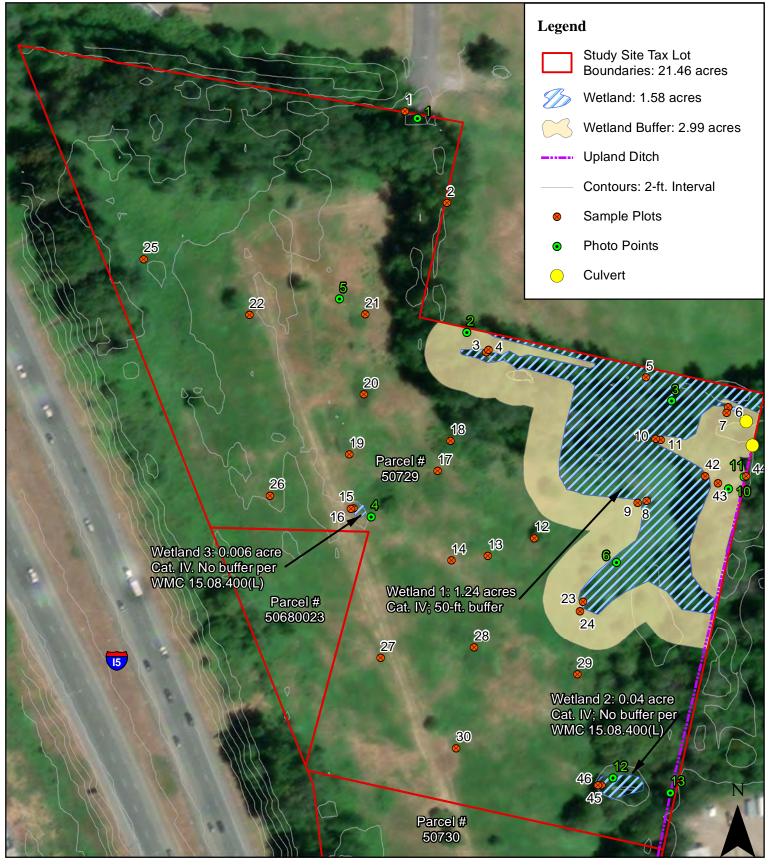


Data Source: ESRI, 2022; Cowlitz County GIS Dept., 2022; USGS, NED, 2013

Figure 6a. Wetland Delineation Map - Overview







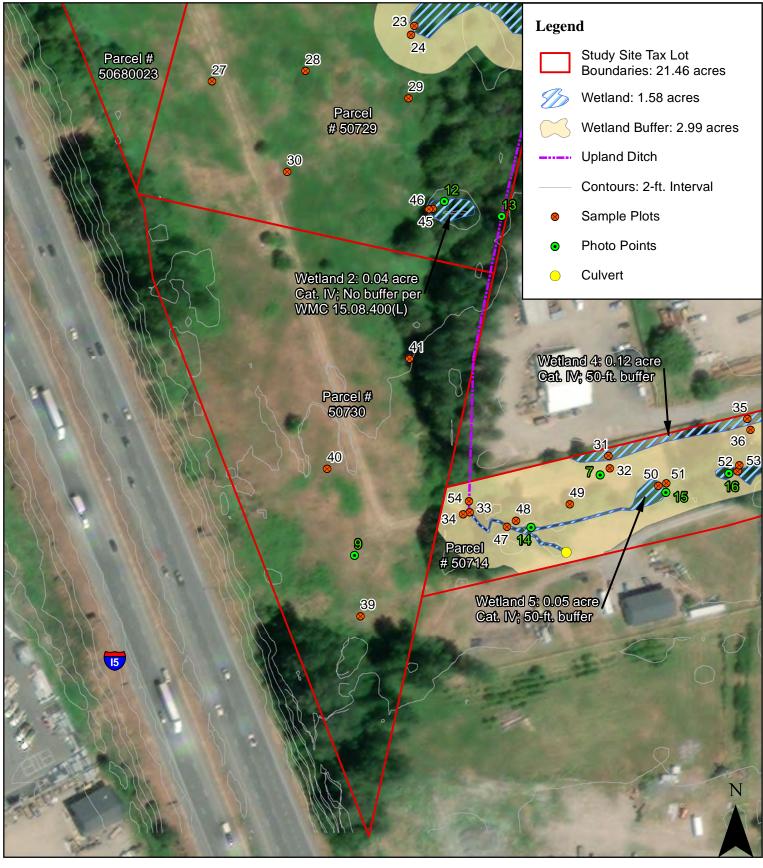
Data Source: ESRI, 2022; Cowlitz County GIS Dept., 2022; USGS, NED, 2013

Figure 6b. Wetland Delineation Map - North Detail



Woodland Project Site: S&A # 2818

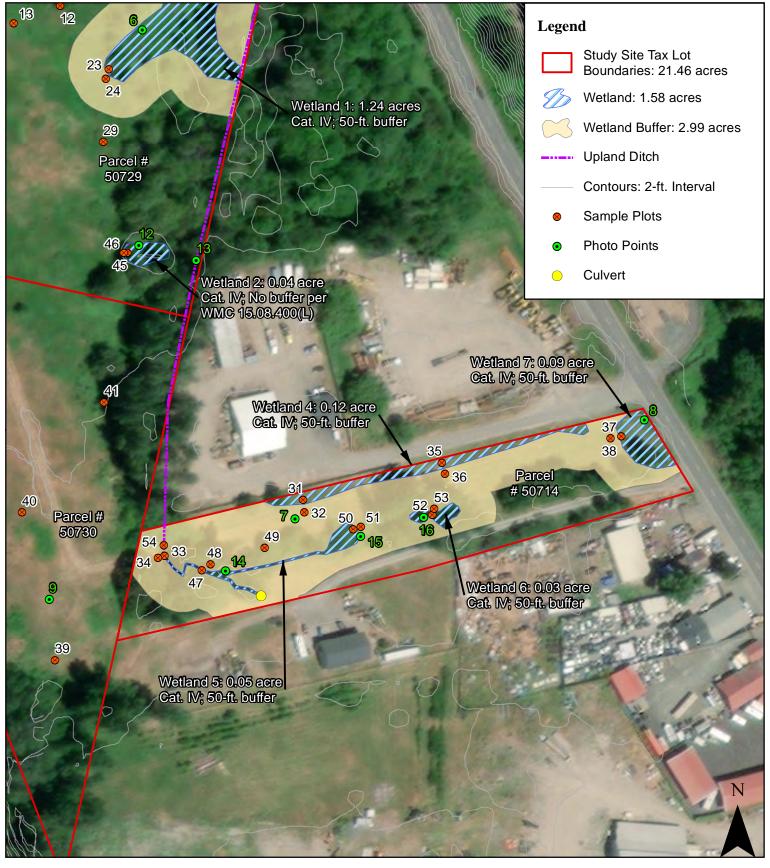
0 100 200 400 Feet



Data Source: ESRI, 2022; Cowlitz County GIS Dept., 2022; USGS, NED, 2013

Figure 6c. Wetland Delineation Map - South Detail





Data Source: ESRI, 2022; Cowlitz County GIS Dept., 2022; USGS, NED, 2013

Figure 6d. Wetland Delineation Map - East Detail



Woodland Project Site: S&A # 2818
100 200 400 Feet

## APPENDIX B: GROUND LEVEL PHOTOGRAPHS



Photo Point 1. From the northern portion of the site facing west.



Photo Point 1. From the northern portion of the site facing east.



Photo Point 2. From the northwestern portion of Wetland 1 facing south toward wetland boundary demarcated by orange flagging.



Photo Point 2. From the northwestern portion of Wetland 1 facing west.



Photo Point 3. From the northeastern portion of Wetland 1 facing east.



Photo Point 3. From the northeastern portion of Wetland 1 facing west.



Photo Point 4. From the Wetland 3 facing west toward wetland area.



Photo Point 4. From the Wetland 3 facing northwest toward adjacent upland.



Photo Point 4. From the Wetland 3 facing west north toward adjacent upland.



Photo Point 4. From the Wetland 3 facing west east toward adjacent upland



Photo Point 5. From the northern portion of the site facing north.



Photo Point 5. From the northern portion of the site facing east.



Photo Point 5. From the northern portion of the site facing south.



Photo Point 5. From the northern portion of the site facing west



Photo Point 6. From the southwestern portion of Wetland 1 facing northeast along the wetland boundary.



Photo Point 6. From the southwestern portion of Wetland 1 facing southwest along the wetland boundary.



Photo Point 6. From the southwestern portion of Wetland 1 facing south toward wetland area.



Photo Point 6. From the southwestern portion of Wetland 1 facing west toward adjacent upland.



Photo Point 7. From Wetland 4 facing north toward wetland area.



Photo Point 7. From Wetland 4 facing east along the wetland boundary.



Photo Point 7. From Wetland 4 facing northwest toward wetland area.



Photo Point 7. From Wetland 4 facing west toward adjacent upland.



Photo Point 8. From Wetland 7 facing south.



Photo Point 8. From Wetland 7 facing west.



Photo Point 9. From the southern portion of the site facing north.



Photo Point 9. From the southern portion of the site facing east.



Photo Point 9. From the southern portion of the site facing south.



Photo Point 9. From the southern portion of the site facing west.



Photo Point 10. From the northeastern site boundary facing south toward upland forest.



Photo Point 10. From the northeastern site boundary facing north toward upland forest.



Photo Point 10. From the northeastern site boundary facing west toward Wetland 1.



Photo Point 11. From the upland ditch along the eastern boundary facing south.



Photo Point 11. From the ditch along the northeastern site boundary facing north.



Photo Point 12. From Wetland 2 facing south toward wetland area.



Photo Point 12. From Wetland 2 facing east toward wetland area.



Photo Point 12. From Wetland 2 facing west toward adjacent upland.



Photo Point 13. From the upland ditch along the eastern boundary facing north.



Photo Point 13. From the upland ditch along the eastern boundary facing south.



Photo Point 14. From Wetland 5 facing east along wetland ditch.



Photo Point 14. From Wetland 5 facing west along wetland ditch..



Photo Point 15. From Wetland 5 facing west toward wetland area.



Photo Point 15. From Wetland 5 facing north toward adjacent upland



Photo Point 15. From Wetland 5 facing east toward adjacent upland.



Photo Point 16. From Wetland 6 facing east toward wetland area.



Photo Point 16. From Wetland 6 facing west toward wetland area.



Photo Point 16. From Wetland 6 facing north toward adjacent upland.

## APPENIDIX C: WETLAND DELINEATION DATA FORMS

	City/County:	vvoodiand	//Cowlitz Sampling Date: Oct.8, 2020
			State: WA Sampling Point:
	Section	n, Township	o, Range: S13, T5N, R1W
	_ Local re	elief (concav	re, convex, none): none Slope (%): 0-3%
<u>4)</u> Lat:		45.92	3439990 Long: -122.750620614 Datum:
			NWI Classification: PFOA
		Yes	X No (If no, explain in Remarks)
-	naturally pro	oblematic?	(If needed, explain any answers in Remarks.)
showing	sampling	point loc	ations, transects, important features, etc.
0			
о х		•	YAS NO Y
о х	Within	a Welland:	
			<u> </u>
			Dominance Test worksheet:
% Cover	Species?	Status?	Number of Dominant Species That Are OBL, FACW, or FAC:
			(A)
	<del></del>		Total Number of Dominant
			Species Across All Strata: 2 (B)
			Percent of Dominant Species
r: <u> </u>	•		That Are OBL, FACW, or FAC:(A/B
			Prevalence Index Worksheet:
			Total % Cover of: Multiply by:
		· <del></del>	OBL species x1 = <b>0</b>
			FACW species x2 = 0
			FAC species x3 = <b>0</b>
-			FACU species x4 = <b>0</b>
r: 0			UPL species x5 = <b>0</b>
	•		Column Totals: <b>0</b> (A) <b>0</b> (B)
30	Υ	JFAC □	Prevalence Index = B/A =
10	Υ	JFACW □	
5			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			X 2 - Dominance Test is >50%
	: (		3 - Prevalence Index is ≤3.0 <sup>1</sup>
			4 - Morphological Adaptation1 (Provide supporting
			data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants <sup>1</sup>
	: ( <del></del>		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
r: <u>45</u>			
			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
			· · · · · · · · · · · · · · · · · · ·
	. —		Hydrophytic
r: 0			Vegetation
	iotic Crust	0	Vegetation Present? Yes x No
	this time of  showing  o o x  o x  Absolute % Cover  0  10  5	Absolute Dominant % Cover Species?	Absolute Dominant Within a Wetland?  Absolute Species? Status?  Absolute Species? Status?  Absolute To The Within a Wetland?  Absolute Species Status?  The Within a Wetland?

JIL Brofile Dec	earintian: (Dasa	ribo to the do	oth pooded to doe	umant ti	ho indicate	or or conf	firm the above	nce of indicators.)	
Depth	Matri	-		dox Feat		or or com	iiiiii tiie abse	nice of indicators.)	
-					Type <sup>1</sup>	Loc <sup>2</sup>	Tovturo	Domarko	
nches) 0-3	Color (moist	100	Color (moist)	<u>%</u>	Туре	LOC	<u>Texture</u> LS	Remarks	
3-5	10 TR 3/2	95	10YR4/4				S	<u> </u>	
5-13	10YR3/2	95	10YR3/3	5		M	S	<del>_</del>	
3 13	101113/2		101110/0				<del>-</del>	<del>_</del>	
								_	
	-								
[\max_C=C	Concentration D	Donlation DM	=Daduard Matrix (	25-004	arad ar Car	oted Cand	Craina 21 or	cation: PL=Pore Lining, M=Matrix	,
						aleu Sanu			
		plicable to all	LRRs, unless oth				Indicators	for Problematic Hydric Soils <sup>3</sup> :	
	ol (A1) Epipedon (A2)			Redox (S d Matrix (			_	2 cm Muck (A10) Red Parent Material (TF2)	
	Histic (A3)				(30) lineral (F1)	(except II	— MI PA 1\	Other (Explain in Remarks)	
	gen Sulfide (A4)			-	//atrix (F2)	-	- INILIXA I)	Other (Explain in Nemarks)	
	ted Below Dark S	surface (A11)		d Matrix					
	Dark Surface (A1				face (F6)		<sup>3</sup> Indica	ators of hydrophytic vegetation an	d
	Muck Mineral (S				Surface (F7	·)		land hydrology must be present,	
	gleyed Matrix (S	,			ons (F8)	,		nless disturbed or problematic.	
	Layer (if presen				. ,			<u> </u>	
ype:	,	,							
epth (inch	es):					Ну	dric Soil Pres	sent? Yes	No
DROLOG` Vetland H	<u>Y</u> ydrology Indicat	ors:							
-	icators (any one i		ricient)					Secondary Indicators (2 or mo	ore require
	ce Water (A1)			Stained L	eaves (B9	) (except		Water-Stained Leaves (B9)	
	Vater Table (A2)				A and 4B)		_	4A and 4B)	
	ation (A3)			ıst (B11)			_	Drainage Patterns (B10)	
Water	Marks (B1)		Aquatic	Inverteb	rates (B13	)	_	Dry-Season Water Table (C	2)
Sedim	ent Deposits (B2	)	Hydroge	en Sulfid	e Odor (C1	l)	_	Saturation Visible on Aerial I	magery (C
Drift D	eposits (B3)		Oxidize	d Rhizos	pheres alo	ng Living	Roots (C3)	Geomorphic Position (D2)	
Algal I	Mat or Crust (B4)		Present	ce of Red	duced Iron	(C4)	_	Shallow Aquitard (D3)	
Iron D	eposits (B5)		Recent	Iron Red	luction in P	lowed Soi	ils (C6)	FAC-Neutral Test (D5)	
Surfac	ce Soil Cracks (B	6)	Stunted	or Stres	sed Plants	(D1) ( <b>LR</b>	R A)	Raised Ant Mounds (D6) (LF	RA)
Inunda	ation Visible on A	erial Imagery (I	B7) Other (E	Explain ir	n Remarks	)	_	Frost-Heave Hummocks (D7	<b>'</b> )
Spars	ely Vegetated Co	ncave Surface	(B8)						
ield Obse			N V 5 4						
Surface Wa Vater table	ater Present?	Yes Yes		n (inches n (inches		<u> </u>			
Saturation F		Yes		i (inches			Wetland Hy	drology Present? Yes	No
	apillary fringe)								
scribe Rec	orded Data (strea	am gauge, mor	itoring well, aerial p	hotos, p	revious ins	spections)	, if available:		
marks:									
mai No.									

Project/Site:	I-5 Woodland		City/County:	Woodland	/Cowlitz	Sampling Date: Oct.8, 2020
Applicant/Owner:	Logan Partners LLC				State: WA	Sampling Point: 2
Investigator(s):	KB		Section	n, Township	, Range: S13, T5N, R1W	
Landform (hillslope	e, terrace, etc.): terrace		_ Local re	elief (concav	e, convex, none): concave	Slope (%): <u>0-3%</u>
Subregion (LRR):	Northwest Forests and Coast (LRR A	<u>)</u> Lat:		45.92	3096599 Long: -1	22.750377409 Datum:
Soil Map Unit Nam	ne: Newberg fine sandy loam				NWI Classification:	PEM1A
Are climatic / hydro	ologic conditions on the site typical for t			Yes	X No	(If no, explain in Remarks)
Are Vegetation	, Soil, or Hydrology				Are "Normal Circumstanc	es" Present? Yes X No
Are Vegetation	, Soil, or Hydrology	-	naturally pro	oblematic?	(If needed, explain any ar	swers in Remarks.)
SUMMARY OF	FINDINGS - Attach site map	showing	sampling	point loca	ations, transects, impo	rtant features, etc.
Hydrophytic Veget	ation Present? Yes x No	0				
Hydric Soil Presen	t? YesNo	<u></u> х		ampled Are a Wetland?	244	No x
Wetland Hydrology		о х	_ within s	a Welland:		<del>-</del>
VEGETATION						
		Absolute	Dominant	Indicator	Dominance Test workshe	et·
T Ot (1.1)		% Cover	Species?	Status?	Number of Dominant Speci	
	se scientific names.)	60	· Y		That Are OBL, FACW, or F.	ΔC·
<ol> <li>Populus balsa</li> <li>2.</li> </ol>	millera		· <u> </u>		Total Number of Dominant	(A)
3.		-			Species Across All Strata:	<b>3</b> (B)
4.				· ———	Develope of Deminent Chari	, , ,
	Total Cover:	60			Percent of Dominant Specie That Are OBL, FACW, or F.	
Shrub Stratum  1 2 3 4 5 Herb Stratum  1	Total Cover	0 5		FAC:	Prevalence Index Worksh Total % Cover of:  OBL species FACW species FAC species FACU species UPL species Column Totals:  Prevalence Index = B/A =	Multiply by: _x1 =0
2. Phalaris arund	linacea	20	Υ	JFACW □		
6 7		15	Y	□FAC□	X 2 - Dominance Te 3 - Prevalence Ind 4 - Morphological	Hydrophytic Vegetation st is >50%
					5 - Wetland Non-V	• •
			• •			ophytic Vegetation <sup>1</sup> (Explain)
		-				(, ·
	Total Cover:	40				
Woody Vine S	<u>tratum</u>		-		<sup>1</sup> Indicators of hydric soil and	d wetland hydrology must
1. Rubus ursinus		20	Υ	FACU□	be present, unless disturbed	d or problematic.
2.					Hydrophytic	
	Total Cover:		<b>=</b> -		Vegetation	
% Ba	re Ground in Herb Stratum <u>50</u> %	Cover of B	iotic Crust	0	Present?	Yes x No
Remarks:						
l						

SOIL							Samp	ling Point:			2
Profile Des	scription: (Descri	ribe to the de	pth needed to doo	ument the ind	icator or	confirm the a	bsence of indic	ators.)			
Depth	Matri	X	Re	dox Features							
(inches)	Color (moist	) %	Color (moist)	%Тур	pe <sup>1</sup> Lo	oc <sup>2</sup> Tex	ture	R	emarks		
0-16	10 YR 3/3	100	, ,			LS					
1 <sub>Tyme</sub> , C=	Concentration D-	Depletion DM	-Daduard Matrix	CS=Covered or	Cooted	Sand Crains	2Location, DL F	oro Lining N	1 Motrix		
Type: C=0	Concentration, D=	Depletion, Riv	l=Reduced Matrix,	CS=Covered or	Coaled	Sand Grains.	Location: PL=F	ore Lining, iv	/i=iviatrix.		
Hydric Soi	il Indicators: (Ap	plicable to al	I LRRs, unless ot	nerwise noted.	)	Indicat	ors for Problem	atic Hydric S	Soils <sup>3</sup> :		
Histos	sol (A1)		Sandy	Redox (S5)			2 cm Mi	uck (A10)			
Histic	Epipedon (A2)		Strippe	d Matrix (S6)			Red Pai	rent Material	(TF2)		
	Histic (A3)			Mucky Mineral		ept MLRA 1)	Other (E	Explain in Re	marks)		
	ogen Sulfide (A4)			Gleyed Matrix	(F2)						
	eted Below Dark S	. ,		ed Matrix (F3)		2					
	Dark Surface (A1			Dark Surface (F		°Ir	ndicators of hydro				
	y Muck Mineral (S			ed Dark Surface			wetland hydrolog				
	y gleyed Matrix (S		Redox	Depressions (F	8)	I	unless disturbe	a or problem	natic.		
	e Layer (if presen	π):									
Type: Depth (inch	200):					Hydric Soil	Procent?	Yes		No	v
Remarks:	<u> </u>		<del></del>			Tiyunc 30ii	riesent:	169_		No_	
HYDROLOG	a <b>y</b>										
	lydrology Indicat	ors:									
	dicators (any one i		ficient)				Seconda	ry Indicators	(2 or more	reauir	ed)
	ce Water (A1)			Stained Leaves	(B9) ( <b>ex</b>	cept		Stained Leave	,		
	Water Table (A2)			A 1, 2, 4A and	, , ,	•		nd 4B)	. , ,		
Satur	ation (A3)		Salt Cr	ust (B11)			Drainag	e Patterns (E	310)		
Wate	r Marks (B1)		Aquatio	: Invertebrates (	B13)		Dry-Sea	son Water T	able (C2)		
Sedin	nent Deposits (B2)	)	Hydrog	en Sulfide Odor	r (C1)		Saturati	on Visible on	Aerial Ima	agery ((	C9)
Drift [	Deposits (B3)		Oxidize	d Rhizospheres	s along Li	iving Roots (C	3) Geomoi	phic Position	n (D2)		
	Mat or Crust (B4)			ce of Reduced	` '			Aquitard (D3			
	Deposits (B5)			Iron Reduction		,		eutral Test (D	'		
	ce Soil Cracks (Be	•		d or Stressed Pl	` '	(LRR A)		Ant Mounds		A)	
	lation Visible on A			Explain in Rema	arks)		Frost-H	eave Hummo	ocks (D7)		
	sely Vegetated Co	ncave Surface	(B8)								
Field Obse	ervations: ater Present?	Yes	No X Dept	h (inches):							
Water table		Yes		h (inches):		•					
Saturation		Yes	No x Dept	h (inches):		Wetland	Hydrology Pre	sent? Y	'es	No _	Х
	apillary fringe)		sitoring well periol	nhotoo proviou	a inanaat	iona) if availab	alar				
Describe Kec	Joinen Data (Střež	ını yauye, mor	nitoring well, aerial	priotos, previou	s inspect	ions), ii avallat	JIC.				
Remarks:											

Project/Site:	I-5 Woodland		City/County: Woodland/Cowlitz				Sampling Date: Oct.8, 2020			, 2020
Applicant/Owner:	Logan Partners LLC					State: W	A	Sampling F	oint:	3
Investigator(s):	KB		Section	n, Township	, Range:	S13, T5N,	, R1W			
Landform (hillslope	e, terrace, etc.): depression									0-3%
Subregion (LRR):	Northwest Forests and Coast (LRF	RA) Lat:						2.750139681	Datum	:
Soil Map Unit Nam						NWI Classi	fication: <u>F</u>	PEM1A		
Are climatic / hydro	ologic conditions on the site typical f			_		No	(	If no, explain	in Remarks	s)
Are Vegetation	, Soil, or Hydrology					Iormal Circu	umstances	" Present?	Yes X	_No
Are Vegetation	, Soil, or Hydrolog	y	naturally pr	oblematic?	(If nee	eded, explai	n any ans	wers in Rema	arks.)	
SUMMARY OF	FINDINGS - Attach site ma	p showing	sampling	point loca	ations, 1	transects	, import	ant feature	es, etc.	
Hydrophytic Veget	tation Present? Yes x	No	la tha O	II A	_					
Hydric Soil Presen	nt? Yes x	No		ampled Are a Wetland?		Yes	x	No		
Wetland Hydrolog	y Present? Yes x	No		a rromana.						
	egetated (<5% cover) depression un		-,g							
VEGETATION										
		Absolute	Dominant	Indicator	Domina	ince Test w	vorksheet	:		
Tree Stratum (U	se scientific names.)	% Cover	Species?	Status?		of Domina				
1.	·				That Are	OBL, FAC	CW, or FAC	D:	0	(A)
2.					Total No	umber of Do	ominant	·		_
3.					Species	Across All	Strata:		0	_(B)
4.					Percent	of Dominar	nt Species			
	Total Cov	/er: 0	-		That Are	e OBL, FAC	CW, or FAC	D:		_(A/B)
Shrub Stratum 1.						nce Index tal % Cover			iply by:	_
2					OBL spe		x		0	_
3								2 =	0	_
					FAC spe			3 =	0	_
5		. <u> </u>						4 =	0	_
	Total Cov	/er: 0	-		UPL spe			5 =	0	
Herb Stratum								A)	0	_(B)
1		· -	·		Preva	ience index	( = B/A = _			_
2		-	. ———	-	Hudron	hytic Vege	totion Indi	iootoro		
3 4.				· ——	пушор			/drophytic Ve	actation	
5.		-	· <del></del>			2 - Domina			getation	
5. 6.		<del>-</del>				3 - Prevale				
7.		<del>-</del>						daptation1 (P	rovida sunn	ortina
8.		-					-	on a separate		orting
9.		<del>-</del>						scular Plants		
10					x			hytic Vegetat		n)
11.		· · ·	· <del></del>			1 TODIOITIA	iio i iyai opi	Tytio Vogotat	ion (Explai	,
···	Total Cov	/er: 0	· <del></del>							
Woody Vine S			-		1Indicate	ors of hydric	soil and v	vetland hydro	ology must	
Rubus ursinus		2%						or problemati		
2.					- دامه دال	hydic				
	Total Cov	/er: 2			Hydrop Vegetat	•				
% Ba	ire Ground in Herb Stratum 10	-	iotic Crust	0	Present		Υ	'es x	No	
	er. Area meets hydrological and soil	•						-	· -	
	32 212, 3. 2. 2. 3. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.				, -   50.00					

OIL								Sampli	ng Point:	
Profile Des	cription: (Describ	e to the dep	oth needed to doc	ument t	he indicato	r or con	firm the abse	ence of indica	tors.)	
Depth	Matrix		Red	lox Feat	tures		ī			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-3	10 YR 3/2	100					SiSL			
3-16	10YR3/2	93	10YR3/6	5	C	M	SiSL			
			10YR3/3	2	С	M				
	-									
					_					
		<del>_</del> ·								
Type: C=0	Concentration, D=De	epletion, RM	=Reduced Matrix, 0	CS=Cove	ered or Coa	ited Sand	d Grains. <sup>2</sup> Lo	ocation: PL=Po	ore Lining, M=Matrix	<b>(</b> .
lydric Soi	I Indicators: (Appl	icable to all	LRRs, unless oth	erwise	noted.)		Indicators	for Problema	tic Hydric Soils <sup>3</sup> :	
	sol (A1)		Sandy F				-	2 cm Mu		
Histic	Epipedon (A2)		Stripped		. ,				ent Material (TF2)	
	Histic (A3)			-	lineral (F1)	(except	MLRA 1)	Other (Ex	plain in Remarks)	
	gen Sulfide (A4)				Matrix (F2)					
	ted Below Dark Sur	face (A11)	Deplete				2			
	Dark Surface (A12)				face (F6)				hytic vegetation ar	ıd
	Muck Mineral (S1)				Surface (F7	)			must be present,	
	gleyed Matrix (S4)		Redox D	)epressi	ions (F8)		u	nless disturbed	d or problematic.	
Restrictive	Layer (if present):									
Гуре:										
										No
Depth (inch	es):					Ну	dric Soil Pre	sent?	Yes <u>x</u>	<u> </u>
Depth (inch						Ну	dric Soil Pre	sent?	Yes X	
Depth (inchemarks:		s:				Ну	dric Soil Pre	sent?	Yes X	
Depth (inch marks: 'DROLOG Wetland H	Y		icient)			Ну	dric Soil Pre		y Indicators (2 or mo	
Depth (inch marks: DROLOG Vetland H	Y ydrology Indicator			Stained L	_eaves (B9)			Secondary		ore required
Depth (inch marks: DROLOG Vetland Hy Primary Ind Surface	Y ydrology Indicator icators (any one ind		Water-S		_eaves (B9) A and 4B)			Secondary	/ Indicators (2 or mained Leaves (B9)	ore required
Depth (inch marks: DROLOG Vetland Hy Primary Ind Surfac High \	ydrology Indicator icators (any one ind ce Water (A1)		Water-S	<b>A</b> 1, 2, 4	A and 4B)			Secondary Water-St	/ Indicators (2 or mained Leaves (B9)	ore required
DROLOG  Wetland H  Surfac  High \  Satura  Water	ydrology Indicator icators (any one ind be Water (A1) Vater Table (A2) ation (A3) Marks (B1)		Water-S MLRA Salt Cru Aquatic	<b>A 1, 2, 4</b> st (B11) Inverteb	A and 4B) orates (B13)	(except		Secondary Water-St 4A an Drainage Dry-Seas	/ Indicators (2 or mained Leaves (B9) d 4B) Patterns (B10) son Water Table (C	ore required (MLRA 1, 2
Depth (inch marks: DROLOG Wetland H Primary Ind Surfac High \ Satura Water Sedim	ydrology Indicator icators (any one indicators (A1) Vater Table (A2) ation (A3) Marks (B1) nent Deposits (B2)		Water-S MLRA Salt Cru Aquatic Hydroge	<b>A 1, 2, 4</b> st (B11) Inverteb en Sulfid	A and 4B)  orates (B13) le Odor (C1	(except		Secondary Water-St 4A an Drainage Dry-Seas Saturatio	v Indicators (2 or mained Leaves (B9) d 4B) Patterns (B10) con Water Table (C	ore required (MLRA 1, 2
Depth (inch marks:  DROLOG  Wetland H Primary Ind Surfac High \ Satura Water Sedim Drift D	ydrology Indicator icators (any one indice Water (A1) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized	A 1, 2, 4 st (B11) Inverteb en Sulfid d Rhizos	A and 4B)  prates (B13) le Odor (C1) spheres alo	(except		Secondary Water-St  4A an Drainage Dry-Seas Saturatio Geomorp	v Indicators (2 or mained Leaves (B9) d 4B) Patterns (B10) son Water Table (Con Visible on Aerial Inhic Position (D2)	ore required (MLRA 1, 2
DROLOG  DROLOG  Vetland High V Satura Water Sedim Drift D Algal	ydrology Indicator icators (any one indice Water (A1) Water Table (A2) ation (A3) Marks (B1) tent Deposits (B2) deposits (B3) Mat or Crust (B4)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presence	A 1, 2, 4 st (B11) Inverteben Sulfid d Rhizos se of Rec	A and 4B)  prates (B13) le Odor (C1) spheres alo duced Iron	(except ) ng Living (C4)	Roots (C3)	Secondary Water-St  4A an Drainage Dry-Seas Saturatio Geomorp	/ Indicators (2 or molained Leaves (B9) d 4B) Patterns (B10) con Water Table (Cn Visible on Aerial Whic Position (D2) Aquitard (D3)	ore required (MLRA 1, 2
Depth (inchemarks:  DROLOG Wetland H Primary Ind Surfac High V Satura Water Sedim Drift D Algal I	ydrology Indicator icators (any one indicators (any one indicators) ice Water (A1) Water Table (A2) ation (A3) Marks (B1) icent Deposits (B2) deposits (B3) Mat or Crust (B4) eposits (B5)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent	A 1, 2, 4. st (B11) Inverteben Sulfid d Rhizos e of Rec	A and 4B)  prates (B13) le Odor (C1) spheres alo duced Iron duction in P	(except ) ng Living (C4) lowed So	Roots (C3)	Secondary Water-St  4A an Drainage Dry-Seas Saturatio Geomorp Shallow /	v Indicators (2 or molained Leaves (B9) d 4B) Patterns (B10) son Water Table (C n Visible on Aerial I ohic Position (D2) Aquitard (D3)	ore required ( <b>MLRA 1, 2</b> 2) magery (C9
Primary Ind Satura Water Sedim Drift D Algal Iron D Surfac	ydrology Indicator icators (any one indice Water (A1) Vater Table (A2) ation (A3) Marks (B1) ient Deposits (B2) deposits (B3) Mat or Crust (B4) eposits (B5) de Soil Cracks (B6)	icator is suff	Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presenc Recent Stunted	A 1, 2, 4. st (B11) Inverteben Sulfid d Rhizose of Recorder Stres	A and 4B) prates (B13) de Odor (C1) spheres alo duced Iron duction in P ssed Plants	(except ) ng Living (C4) lowed So (D1) (LR	Roots (C3)	Secondary Water-St 4A an Drainage Dry-Seas Saturatio Geomorp Shallow A	v Indicators (2 or mained Leaves (B9) d 4B) Patterns (B10) son Water Table (C n Visible on Aerial I shic Position (D2) Aquitard (D3) stral Test (D5) nt Mounds (D6) (Li	ore required (MLRA 1, 2 2) magery (CS
Depth (inch marks:  DROLOG  Wetland H Primary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac	ydrology Indicator icators (any one indice Water (A1) Water Table (A2) ation (A3) Marks (B1) bent Deposits (B2) deposits (B3) Mat or Crust (B4) eposits (B5) be Soil Cracks (B6) ation Visible on Aeri	icator is suff	Water-S  MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted Other (E	A 1, 2, 4. st (B11) Inverteben Sulfid d Rhizose of Recorder Stres	A and 4B)  prates (B13) le Odor (C1) spheres alo duced Iron duction in P	(except ) ng Living (C4) lowed So (D1) (LR	Roots (C3)	Secondary Water-St 4A an Drainage Dry-Seas Saturatio Geomorp Shallow A	v Indicators (2 or molained Leaves (B9) d 4B) Patterns (B10) son Water Table (C n Visible on Aerial I ohic Position (D2) Aquitard (D3)	ore required (MLRA 1, 2 2) magery (CS
Depth (inchemarks:  Depth (inchemarks:  Depth (inchemarks:  Depth (inchemarks:  Depth (inchemarks:  Depth (inchemarks:  Surfact  High (inchemark)  Surfact  Algal (inchemark)  Iron D  Surfact  Iron D  Surfact  Iron D  Surfact  Iron D  Surfact  X  Spars	ydrology Indicator icators (any one indicators (any one indicators) water (A1) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2) heposits (B3) Mat or Crust (B4) heposits (B5) hee Soil Cracks (B6) ation Visible on Aeriely Vegetated Conce	icator is suff	Water-S  MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted Other (E	A 1, 2, 4. st (B11) Inverteben Sulfid d Rhizose of Recorder Stres	A and 4B) prates (B13) de Odor (C1) spheres alo duced Iron duction in P ssed Plants	(except ) ng Living (C4) lowed So (D1) (LR	Roots (C3)	Secondary Water-St 4A an Drainage Dry-Seas Saturatio Geomorp Shallow A	v Indicators (2 or mained Leaves (B9) d 4B) Patterns (B10) son Water Table (C n Visible on Aerial I shic Position (D2) Aquitard (D3) stral Test (D5) nt Mounds (D6) (Li	ore required (MLRA 1, 2 2) magery (CS
Primary Ind Satura Water Sedim Drift D Algal I Iron D Surfac Iron D Surfac Inund: x Spars	ydrology Indicator icators (any one indice Water (A1) Water Table (A2) ation (A3) Marks (B1) Alent Deposits (B2) Aleposits (B3) Mat or Crust (B4) Aleposits (B5) Aleposits (B5) Aleposits (B6) Aleposits	icator is suff al Imagery (I ave Surface	Water-S  MLR/ Salt Cru Aquatic Hydroge Oxidized Presenc Recent Stunted 37) Other (E	A 1, 2, 4 st (B11) Inverteben Sulfid d Rhizos se of Red Iron Red or Stres Explain in	A and 4B)  prates (B13) le Odor (C1) spheres alo duced Iron duction in P ssed Plants in Remarks)	(except ) ng Living (C4) lowed So (D1) (LR	Roots (C3)	Secondary Water-St 4A an Drainage Dry-Seas Saturatio Geomorp Shallow A	v Indicators (2 or mained Leaves (B9) d 4B) Patterns (B10) son Water Table (C n Visible on Aerial I shic Position (D2) Aquitard (D3) stral Test (D5) nt Mounds (D6) (Li	ore required (MLRA 1, 2 2) magery (CS
Primary Ind Satura Water Sedim Drift E Algal I Iron D Surfac Iron D Surfac Inund: X Spars Surface Wa	ydrology Indicator icators (any one indice Water (A1) Water Table (A2) ation (A3) Marks (B1) Alent Deposits (B2) Alent Deposits (B3) Mat or Crust (B4) Aleposits (B5) Ale Soil Cracks (B6) Aleion Visible on Aeri Alely Vegetated Concurvations: Alert Present?	icator is suff al Imagery (I ave Surface	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   Stunted   Other (E)   (B8)   No	A 1, 2, 4. st (B11) Inverteben Sulfid d Rhizose of Recorder Stres	A and 4B)  prates (B13 de Odor (C1 spheres alo duced Iron duction in P ssed Plants in Remarks)	(except ) ng Living (C4) lowed So (D1) (LR	Roots (C3)	Secondary Water-St 4A an Drainage Dry-Seas Saturatio Geomorp Shallow A	v Indicators (2 or mained Leaves (B9) d 4B) Patterns (B10) son Water Table (C n Visible on Aerial I shic Position (D2) Aquitard (D3) stral Test (D5) nt Mounds (D6) (Li	ore required (MLRA 1, 2 2) magery (C9
Primary Ind Surfac Water Sedim Drift E Algal I Iron D Surfac Vater Surfac Water Sedim Drift E Algal I Vater Surfac Vater Surfac Vater Surfac Vater Surfac Vater Surfac	ydrology Indicator icators (any one indicators (any one indicator (A1)) Water Table (A2) ation (A3) Marks (B1) Ment Deposits (B2) Meposits (B3) Mat or Crust (B4) Meposits (B5) Mee Soil Cracks (B6) Mation Visible on Aeri Mely Vegetated Concurvations: Mater Present?  Present?  Yeresent?  Yeresent?  Yeresent?	al Imagery (I ave Surface es	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   Stunted   Other (E (B8)   No	A 1, 2, 4 st (B11) Inverteben Sulfid d Rhizos te of Red Iron Red or Stres Explain in	A and 4B)  prates (B13 de Odor (C1 spheres alo duced Iron duction in P ssed Plants in Remarks)	(except ) ng Living (C4) lowed So (D1) (LR	Roots (C3) pils (C6)	Secondary Water-St 4A an Drainage Dry-Seas Saturatio Geomorp Shallow A	r Indicators (2 or monained Leaves (B9) d 4B) Patterns (B10) con Water Table (Con Visible on Aerial Indice Position (D2) Aquitard (D3) atral Test (D5) atral Test (D6) (L1 ave Hummocks (D6)	ore required (MLRA 1, 2 2) magery (C9
Primary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inund: x Spars Field Obse Surface Wa Water table Saturation I (includes ca	ydrology Indicator icators (any one indice Water (A1) Vater Table (A2) ation (A3) Marks (B1) Ment Deposits (B2) Meposits (B3) Mat or Crust (B4) Meposits (B5) Meter Soil Cracks (B6) Metion Visible on Aericely Vegetated Concurvations: Mater Present?  Present?  Yeresent?  Yeresent?  Yeresent?  Yeresent?	al Imagery (I ave Surface es es es	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presence   Recent   Stunted   Stunted   Stunted   Other (E (B8)   Depth   No   x   Depth   Depth   No   x   Depth   Depth	A 1, 2, 4. st (B11) Inverteben Sulfid In Rhizos e of Rec Iron Rec or Stres Explain ir  (inches (inches	A and 4B)  orates (B13) le Odor (C1) spheres alo duced Iron duction in P ssed Plants in Remarks)  b):	(except ) ng Living (C4) lowed So (D1) (LR	Roots (C3) pils (C6) RR A) Wetland Hy	Secondary Water-St  4A an Drainage Dry-Seas Saturatio Geomorp Shallow / FAC-Neu Raised A Frost-He	r Indicators (2 or monained Leaves (B9) d 4B) Patterns (B10) con Water Table (Con Visible on Aerial Indice Position (D2) Aquitard (D3) atral Test (D5) atral Test (D6) (L1 ave Hummocks (D6)	ore required (MLRA 1, 2 2) magery (C9
Primary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inund: x Spars Field Obse Surface Wa Water table Saturation I (includes ca	ydrology Indicator icators (any one indicators (any one indicator (A1)) Water Table (A2) ation (A3) Marks (B1) Ment Deposits (B2) Meposits (B3) Mat or Crust (B4) Meposits (B5) Mee Soil Cracks (B6) Mation Visible on Aeri Mely Vegetated Concurvations: Mater Present?  Present?  Yeresent?  Yeresent?  Yeresent?	al Imagery (I ave Surface es es es	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presence   Recent   Stunted   Stunted   Stunted   Other (E (B8)   Depth   No   x   Depth   Depth   No   x   Depth   Depth	A 1, 2, 4. st (B11) Inverteben Sulfid In Rhizos e of Rec Iron Rec or Stres Explain ir  (inches (inches	A and 4B)  orates (B13) le Odor (C1) spheres alo duced Iron duction in P ssed Plants in Remarks)  b):	(except ) ng Living (C4) lowed So (D1) (LR	Roots (C3) pils (C6) RR A) Wetland Hy	Secondary Water-St  4A an Drainage Dry-Seas Saturatio Geomorp Shallow / FAC-Neu Raised A Frost-He	r Indicators (2 or monained Leaves (B9) d 4B) Patterns (B10) con Water Table (Con Visible on Aerial Indice Position (D2) Aquitard (D3) atral Test (D5) atral Test (D6) (L1 ave Hummocks (D6)	ore required (MLRA 1, 2 2) magery (C9
Primary Ind Surfac High V Satura Water Sedim Drift E Algal I Iron D Surfac Inund: x Spars Field Obse Surface Wa Water table Saturation I (includes ca	ydrology Indicator icators (any one indice Water (A1) Vater Table (A2) ation (A3) Marks (B1) Ment Deposits (B2) Meposits (B3) Mat or Crust (B4) Meposits (B5) Meter Soil Cracks (B6) Metion Visible on Aericely Vegetated Concurvations: Mater Present?  Present?  Yeresent?  Yeresent?  Yeresent?  Yeresent?	al Imagery (I ave Surface es es es	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presence   Recent   Stunted   Stunted   Stunted   Other (E (B8)   Depth   No   x   Depth   Depth   No   x   Depth   Depth	A 1, 2, 4. st (B11) Inverteben Sulfid In Rhizos e of Rec Iron Rec or Stres Explain ir  (inches (inches	A and 4B)  orates (B13) le Odor (C1) spheres alo duced Iron duction in P ssed Plants in Remarks)  b):	(except ) ng Living (C4) lowed So (D1) (LR	Roots (C3) pils (C6) RR A) Wetland Hy	Secondary Water-St  4A an Drainage Dry-Seas Saturatio Geomorp Shallow / FAC-Neu Raised A Frost-He	r Indicators (2 or monained Leaves (B9) d 4B) Patterns (B10) con Water Table (Con Visible on Aerial Indice Position (D2) Aquitard (D3) atral Test (D5) atral Test (D6) (L1 ave Hummocks (D6)	ore required (MLRA 1, 2 2) magery (C9
Primary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inund: x Spars Field Obse Surface Wa Water table Saturation I (includes ca	ydrology Indicator icators (any one indice Water (A1) Vater Table (A2) ation (A3) Marks (B1) Ment Deposits (B2) Meposits (B3) Mat or Crust (B4) Meposits (B5) Meter Soil Cracks (B6) Metion Visible on Aericely Vegetated Concurvations: Mater Present?  Present?  Yeresent?  Yeresent?  Yeresent?  Yeresent?	al Imagery (I ave Surface es es es	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presence   Recent   Stunted   Stunted   Stunted   Other (E (B8)   Depth   No   x   Depth   Depth   No   x   Depth   Depth	A 1, 2, 4. st (B11) Inverteben Sulfid In Rhizos e of Rec Iron Rec or Stres Explain ir  (inches (inches	A and 4B)  orates (B13) le Odor (C1) spheres alo duced Iron duction in P ssed Plants in Remarks)  b):	(except ) ng Living (C4) lowed So (D1) (LR	Roots (C3) pils (C6) RR A) Wetland Hy	Secondary Water-St  4A an Drainage Dry-Seas Saturatio Geomorp Shallow / FAC-Neu Raised A Frost-He	r Indicators (2 or monained Leaves (B9) d 4B) Patterns (B10) con Water Table (Con Visible on Aerial Indice Position (D2) Aquitard (D3) atral Test (D5) atral Test (D6) (L1 ave Hummocks (D6)	ore required (MLRA 1, 2 2) magery (C9

	,,	: Woodland	/Cowlitz Sampling Date: Oct.8, 2020
			State: WA Sampling Point:
	Section	n, Township	, Range: S13, T5N, R1W
	_ Local re	elief (concav	e, convex, none): none Slope (%): 0-3%
<u>A)</u> Lat:		45.92	<u>2540293</u> Long: <u>-122.750129163</u> Datum:
			NWI Classification: PEM1A
this time of	year?	Yes_	X No (If no, explain in Remarks)
			Are "Normal Circumstances" Present? Yes X No
	naturally pro	oblematic?	(If needed, explain any answers in Remarks.)
showing	sampling	point loca	ations, transects, important features, etc.
o x			
о х		•	<sup>a</sup> Yes No x
о х	Within	a welland:	<u> </u>
Absolute % Cover	Dominant Species?	Indicator Status?	Dominance Test worksheet:  Number of Dominant Species
40	Υ Υ	FACU□	That Are OBL, FACW, or FAC:
10			Total Number of Dominant
10		ı∉AC □	Species Across All Strata: 5 (B)
			Percent of Dominant Species
r: 60			That Are OBL, FACW, or FAC: 40% (A/B)
			Prevalence Index Worksheet:
30	Υ	ıFACU□	Total % Cover of: Multiply by:
			OBL species x1 = <b>0</b>
	Y	FACW□	FACW species x2 = 0
			FAC species x3 = <b>0</b>
,			FACU species x4 = <b>0</b>
r: 50			UPL species x5 = <b>0</b>
			Column Totals:(A)(B)
			Prevalence Index = B/A =
	·		
			Hydrophytic Vegetation Indicators:
	<del></del>		1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
-			3 - Prevalence Index is ≤3.0¹
			4 - Morphological Adaptation1 (Provide supporting
	· -	· <del></del>	data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants <sup>1</sup>
-			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
r. 0			
	•		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
15%	Υ	ŒACU□	be present, unless disturbed or problematic.
1070			The described in
r: 15			Hydrophytic Vegetation
		_	1 9
Cover of B	iotic Crust	0	Present? Yes No x
	this time of  showing  to x  t	Absolute % Cover 40 10 10 10 10 10 10 10 10 10 10 10 10 10	Absolute Species? Status?  Absolute Species? Status?  40 Y FACU  10 Y FACU

SOIL								Sampling P	oint:		4
Profile Desc	ription: (Describ	e to the depth	needed to	document t	he indica	tor or co	onfirm the abse	ence of indicators.	.)		
Depth	Matrix	•		Redox Feat							
(inches)	Color (moist)	%	Color (moist		Type <sup>1</sup>	Loc <sup>2</sup>	 Texture		Remarks		
0-10	10 YR 2/2	100	Oolor (moist		Турс		SiSL		Remarks		
10-16	10 YR 2/2	100		_	_	_	I				
10-10	101112/2										
				_	_		_	<del></del>			
					_						
¹Type: C=Co	oncentration, D=De	epletion, RM=F	Reduced Matı	ix, CS=Cov	ered or Co	pated Sa	and Grains. <sup>2</sup> Lo	ocation: PL=Pore L	ining, M=Matrix.		
Hydric Soil I	Indicators: (Appl	icable to all L	RRs, unless	otherwise	noted.)		Indicators	for Problematic H	ydric Soils³:		
Histoso				dy Redox (S				2 cm Muck (A	،10)		
	pipedon (A2)			ped Matrix			•	Red Parent M			
	listic (A3)			my Mucky N		) (excep	ot MLRA 1)	Other (Explain	` '		
	en Sulfide (A4)			my Gleyed I	=				,,		
	ed Below Dark Surf	face (A11)		leted Matrix		-,					
	ark Surface (A12)	(1117)		ox Dark Su			<sup>3</sup> Indic	ators of hydrophytic	vegetation and	l	
	Muck Mineral (S1)			leted Dark S		7)		tland hydrology mu	=		
	gleyed Matrix (S4)			ox Depress	•	.,		nless disturbed or p			
	_ayer (if present):			<u> </u>	10110 (1 0)			The contract of the contract o	7 objective in the second seco		
Type:											
Depth (inche	s):						Hydric Soil Pre	sent?	Yes	No	х
Remarks:											
HYDROLOGY Wetland Hyd	drology Indicators	s·									
=	cators (any one ind		ent)					Secondary Indi	icators (2 or mor	e requir	ed)
-	Water (A1)	ioator io oarrior		er-Stained I	eaves (B	9) (exce	nt		d Leaves (B9) (N		
	ater Table (A2)			LRA 1, 2, 4			٠.	4A and 4E	, , ,	<i></i>	, -,
· · · · · · · · · · · · · · · · · · ·	ion (A3)			Crust (B11)		')	•	Drainage Patt	•		
	Marks (B1)			atic Inverteb	<b>'</b>	3)	•		Vater Table (C2	١	
	ent Deposits (B2)			rogen Sulfic			•		sible on Aerial In	•	Ca)
	eposits (B3)			-			ng Roots (C3)	Geomorphic F		lagory (	00)
	at or Crust (B4)			sence of Re	•	•	ig 110013 (00)	Shallow Aquit			
	posits (B5)			ent Iron Red		` '	Soils (C6)	FAC-Neutral			
	Soil Cracks (B6)			ted or Stres			` '		ounds (D6) ( <b>LR</b> I	D A\	
		ol Imaganı (D7					LKK A)		. , .	,	
	ion Visible on Aeri	• • •	· —	er (Explain i	n Kemark	5)	•	FIOSI-Heave i	Hummocks (D7)		
	ly Vegetated Conc	ave Suriace (E	90)				1				
Field Observ Surface Water		es No	o X D	epth (inches	:).						
Water table F		es No		epth (inches							
Saturation Pr	resent? Ye	es No		epth (inches			Wetland Hy	drology Present?	Yes	No	Х
(includes cap											
Describe Reco	rded Data (stream	gauge, monito	oring well, aer	ial photos, p	orevious ir	nspection	ns), it available:				
Remarks:											

Project/Site:	t/Site: I-5 Woodland				City/County: Woodland/Co			nd/Cowlitz		ng Date: Oc	t.8, 2020
Applicant/Owner:	Logan Partners LLC						State: V	VA	Sampli	ng Point:	5
Investigator(s):	KB			Section	n, Township	, Range:	S13, T5	N, R1W			
Landform (hillslop	e, terrace, etc.):	swale		_ Local re	elief (concave	e, convex	k, none): <u>c</u>	oncave		Slope (%	%): <u>0-3%</u>
Subregion (LRR):	Northwest Forests a	nd Coast (LRR A)	Lat:		45.922	2452524	Long:	-1	122.749265	341 Datu	um:
Soil Map Unit Nan	ne: Newberg fine	sandy loam					NWI Clas	sification:	PEM1A		
Are climatic / hydr	ologic conditions on th	e site typical for t	his time of	year?	Yes	Χ	No_		_(If no, exp	olain in Rema	ırks)
Are Vegetation	, Soil	, or Hydrology		significantly	disturbed?	Are "N	Normal Cir	cumstand	ces" Preser	it? Yes	XNo
Are Vegetation	, Soil	, or Hydrology		naturally pro	oblematic?	(If nee	eded, expl	ain any a	nswers in F	Remarks.)	
SUMMARY OF	FINDINGS - Atta	ach site map s	showing	sampling	point loca	ations, 1	transect	ts, impo	ortant fea	tures, etc.	
Hydrophytic Veget	tation Present?	Yes x No	)								
Hydric Soil Preser					ampled Area a Wetland?	а	Yes	x	No		
Wetland Hydrolog		Yes x No		within	ı wellanu :		_				
VEGETATION											
VEGETATION						1					
			Absolute	Dominant	Indicator		nce Test				
Tree Stratum (U	se scientific names.)		% Cover	Species?	Status?		r of Domin				
1						mat Are	e OBL, FA	CVV, OF F	-AC:	11	(A)
2							umber of D				
3						Species	Across A	II Strata:		1	(B)
4							of Domina				
		Total Cover:	0			That Are	e OBL, FA	CW, or F	AC:	100%	(A/B)
Shrub Stratum						Prevale	nce Index	x Worksł	neet:		
1.							tal % Cove			Multiply by:	
2.						OBL sp			x1 =		
0		<u> </u>				FACW	species _		x2 =	0	
4.						FAC sp	ecies		x3 =	0	<u> </u>
5						FACU s	pecies _		x4 =	0	
		Total Cover:	0			UPL spe			_x5 =		
Herb Stratum						Column	Totals:	0	_(A)	0	(B)
1. Phalaris arund	dinacea		90	<u> </u>	FACW □	Preva	lence Inde	ex = B/A =	=		
2											
3						Hydrop			ndicators:		
·										c Vegetation	
5				-		X			est is >50%		
6				-					dex is ≤3.0		
7					. ———					1 (Provide su	ipporting
										arate sheet)	
				· <del></del>	· <del></del>				Vascular Pl		
•					· <del></del>		Problem	atic Hydr	opnytic veg	etation <sup>1</sup> (Exp	iain)
11		Total Cover:	90		. ——						
Woody Vine S	Stratum	Total Cover.	90			1 maliant	ana af laved	ria aail aa	ما لمصملاميين		<b>.</b>
-				Y					d welland i ed or proble	nydrology mu matic.	51
2.									p		
<u> </u>		Total Cover:				Hydrop	-				
% Ra	are Ground in Herb Str				0	Vegetat Present			Yes >	. No	
Remarks:			00101 01 0	otio Ordot		1100011	••				

SOIL								Sa	ampling Point:		5
Profile Des	cription: (Describ	e to the dept	h needed to do	cument t	he indicat	tor or co	onfirm the abs	ence of in	dicators.)		
Depth	Matrix		Re	edox Feat	tures						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	 Texture	e		Remarks	
0-7	10 YR 3/2	95	10YR3/4	5	C	M	SiL				
7-16	10YR3/2	98	10YR3/4	2		М	SiL				
				-			_				
				-		-					
				-							
				-							
				-							
					_		_				
<sup>1</sup> Type: C=C	oncentration, D=D	epletion, RM=	Reduced Matrix,	CS=Cov	ered or Co	oated Sai	nd Grains. <sup>2</sup> L	ocation: P	L=Pore Lining	ı, M=Matrix.	
Hydric Soil	Indicators: (Appl	licable to all I	LRRs, unless ot	herwise	noted.)		Indicators	s for Prob	lematic Hydri	c Soils³:	
Histose	ol (A1)		Sandy	Redox (S	S5)				n Muck (A10)		
Histic I	Epipedon (A2)		Strippe	d Matrix	(S6)			Red	Parent Mater	ial (TF2)	
Black I	Histic (A3)		Loamy	Mucky M	lineral (F1	) (excep	t MLRA 1)	Othe	er (Explain in l	Remarks)	
Hydrog	gen Sulfide (A4)		Loamy	Gleyed N	Matrix (F2	)					
Deplet	ed Below Dark Sur	face (A11)	Deplet	ed Matrix	(F3)						
Thick I	Dark Surface (A12)		x Redox	Dark Sur	face (F6)		<sup>3</sup> Indi	cators of h	ydrophytic ve	getation and	
Sandy	Muck Mineral (S1)		Deplet	ed Dark S	Surface (F	7)	We	etland hydr	ology must be	present,	
Sandy	gleyed Matrix (S4)		Redox	Depressi	ions (F8)		į	unless dist	urbed or prob	ematic.	
Restrictive	Layer (if present)	:									
Type:											
Depth (inche	es):						Hydric Soil Pro	esent?	Yes	<u> </u>	No
HYDROLOGY	,										
	drology Indicator	'S'									
_	cators (any one inc		cient)					Seco	ndary Indicato	rs (2 or more	e required)
	e Water (A1)			Stained L	_eaves (B9	9) (excer	ot		er-Stained Le		
	Vater Table (A2)				A and 4B				A and 4B)	`	
·	tion (A3)			ust (B11)		,			nage Patterns	s (B10)	
Water	Marks (B1)		Aquatio	c Inverteb	orates (B13	3)			Season Wate		
	ent Deposits (B2)				le Odor (C				ıration Visible		agery (C9)
Drift D	eposits (B3)		Oxidize	ed Rhizos	spheres ald	ong Livin	g Roots (C3)	x Geo	morphic Posit	ion (D2)	
Algal N	Mat or Crust (B4)		Preser	ice of Re	duced Iron	n (C4)		Sha	llow Aquitard	(D3)	
Iron De	eposits (B5)		Recen	t Iron Red	duction in F	Plowed S	Soils (C6)	x FAC	-Neutral Test	(D5)	
Surfac	e Soil Cracks (B6)		Stunte	d or Stres	sed Plant	s (D1) ( <b>L</b>	.RR A)	Rais	sed Ant Mound	ds (D6) ( <b>LRR</b>	<b>(A</b> )
Inunda	ition Visible on Aeri	ial Imagery (B	7) Other (	Explain i	n Remarks	s)		Fros	st-Heave Hum	mocks (D7)	
Sparse	ely Vegetated Cond	ave Surface (	B8)								
Field Obser											
				th (inches	·						
Water table Saturation F				th (inches th (inches	<i></i>		Wetland H	vdrology	Present?	Yes x	No
	pillary fringe)	<u> </u>	<u></u>	(	.,. <u> </u>	_		, o. o g ,		<u></u>	
Describe Reco	orded Data (stream	gauge, monit	oring well, aerial	photos, p	revious in	spection	s), if available:				
Remarks:											
ı											

Project/Site: I-5 V	Voodland		City/County:	Woodland	I/Cowlitz Sampling Date: Oct.8, 2020
Applicant/Owner: Loga	an Partners LLC				State: WA Sampling Point:
Investigator(s): KB			Section	n, Township	o, Range: S13, T5N, R1W
Landform (hillslope, terra	ace, etc.): swale		Local re	elief (concav	ve, convex, none): concave Slope (%): 0-3%
Subregion (LRR): Nort	hwest Forests and Coast (LRR A	<u>\)</u> Lat:		45.92	2348649 Long: -122.748811117 Datum:
Soil Map Unit Name:	Newberg fine sandy loam				NWI Classification: PEM1C
Are climatic / hydrologic	conditions on the site typical for	this time of	year?	Yes	X No (If no, explain in Remarks)
Are Vegetation	, Soil, or Hydrology		significantly	disturbed?	Are "Normal Circumstances" Present? Yes X No
Are Vegetation	, Soil, or Hydrology		naturally pro	oblematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINE	DINGS – Attach site map	showing	sampling	point loca	ations, transects, important features, etc.
Nordana kodin Manadadian I		_			
Hydrophytic Vegetation			Is the Sa	ampled Are	ea Yes x No
Hydric Soil Present? Wetland Hydrology Pres	Yes x No		within a	a Wetland?	163 <u>X</u> 110
welland Hydrology Pres	ent? Yes x No	U			
VEGETATION					
VEGETATION		AL 1.	- · ·	1 12 4	Daminanas Tast waybahaati
		Absolute % Cover	Dominant Species?	Indicator Status?	Dominance Test worksheet:
Tree Stratum (Use scient	entific names.)		——————————————————————————————————————		Number of Dominant Species That Are OBL, FACW, or FAC:
<u> </u>		-			(A)
<u> </u>		-	-		Total Number of Dominant Species Across All Strata:  1 (B)
		-	-		Species Across Ali Strata: 1 (B)
4	Total Caver				Percent of Dominant Species
	Total Cover	: 0			That Are OBL, FACW, or FAC:(A/B)
Shrub Stratum					Prevalence Index Worksheet:
4					Total % Cover of: Multiply by:
2					OBL species x1 = <b>0</b>
					FACW species x2 = <b>0</b>
1					FAC species x3 = 0
5.					FACU species x4 = <b>0</b>
•	Total Cover	: 0			UPL speciesx5 = <b>0</b>
Herb Stratum					Column Totals: (A) (B)
1. Phalaris arundinace	a	40	Υ	FACW□	Prevalence Index = B/A =
2					
3					Hydrophytic Vegetation Indicators:
4					1 - Rapid Test for Hydrophytic Vegetation
5					X 2 - Dominance Test is >50%
6					3 - Prevalence Index is ≤3.0 <sup>1</sup>
7					4 - Morphological Adaptation1 (Provide supporting
					data in Remarks or on a separate sheet)
					5 - Wetland Non-Vascular Plants <sup>1</sup>
10		-			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
11					
W 1 1/2 Oc. 1	Total Cover	: 40	•		
Woody Vine Stratum	=		V		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
			Y		
2	Total Cover		-		Hydrophytic
% Rara Gro	ound in Herb Stratum 60 %		iotic Cruet	0	Vegetation   Present?   Yes x No
	verstory. Rooted outside plot.	20101 OI D	ono Orust	<u> </u>	165 <u>A</u> 140
romano. Culunwoud 0	versiory. Nooted outside piot.				

SOIL								Sampling Point:	6
Profile Des	scription: (Descri	ibe to the dep	oth needed to doc	ument t	he indicate	or or co	onfirm the abs	sence of indicators.)	
Depth	Matrix	(	Red	dox Feat	tures				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textur	re Remarks	
0-5	10 YR 2/2	100	, ,				SiL		
5-16	10YR2/2	95	7.5YR3/4	5	С	М	SiL		
1	·								
'Type: C=0	Concentration, D=[	Depletion, RM	=Reduced Matrix, (	CS=Cov	ered or Coa	ated Sa	nd Grains. <sup>2</sup> L	Location: PL=Pore Lining, M=Matrix.	
Hydric Soi	il Indicators: (App	plicable to all	I LRRs, unless oth	erwise	noted.)		Indicator	s for Problematic Hydric Soils <sup>3</sup> :	
Histos	sol (A1)		Sandy F	Redox (S	S5)			2 cm Muck (A10)	
Histic	Epipedon (A2)		Stripped	Matrix	(S6)			Red Parent Material (TF2)	
Black	Histic (A3)		Loamy I	Mucky M	lineral (F1)	(ехсер	t MLRA 1)	Other (Explain in Remarks)	
Hydro	ogen Sulfide (A4)		Loamy (	Gleyed N	Matrix (F2)				
Deple	eted Below Dark Su	urface (A11)	Deplete	d Matrix	(F3)				
Thick	Dark Surface (A12	2)	x Redox [	Dark Sur	rface (F6)		<sup>3</sup> Indi	icators of hydrophytic vegetation and	
Sandy	y Muck Mineral (S1	)	Deplete	d Dark S	Surface (F7	<b>'</b> )	W	etland hydrology must be present,	
Sandy	y gleyed Matrix (S4	<b>!</b> )	Redox [	Depressi	ions (F8)			unless disturbed or problematic.	
Restrictive	E Layer (if present	i):							
Type:									
Depth (inch	nes):					H	Hydric Soil Pr	resent? Yes x	No
Remarks:									
HYDROLOG	Υ								
Wetland H	ydrology Indicato	ors:							
Primary Inc	dicators (any one in	ndicator is suff	ficient)					Secondary Indicators (2 or more	e required)
Surfa	ce Water (A1)		Water-S	Stained L	_eaves (B9	) (excel	pt	Water-Stained Leaves (B9) (N	ILRA 1, 2,
High \	Water Table (A2)		MLRA	4 1, 2, 4	A and 4B)			4A and 4B)	
Satura	ation (A3)		Salt Cru	st (B11)	)			Drainage Patterns (B10)	
Water	r Marks (B1)				orates (B13			Dry-Season Water Table (C2)	
Sedim	nent Deposits (B2)		Hydroge	en Sulfid	le Odor (C1	l)		Saturation Visible on Aerial Im	agery (C9)
	Deposits (B3)					-	ng Roots (C3)	x Geomorphic Position (D2)	
	Mat or Crust (B4)				duced Iron	` '		Shallow Aquitard (D3)	
	Deposits (B5)				duction in P			x FAC-Neutral Test (D5)	
	ce Soil Cracks (B6	•			ssed Plants		RR A)	Raised Ant Mounds (D6) (LRF	₹ <b>A</b> )
	lation Visible on Ae			xplain i	n Remarks	)		Frost-Heave Hummocks (D7)	
	sely Vegetated Con	icave Surface	(B8)						
Field Obse		.,	N V D 4	<i>(</i> ' 1	,				
Water table		Yes Yes		i (inches i (inches					
Saturation		Yes		(inches			Wetland H	lydrology Present? Yes x	No
(includes ca	apillary fringe)		<u> </u>	`	,				
Describe Rec	corded Data (strear	m gauge, mor	nitoring well, aerial p	hotos, p	orevious ins	spection	s), if available	:	
Remarks:									

Project/Site: I-5 V	Voodland		City/County:	: Woodland	/Cowlitz	Sampling Date:	Oct.8, 2020		
Applicant/Owner: Loga	an Partners LLC				State: WA	Sampling Point:	7		
Investigator(s): KB			Section	n, Township	, Range: S13, T5N, R1W				
Landform (hillslope, terra	ace, etc.): hillslope		_ Local re	elief (concav	e, convex, none): none	Slop	oe (%): <u>0-3%</u>		
Subregion (LRR): Nort	hwest Forests and Coast (LRR A	<u>)</u> Lat:		45.92	2327554 Long: -	122.748820615	Datum:		
Soil Map Unit Name:	Newberg fine sandy loam				NWI Classification	i: PEM1C			
	conditions on the site typical for t			Yes_	X No	(If no, explain in Re	emarks)		
	, Soil, or Hydrology				Are "Normal Circumstan				
Are Vegetation	, Soil, or Hydrology		naturally pro	oblematic?	(If needed, explain any a	answers in Remarks.)	l		
SUMMARY OF FINI	DINGS – Attach site map	showing	sampling	point loca	ations, transects, impo	ortant features, e	etc.		
Hydrophytic Vegetation I	Present? Yes x No	)							
Hydric Soil Present?	YesNo	x		ampled Are a Wetland?	a Yes	No x	_		
Wetland Hydrology Pres	· · · · · · · · · · · · · · · · · · ·		_ within s	a Welland:					
VEGETATION									
VEGETATION		A ba a du sta	Dominant	Indicator	Dominance Test worksho	oot:			
		Absolute % Cover	Dominant Species?	Status?	Number of Dominant Spec				
Tree Stratum (Use scie	entific names.)		-		That Are OBL, FACW, or F	FAC:	(4)		
1 2.					Total Number of Dominant	. 3	(A)		
3.					Species Across All Strata:		(B)		
4.				· ——	•		(b)		
т. 	Total Cover:	0		· ———	Percent of Dominant Spec That Are OBL, FACW, or F		(A/B)		
	, otal Goroll		-				(/ (2)		
Shrub Stratum					Prevalence Index Worksl	heet:			
Salix scouleriana		10	Υ		Total % Cover of:	Multiply b	oy:		
2. Rubus armeniacus		30	Υ	ıFAC□	OBL species	x1 = <b>0</b>			
3. Rosa pisocarpa		10	Υ	IFAC□	FACW species	x2 = <b>0</b>			
4					FAC species	x3 = <b>0</b>			
5					FACU species	x4 = <b>0</b>			
	Total Cover:	50	_		UPL species	x5 = <b>0</b>			
Herb Stratum					Column Totals: 0	(A) <b>0</b>	(B)		
Polystichum munitur	-	5	Y	FACU□	Prevalence Index = B/A :	=			
					H. Land C. Marriage				
•	_		·		Hydrophytic Vegetation I		tion.		
_					2 - Dominance Te	r Hydrophytic Vegeta	uon		
				· ——	3 - Prevalence In				
						I Adaptation1 (Provid	e supporting		
0				· ·		or on a separate she			
				. ———	5 - Wetland Non-	'	,		
					Problematic Hydr	rophytic Vegetation <sup>1</sup> (	(Explain)		
11.									
	Total Cover:	5	-						
Woody Vine Stratum	<u>1</u>				<sup>1</sup> Indicators of hydric soil ar		must		
1. Rubus ursinus		5%		FACU□	be present, unless disturbe	ed or problematic.			
2. <u>Hedera helix</u>		90	Y	FACU□	Hydrophytic				
	Total Cover:		-		Vegetation				
% Bare Gro	ound in Herb Stratum 0 %	Cover of B	iotic Crust	0	Present?	Yes No	<u> </u>		
Remarks:									

		the depth	needed to do	cument th	a indicat	or or oor	afirm the abo	ence of in	ndicators.)			
				• • • • • • • • • • • • • • • • • • • •	ie illuicati	or or cor	IIIIIIII LIIE abs		,			
(in ale an) Calar (	Matrix		Re	edox Feati	ures							
(inches) Color (i	moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	- Texture	<b>!</b>		Remarks		
0-3 10 YF		100	- /		. <u>-/</u>		SiL					
3-16 10YF		98	10YR3/2	2		М	SiL					
			101110/2									
				-			_					
				-			_					
							_					
							_					
Type: C=Concentratio	n, D=Deplet	tion, RM=R	Reduced Matrix,	CS=Cove	ered or Co	ated San	d Grains. <sup>2</sup> Lo	cation: F	L=Pore Linin	ıg, M=Matrix.		
hadela Oall hadiaataaa	. /A	.1. 411.1	DD				I	for Dool	1	0 - 11 - 3		
Hydric Soil Indicators	: (Applicat	DIE TO AII LI			-		indicators		lematic Hyd			
Histosol (A1)	.0)			Redox (S					n Muck (A10)			
Histic Epipedon (A	(2)			ed Matrix (	,	/	MI DA 4\		Parent Mate			
Black Histic (A3)	(A 4)			-	ineral (F1)		WILKA 1)	Oth	er (Explain in	Remarks)		
Hydrogen Sulfide		(444)		-	fatrix (F2)							
Depleted Below D		(A11)		ed Matrix	-		31 11					
Thick Dark Surfac				Dark Surf						egetation and		
Sandy Muck Mine					Surface (F7	()		•	rology must b	•		
Sandy gleyed Mat			Redox	Depression	ons (F8)	•	ι	nless dis	turbed or prol	olematic.		
Restrictive Layer (if pr	esent):											
ype:												
										25	No	
			_			H	ydric Soil Pre	esent?	Υє	·		
marks:			_			H	ydric Soil Pre	esent?	Ye			
marks:	dicators:		_			H	ydric Soil Pre	sent?	Ye			<u> </u>
marks:  DROLOGY  Wetland Hydrology In:  Primary Indicators (any	one indicate	or is sufficio	ent)			H	ydric Soil Pre			ors (2 or mor		
marks: DROLOGY Vetland Hydrology In	one indicate	or is suffici		Stained L	eaves (B9			Seco	ndary Indicat		e requi	red
marks:  DROLOGY  Vetland Hydrology Inversionary Indicators (any	one indicate	or is sufficie	Water-		eaves (B9 A and 4B)	) (except		Seco Wa	ndary Indicat	ors (2 or mor	e requi	red
DROLOGY Vetland Hydrology Inc Primary Indicators (any Surface Water (A	one indicate	or is suffici	Water-		A and 4B)	) (except		Seco Wa	ndary Indicat ter-Stained L	ors (2 or mor eaves (B9) (N	e requi	red
DROLOGY Vetland Hydrology In Primary Indicators (any Surface Water (A' High Water Table	one indicate	or is sufficio	Water- MLF Salt Cr	<b>RA 1, 2, 4</b> / rust (B11)	A and 4B)	) (excep		Secc Wa Dra	ndary Indicat ter-Stained L 1A and 4B) inage Patterr	ors (2 or mor eaves (B9) (N	e requii	rec
DROLOGY Vetland Hydrology In Primary Indicators (any Surface Water (A' High Water Table Saturation (A3)	one indicate  (A2)	or is suffici	Water- MLF Salt Cr Aquatio	<b>RA 1, 2, 4/</b> rust (B11) c Inverteb	A and 4B)	) (except		Secc Wa Dra Dra	ndary Indicat ter-Stained L <b>1A and 4B</b> ) inage Patterr -Season Wat	cors (2 or moreaves (B9) (Normal (B10)	e requii	red, 2
DROLOGY  Vetland Hydrology In:  Primary Indicators (any  Surface Water (A'  High Water Table  Saturation (A3)  Water Marks (B1)	one indicate  (A2)  s (B2)	or is suffici	Water- MLF Salt Cr Aquation Hydrog	RA 1, 2, 4/ rust (B11) c Inverteb gen Sulfide	A and 4B) rates (B13 e Odor (C1	) (except		Seco Wa Dra Dry Sat	ndary Indicat ter-Stained L <b>1A and 4B</b> ) inage Patterr -Season Wat	eaves (B9) (Note: 1888)  The second of the s	e requii	red, 2
DROLOGY  Vetland Hydrology Inc Primary Indicators (any Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit	one indicate (A2) (S (B2)	or is suffici	Water- MLF Salt Cr Aquatic Hydrog Oxidize	RA 1, 2, 4/ rust (B11) c Inverteb gen Sulfide ed Rhizos	A and 4B) rates (B13 e Odor (C1	) (except	<u> </u>	Seco Wa Dra Dry Sati	ndary Indicat ter-Stained L <b>1A and 4B</b> ) inage Patterr -Season Wat uration Visible	eaves (2 or moreaves (B9) (Notes (B10))  er Table (C2)  e on Aerial Instition (D2)	e requii	red, 2
DROLOGY  Vetland Hydrology In  Primary Indicators (any  Surface Water (A'  High Water Table  Saturation (A3)  Water Marks (B1)  Sediment Deposits  Drift Deposits (B3)	one indicate (A2) (S (B2) (B4)	or is suffici	Water- MLF Salt Cr Aquatir Hydrog Oxidize Preser	RA 1, 2, 4/ rust (B11) c Inverteb gen Sulfide ed Rhizos nce of Rec	A and 4B) rates (B13 e Odor (C1 pheres alo	) (excepted)  I)  Ing Living (C4)	t g Roots (C3)	Seco Wa Dra Dry Sat Geo Sha	ndary Indicat ter-Stained L 1A and 4B) inage Patterr -Season Wat uration Visible omorphic Pos	cors (2 or moreaves (B9) (Notes (B10))  er Table (C2) e on Aerial Instition (D2) I (D3)	e requii	red, 2
DROLOGY  Vetland Hydrology In  Primary Indicators (any Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust	one indicate (A2) (S (B2) (B4)	or is sufficio	Water- MLF Salt Cr Aquation Hydrog Oxidize Preser Recen	RA 1, 2, 4/ rust (B11) c Inverteb gen Sulfide ed Rhizos nce of Rec t Iron Red	A and 4B) rates (B13 e Odor (C1 pheres alo	(C4)	t Roots (C3)	Seco Wa Dra Dry Sati Geo Sha FAC	andary Indicater-Stained Land 4B) inage Patterr-Season Water uration Visible omorphic Poselllow Aquitare C-Neutral Tes	cors (2 or moreaves (B9) (Notes (B10))  er Table (C2) e on Aerial Instition (D2) I (D3)	e requii ILRA 1	red, 2
DROLOGY  Vetland Hydrology In- Primary Indicators (any Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5)	one indicate (A2) (S (B2) (B4) (SS (B6)		Water- MLF Salt Cr Aquatic Hydrog Oxidize Preser Recent Stunter	RA 1, 2, 4/ rust (B11) c Inverteb gen Sulfide ed Rhizos nce of Rec t Iron Red d or Stres	A and 4B) rates (B13 e Odor (C1 pheres alo duced Iron luction in F	(C4) Plowed So	t Roots (C3)	Seco Wa Dra Dry Sat Geo Sha FAO Rais	andary Indicate ter-Stained Land 4B) inage Patterre-Season Wateration Visible omorphic Posullow Aquitare C-Neutral Tessed Ant Mour	eaves (2 or moreaves (B9) (Notes (B10))  er Table (C2) e on Aerial Instition (D2) I (D3) et (D5)	e requir //LRA 1	red, 2
DROLOGY  Vetland Hydrology In: Primary Indicators (any Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cracl	one indicate (A2) (A2) (B2) (B4) (S (B6) on Aerial In	nagery (B7	Water- MLF Salt Cr Aquatic Hydrog Oxidize Preser Recen Stunter Other (	RA 1, 2, 4/ rust (B11) c Inverteb gen Sulfide ed Rhizos nce of Rec t Iron Red d or Stres	A and 4B) rates (B13 e Odor (C1 pheres alo duced Iron uction in F sed Plants	(C4) Plowed So	t Roots (C3)	Seco Wa Dra Dry Sat Geo Sha FAO Rais	andary Indicate ter-Stained Land 4B) inage Patterre-Season Wateration Visible omorphic Posullow Aquitare C-Neutral Tessed Ant Mour	eaves (2 or moreaves (B9) (Note of the constant of the constan	e requir //LRA 1	rec, <b>2</b>
DROLOGY  Vetland Hydrology In  Primary Indicators (any Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cracl Inundation Visible Sparsely Vegetate	one indicate (A2) (A2) (B2) (B4) (S (B6) on Aerial In	nagery (B7	Water- MLF Salt Cr Aquatic Hydrog Oxidize Preser Recen Stunter Other (	RA 1, 2, 4/ rust (B11) c Inverteb gen Sulfide ed Rhizos nce of Rec t Iron Red d or Stres	A and 4B) rates (B13 e Odor (C1 pheres alo duced Iron uction in F sed Plants	(C4) Plowed So	t Roots (C3)	Seco Wa Dra Dry Sat Geo Sha FAO Rais	andary Indicate ter-Stained Land 4B) inage Patterre-Season Wateration Visible omorphic Posullow Aquitare C-Neutral Tessed Ant Mour	eaves (2 or moreaves (B9) (Note of the constant of the constan	e requir //LRA 1	rec, <b>2</b>
Metland Hydrology In- Primary Indicators (any Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cracl Inundation Visible Sparsely Vegetate Field Observations: Surface Water Present	one indicate (A2) (A2) (B4) (B4) (S (B6) On Aerial Indicate Concave	nagery (B7 Surface (B	Water- MLF Salt Cr Aquation Hydrog Oxidize Preser Recent Stunter Other (	RA 1, 2, 4/ rust (B11) c Inverteb gen Sulfide ed Rhizos nce of Rec t Iron Red d or Stres (Explain in	A and 4B) rates (B13 e Odor (C1 pheres alo duced Iron luction in P sed Plants n Remarks ):	(C4) Plowed So	t Roots (C3)	Seco Wa Dra Dry Sat Geo Sha FAO Rais	andary Indicate ter-Stained Land 4B) inage Patterre-Season Wateration Visible omorphic Posullow Aquitare C-Neutral Tessed Ant Mour	eaves (2 or moreaves (B9) (Note of the constant of the constan	e requir //LRA 1	red, 2
Primary Indicators (any Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cracl Inundation Visible Sparsely Vegetate Field Observations: Surface Water Present' Water table Present?	one indicate (A2) (A2) (B4) (B4) (S (B6) On Aerial Indicate Concave (Concave Yes Yes Yes Yes (Concave Yes Yes Yes (Concave Yes Yes (Concave Yes Yes (Concave Yes)	nagery (B7 Surface (B	Water- MLF Salt Cr Aquatic Hydrog Oxidize Preser Recen Stunte Other (8)  X Dept	RA 1, 2, 4/ rust (B11) c Inverteb gen Sulfide ed Rhizos nce of Rec t Iron Red d or Stres (Explain in	A and 4B) rates (B13 e Odor (C1 pheres alo duced Iron uction in P sed Plants n Remarks ):	(C4) Plowed So	t Roots (C3) poils (C6) RR A)	Secco Wa Dra Dry Satt Geo Sha FAO Rais	andary Indicater-Stained Leta and 4B) inage Patterr-Season Water and Visible omorphic Postellow Aquitare C-Neutral Tested Ant Mourst-Heave Hur	eaves (2 or moreaves (B9) (Notes (B10))  er Table (C2) e on Aerial Intelition (D2) I (D3) est (D5) ends (D6) (LRI emmocks (D7)	e requii	red, <b>2</b>
High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cracl Inundation Visible Sparsely Vegetate Field Observations: Surface Water Present? Water table Present? Saturation Present?	one indicate (A2) (A2) (B4) (B4) (S (B6) On Aerial Indicate Concave (Concave Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	nagery (B7 Surface (B	Water- MLF Salt Cr Aquatic Hydrog Oxidize Preser Recen Stunte Other (8)  X Dept	RA 1, 2, 4/ rust (B11) c Inverteb gen Sulfide ed Rhizos nce of Rec t Iron Red d or Stres (Explain in	A and 4B) rates (B13 e Odor (C1 pheres alo duced Iron uction in P sed Plants n Remarks ):	(C4) Plowed So	t Roots (C3)	Secco Wa Dra Dry Satt Geo Sha FAO Rais	andary Indicater-Stained Leta and 4B) inage Patterr-Season Water and Visible omorphic Postellow Aquitare C-Neutral Tested Ant Mourst-Heave Hur	eaves (2 or moreaves (B9) (Note of the constant of the constan	e requir //LRA 1	red , 2
Primary Indicators (any Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cracl Inundation Visible Sparsely Vegetate Field Observations: Surface Water Present' Water table Present? Saturation Present? Situration Present?	one indicate (A2) (S (B2) (B4) (SS (B6) On Aerial In (Concave  Yes Yes Yes Yes	nagery (B7 Surface (B No	Water-   MLF     Salt Cr     Aquatic     Hydrog     Oxidize     Preser     Recen:     Stunte     Other (	RA 1, 2, 4/ rust (B11) c Inverteb gen Sulfide ed Rhizos nce of Rec t Iron Red d or Stres (Explain in	A and 4B) rates (B13 e Odor (C1 pheres alo duced Iron luction in P sed Plants n Remarks ):	(C4) (D1) (LF	t Roots (C3) pils (C6) RR A)  Wetland Hy	Secco Wa Dra Dry Satt Geo Sha FAO Rais	andary Indicater-Stained Leta and 4B) inage Patterr-Season Water and Visible omorphic Postellow Aquitare C-Neutral Tested Ant Mourst-Heave Hur	eaves (2 or moreaves (B9) (Notes (B10))  er Table (C2) e on Aerial Intelition (D2) I (D3) est (D5) ends (D6) (LRI emmocks (D7)	e requii	red , 2
Primary Indicators (any Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cracl Inundation Visible Sparsely Vegetate Field Observations: Surface Water Present' Water table Present? Saturation Present? Signal Saturation Present (includes capillary fringerescribe Recorded Data	one indicate (A2) (S (B2) (B4) (SS (B6) On Aerial In (Concave  Yes Yes Yes Yes	nagery (B7 Surface (B No	Water-   MLF     Salt Cr     Aquatic     Hydrog     Oxidize     Preser     Recen:     Stunte     Other (	RA 1, 2, 4/ rust (B11) c Inverteb gen Sulfide ed Rhizos nce of Rec t Iron Red d or Stres (Explain in	A and 4B) rates (B13 e Odor (C1 pheres alo duced Iron luction in P sed Plants n Remarks ):	(C4) (D1) (LF	t Roots (C3) pils (C6) RR A)  Wetland Hy	Secco Wa Dra Dry Satt Geo Sha FAO Rais	andary Indicater-Stained Leta and 4B) inage Patterr-Season Water and Visible omorphic Postellow Aquitare C-Neutral Tested Ant Mourst-Heave Hur	eaves (2 or moreaves (B9) (Notes (B10))  er Table (C2) e on Aerial Intelition (D2) I (D3) est (D5) ends (D6) (LRI emmocks (D7)	e requii	red , <b>2</b> ,
Primary Indicators (any Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Cracl Inundation Visible Sparsely Vegetate Field Observations: Surface Water Present' Water table Present? Saturation Present? Situration Present?	one indicate (A2) (S (B2) (B4) (SS (B6) On Aerial In (Concave  Yes Yes Yes Yes	nagery (B7 Surface (B No	Water-   MLF     Salt Cr     Aquatic     Hydrog     Oxidize     Preser     Recen:     Stunte     Other (	RA 1, 2, 4/ rust (B11) c Inverteb gen Sulfide ed Rhizos nce of Rec t Iron Red d or Stres (Explain in	A and 4B) rates (B13 e Odor (C1 pheres alo duced Iron luction in P sed Plants n Remarks ):	(C4) (D1) (LF	t Roots (C3) pils (C6) RR A)  Wetland Hy	Secco Wa Dra Dry Satt Geo Sha FAO Rais	andary Indicater-Stained Leta and 4B) inage Patterr-Season Water and Visible omorphic Postellow Aquitare C-Neutral Tested Ant Mourst-Heave Hur	eaves (2 or moreaves (B9) (Notes (B10))  er Table (C2) e on Aerial Intelition (D2) I (D3) est (D5) ends (D6) (LRI emmocks (D7)	e requii	red, <b>2</b> ,

te: WA Sampling Point: 8 3, T5N, R1W  ne): concave Slope (%): 0-3% ng: -122.749242844 Datum:  Classification: PEM1A  No (If no, explain in Remarks) al Circumstances" Present? Yes X No explain any answers in Remarks.)  sects, important features, etc.
ne): concave Slope (%): 0-3%  ng:122.749242844 Datum:  Classification: PEM1A  No (If no, explain in Remarks)  al Circumstances" Present? YesX No  explain any answers in Remarks.)  sects, important features, etc.
ng:122.749242844 Datum:
Classification: PEM1A  No(If no, explain in Remarks) al Circumstances" Present? Yes X No explain any answers in Remarks.)  sects, important features, etc.
No(If no, explain in Remarks) al Circumstances" Present? Yes X No explain any answers in Remarks.)  sects, important features, etc.
al Circumstances" Present? Yes X No explain any answers in Remarks.)  sects, important features, etc.
explain any answers in Remarks.)  sects, important features, etc.
sects, important features, etc.
es <u>x</u> No
es <u>x</u> No
Test worksheet:  cominant Species L, FACW, or FAC: 2 (A)
er of Dominant
oss All Strata: <b>2</b> (B)
ominant Species
L, FACW, or FAC: 100% (A/B)
Index Worksheet:           Cover of:         Multiply by:           s         x1 =           es         x2 =           s         x3 =           es         x4 =
x5 = 0
als: <b>0</b> (A) <b>0</b> (B)
e Index = B/A =
: Vegetation Indicators:
Rapid Test for Hydrophytic Vegetation Dominance Test is >50%
Prevalence Index is ≤3.0 <sup>1</sup> Morphological Adaptation1 (Provide supporting a in Remarks or on a separate sheet)  Wetland Non-Vascular Plants <sup>1</sup> blematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Morphological Adaptation1 (Provide supporting a in Remarks or on a separate sheet) Wetland Non-Vascular Plants <sup>1</sup>
Morphological Adaptation1 (Provide supporting a in Remarks or on a separate sheet) Wetland Non-Vascular Plants <sup>1</sup>
Morphological Adaptation1 (Provide supporting a in Remarks or on a separate sheet) Wetland Non-Vascular Plants <sup>1</sup>
Morphological Adaptation1 (Provide supporting a in Remarks or on a separate sheet) Wetland Non-Vascular Plants <sup>1</sup> blematic Hydrophytic Vegetation <sup>1</sup> (Explain)  f hydric soil and wetland hydrology must

SOIL								•	sampling Poin	ι	
Profile Des	cription: (Describ	e to the dep	th needed to doc	ument th	e indicato	or or con	firm the abs	sence of	indicators.)		
Depth	Matrix		Re	dox Featu	ıres						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textur	е		Remarks	
0-6	10 YR 2/2	100	· · · · · · · · · · · · · · · · · · ·				SiS				
6-13	10YR2/2	70	10YR3/4	20	С	М	S				
			10YR4/1	10	D	М	S				
1Type: C=C	oncentration, D=De	nletion RM	-Reduced Matrix (	-S=Cove	red or Cos	ted San	d Graine 2	ocation:	DI –Dore I inin	na M–Matriy	
		•				ileu Sanc					
=	Indicators: (Appl	icable to all			-		Indicators		blematic Hyd		
Histose	` '			Redox (S5					m Muck (A10)		
	Epipedon (A2)			d Matrix (S		/awaam4	MI DA 4\		d Parent Mate		
	Histic (A3)			-	neral (F1)	(except	WILKA 1)	01	her (Explain in	Remarks)	
	gen Sulfide (A4) ed Below Dark Suri	faco (A11)		-	atrix (F2)						
		` '		d Matrix (			<sup>3</sup> Indi	antors of	hydrophytic ve	agotation and	
	Dark Surface (A12) Muck Mineral (S1)			Dark Surfa	urface (F7)	١			drology must b	-	
	gleyed Matrix (S4)			Depressio		,		-	sturbed or prol	-	
	Layer (if present):	:	Nedox I	Jepi essio	113 (1 0)		'	uriless dis	starbed or pro	olemano.	
Type:	, , ,										
Depth (inche	es):					Ну	dric Soil Pr	esent?	Υe	es x	No
emarks:											
IYDROLOGY	,										
Wetland Hy	drology Indicator	s:									
Primary Indi	cators (any one ind	licator is suffi	cient)					Sec	ondary Indicat	ors (2 or more	e required)
Surfac	e Water (A1)		Water-S	Stained Le	eaves (B9)	(except		Wa	ater-Stained L	eaves (B9) ( <b>N</b>	ILRA 1, 2,
High W	Vater Table (A2)				and 4B)				4A and 4B)		
	tion (A3)			ıst (B11)					ainage Patterr	` ,	
	Marks (B1)				ates (B13)				y-Season Wat		
	ent Deposits (B2)		<del></del> · ·		Odor (C1	•			turation Visible		agery (C9)
	eposits (B3)					-	Roots (C3)		omorphic Pos		
	/lat or Crust (B4)				uced Iron	` '			allow Aquitard	,	
	eposits (B5)				uction in P				.C-Neutral Tes	` ,	
	e Soil Cracks (B6)				sed Plants		RA)		ised Ant Mour	. , ,	R A)
	tion Visible on Aeri			=xpiain in	Remarks)			Fro	ost-Heave Hur	nmocks (D7)	
	ely Vegetated Conc	ave Surrace	(B8)								
Field Obser		es	No X Depth	n (inches)							
Water table				i (inches)							
Saturation P		es	No x Depth	n (inches)	:		Wetland H	lydrology	Present?	Yes x	_No
,	pillary fringe)			1 (		\	7 7 1 1				
escribe Reco	orded Data (stream	gauge, moni	itoring well, aerial p	photos, pr	evious ins	pections)	), if available:	:			
temarks: Ass	umed seasonal hig	h water table									
	3										

Project/Site: I-5 Woodland			City/County	: Woodland	/Cowlitz Sampling Date: Oct.8,	, 2020
Applicant/Owner: Logan Partners LLC					State: WA Sampling Point:	
nvestigator(s): KB			_		, Range: S13, T5N, R1W	
	errace		_	•	e, convex, none): none Slope (%):	0-3%
subregion (LRR): Northwest Forests and		Lat:		45.92	<u>1974237</u> Long: <u>-122.749291373</u> Datum:	
oil Map Unit Name: Newberg fine s					NWI Classification: PEM1A	
re climatic / hydrologic conditions on the			•	Yes_	X No (If no, explain in Remarks	
re Vegetation, Soil,						_No
re Vegetation, Soil,	or Hydrology	-	naturally pr	oblematic?	(If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attac	ch site map s	showing	sampling	point loca	ations, transects, important features, etc.	
lydrophytic Vegetation Present? Y	∕es <u>x</u> No	)	lo the St	ampled Are	_	
lydric Soil Present? Y	/es No	<u> </u>		ampied Are a Wetland?	YAS NO Y	
Vetland Hydrology Present?	es No	<u> </u>				
/EGETATION						
ree Stratum (Use scientific names.)		Absolute % Cover	Dominant Species?	Indicator Status?	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:	
·					3	_(A)
i.					Total Number of Dominant Species Across All Strata:	(D)
						_(B)
• ,	Total Cover:	0	-		Percent of Dominant Species That Are OBL, FACW, or FAC: 75%	(A/B)
	Total Cover.				111dt 711e GBE, 1710vv, 011710.	_(/(D)
Shrub Stratum					Prevalence Index Worksheet:	
. Crataegus monogyna		10	Υ	IFAC□	Total % Cover of: Multiply by:	
. Rubus armeniacus		20	Y	ıFAC□	OBL species x1 = 0	_
					FACW speciesx2 = <b>0</b>	_
·					FAC speciesx3 = <b>0</b>	_
·			-		FACU species x4 = <b>0</b>	_
	Total Cover:	30			UPL speciesx5 = <b>0</b>	-
lerb Stratum				<b>=</b> 4014/=	Column Totals: 0 (A) 0	_(B)
Phalaris arundinacea		30	<u>Y</u>	#ACW	Prevalence Index = B/A =	-
Anthoxanthum odoratum		40	Y	□FACU□ □FAC□	I hadaa ahadia Waasaadia ahadia ahaa	
Holcus lanatus Carex obnupta		10 5		©BL□	Hydrophytic Vegetation Indicators:	
•			-		1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%	
			-		3 - Prevalence Index is ≤3.0¹	
-			· <del></del>	· ———	4 - Morphological Adaptation1 (Provide supp	ortina
					data in Remarks or on a separate sheet)	۳
					5 - Wetland Non-Vascular Plants <sup>1</sup>	
0.					Problematic Hydrophytic Vegetation <sup>1</sup> (Explain	n)
1.						
	Total Cover:	85				
Woody Vine Stratum					<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
					Hydrophytic	
	Tatal Cavar				Vegetation	
					1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	
% Bare Ground in Herb Strat		Cover of B	iotic Crust	0	Present?	

SOIL								Sampling P	oint:		9
Profile Des	cription: (Desc	ribe to the dep	oth needed to	document t	he indicat	tor or co	onfirm the abse	ence of indicators	.)		
Depth	Matr	-		Redox Fea					,		
(inches)	Color (moist		Color (mois		Type <sup>1</sup>	Loc <sup>2</sup>	<del>-</del> Texture	<b>.</b>	Remarks		
0-6	10 YR 2/2	100	Ooloi (IIIolo	70	Турс		SiL	<u> </u>	remans		
6-8	10YR5/6	100					S				
8-16	10YR2/2	100			_		SiL				
0-10	1011(2/2				_		OIL				
		<del></del>						<u> </u>			
	-							<u> </u>			
		<del></del>						<u> </u>			
		<del></del>					_				
<sup>1</sup> Type: C=C	Concentration D=	Depletion RM	=Reduced Ma	trix CS=Cov	ered or Co	nated Sar	nd Grains <sup>2</sup> I c	ocation: PL=Pore L	ining, M=Matrix		
. , , , , , , ,				,					g,		
Hydric Soil	Indicators: (Ap	oplicable to all	LRRs, unles	s otherwise	noted.)		Indicators	for Problematic H	lydric Soils³:		
Histos	ol (A1)		Sa	indy Redox (	S5)			2 cm Muck (A			
Histic	Epipedon (A2)		Sti	ripped Matrix	(S6)			Red Parent M	laterial (TF2)		
Black	Histic (A3)		Lo	amy Mucky N	/lineral (F1	) (excep	t MLRA 1)	Other (Explain	n in Remarks)		
Hydro	gen Sulfide (A4)		Lo	amy Gleyed I	Matrix (F2	)					
Deplet	ted Below Dark S	Surface (A11)	De	pleted Matrix	(F3)						
Thick I	Dark Surface (A1	2)	Re	dox Dark Su	rface (F6)		<sup>3</sup> Indic	ators of hydrophytic	c vegetation and	t	
Sandy	Muck Mineral (S	51)	De	pleted Dark	Surface (F	7)	we	tland hydrology mu	st be present,		
Sandy	gleyed Matrix (S	4)	Re	dox Depress	ions (F8)		u	ınless disturbed or ı	problematic.		
Restrictive	Layer (if preser	nt):									
Type:											
Depth (inch	es):					⊦	lydric Soil Pre	esent?	Yes	No_	Х
Remarks:											
HYDROLOGY											
-	drology Indicat										
	icators (any one	indicator is suff							icators (2 or mo		•
	ce Water (A1)			ater-Stained l			ot .		d Leaves (B9) (	MLRA 1,	, 2,
High V	Vater Table (A2)			MLRA 1, 2, 4		)		4A and 4E	3)		
	ation (A3)			lt Crust (B11	,			Drainage Pat			
	Marks (B1)			uatic Invertel				•	Water Table (C2	•	
Sedim	ent Deposits (B2	)		drogen Sulfic	-	-	•	Saturation Vis	sible on Aerial Ir	nagery (	C9)
Drift D	eposits (B3)				•	•	g Roots (C3)	Geomorphic I	Position (D2)		
Algal N	Mat or Crust (B4)			esence of Re		` '	•	Shallow Aquit	tard (D3)		
	eposits (B5)			ecent Iron Re			` '	FAC-Neutral			
Surfac	e Soil Cracks (B	6)	St	unted or Stre	ssed Plant	s (D1) ( <b>L</b>	.RR A)	Raised Ant M	lounds (D6) ( <b>LR</b>	(R A)	
Inunda	ation Visible on A	erial Imagery (I	B7) Ot	her (Explain i	n Remarks	s)		Frost-Heave	Hummocks (D7)	)	
Sparse	ely Vegetated Co	ncave Surface	(B8)								
Field Obse	rvations:										
	iter Present?	Yes		Depth (inches							
Water table Saturation F		Yes Yes		Depth (inches Depth (inches			Wotland Hy	/drology Present?	Yes	No	v
	apillary fringe)		110 <u>x</u>	Deptii (iiiones	s)		Wetlanding	diology i resent:	163	_'''' _	Х
	orded Data (strea	am gauge, mon	itoring well, a	erial photos, ¡	orevious in	spection	s), if available:				
Damad											
Remarks:											

Project/Site:	I-5 Woodland		City/County:	Woodland	/Cowlitz		Sampling Date: O	ct.8, 2020
Applicant/Owner:	Logan Partners LLC					State: WA	Sampling Point:	10
Investigator(s):	KB		Section	n, Township	, Range:	S13, T5N, R1W		
Landform (hillslop	e, terrace, etc.): terrace		Local re	elief (concav	e, convex	, none): none	Slope (	(%): 0-3%
Subregion (LRR):	Northwest Forests and Coast (LRR A	) Lat:		45.922	2216307	Long:	122.749174627 Da	tum:
Soil Map Unit Nan	ne: Newberg fine sandy loam					NWI Classification	: PEM1A	
Are climatic / hydr	ologic conditions on the site typical for t	his time of	year?	Yes	Χ	No	(If no, explain in Rem	arks)
Are Vegetation	, Soil, or Hydrology		significantly	disturbed?	Are "N	Iormal Circumstan	ces" Present? Yes	X No
Are Vegetation	, Soil, or Hydrology		naturally pr	oblematic?	(If nee	eded, explain any a	inswers in Remarks.)	
SUMMARY OF	FINDINGS – Attach site map	showing	sampling	point loca	ations, t	transects, impo	ortant features, etc	<b>`</b> .
Hydrophytic Veget	tation Present? Yes x No	)						
Hydric Soil Preser		)		ampled Area a Wetland?		Yes x	No	
Wetland Hydrolog			- Within 6	a welland?			<u> </u>	
VEGETATION								
VEGETATION		A1 1 .	<b>D</b> : .	1 12 4	Domina	maa Taat waskab		
		Absolute % Cover	Dominant Species?	Indicator Status?		ince Test worksho		
,	se scientific names.)		· <u> </u>			of Dominant Spece OBL, FACW, or F	EAC:	
1. Populus balsa	amitera	75	Y	EAC□_				(A)
·						umber of Dominant Across All Strata:		<b>(D)</b>
3.			·	· ———	'		2	(B)
4	T-t-l O		·	· ———		of Dominant Spec		(A /D)
	Total Cover:	75	<u>-</u>		That Are	e OBL, FACW, or F	FAC: 100%	(A/B)
Shrub Stratum					Prevale	nce Index Worksl	neet:	
1.						tal % Cover of:	Multiply by:	
<u> </u>					OBL spe		x1 = <b>0</b>	
2					1	species		
					FAC spe		x3 = <b>0</b>	
5.					1	pecies	x4 = <b>0</b>	
	Total Cover:	0			UPL spe	ecies	x5 = <b>0</b>	
Herb Stratum					Column	Totals: 0		(B)
1. Phalaris arund	dinacea	100	Y	JFACW □	1		=	
2								
3					Hydrop	hytic Vegetation I	ndicators:	
4						1 - Rapid Test for	r Hydrophytic Vegetation	n
5					X	2 - Dominance Te		
6						3 - Prevalence In	dex is ≤3.0 <sup>1</sup>	
7						4 - Morphological	Adaptation1 (Provide s	supporting
8							or on a separate sheet)	•
9						5 - Wetland Non-		
10						Problematic Hydr	ophytic Vegetation <sup>1</sup> (Ex	plain)
11								
	Total Cover:	100	-					
Woody Vine S							nd wetland hydrology mi	ust
1. Rubus ursinus	3	10%	Y	FACU□	be prese	ent, unless disturbe	ed or problematic.	
2			·		Hydrop	hytic		
	Total Cover:				Vegetat			
	are Ground in Herb Stratum 0 %	Cover of B	iotic Crust	0	Present	17	Yes x No	
Remarks:								

Profile Des								Sampling	1 01111.	1
Denth	scription: (Describe	to the de	oth needed to doc	ument tl	ne indicato	r or con	firm the ab	sence of indicator	·s.)	
Берит	Matrix		Re	dox Feat	ures					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textu	re	Remarks	
0-4	10 YR 3/2	100					SL			
4-12	10YR3/2	95	7.5YR3/4	5	С	М	SL			
								·		
1 <sub>Type: C=0</sub>	Concentration, D=Dep	lotion DM	-Poducod Matrix		rod or Coo	tod Son	Croine 2	Location: DI -Poro	Lining M-Matrix	
Type. C-C	Concentration, D-Dep	delion, Kivi	-Reduced Matrix, (	J3-00V6	ered or Coa	ieu Sani	i Grains. T	Location. PL=Pore	Liffing, ivi=iviatrix.	
Hydric Soi	I Indicators: (Applic	able to all	I LRRs, unless oth	erwise	noted.)		Indicator	rs for Problematic	Hydric Soils <sup>3</sup> :	
Histos	sol (A1)		Sandy F	Redox (S	5)			2 cm Muck	(A10)	
Histic	Epipedon (A2)		Stripped	d Matrix (	S6)			Red Parent	Material (TF2)	
	Histic (A3)				ineral (F1) (	except	MLRA 1)	Other (Expla	ain in Remarks)	
	gen Sulfide (A4)			-	latrix (F2)					
	ted Below Dark Surfa	ce (A11)		d Matrix			2.			
	Dark Surface (A12)				face (F6)			dicators of hydrophy	=	
	y Muck Mineral (S1)				urface (F7)		W	vetland hydrology m		
	y gleyed Matrix (S4)		Redox I	Depressi	ons (F8)			unless disturbed o	r problematic.	
	Layer (if present):									
Type: Depth (inch	refusal nes): 1	2	<u></u>			ш,	dric Soil P	rocont?	Yes x N	lo
Remarks:	100).					,	dile doll i	resent:	103 <u> </u>	
	Y									
	Y ydrology Indicators:									
Wetland H			ficient)					Secondary In	ndicators (2 or more re	equired)
Wetland H	ydrology Indicators:			Stained L	eaves (B9)	(except			ndicators (2 or more rolled Leaves (B9) ( <b>MLF</b>	
Wetland Hy Primary Ind Surface	ydrology Indicators: licators (any one indic		Water-S	A 1, 2, 4	eaves (B9) <b>A and 4B</b> )	(except			ned Leaves (B9) (MLF	
Wetland Hy Primary Ind Surface High \ Satura	ydrology Indicators: dicators (any one indic ce Water (A1) Water Table (A2) ation (A3)		Water-S MLR Salt Cru	<b>A 1, 2, 4</b> ust (B11)	A and 4B)			Water-Stain  4A and 4  Drainage Pa	ned Leaves (B9) ( <b>MLF</b> 4 <b>B</b> ) atterns (B10)	
Wetland Hy Primary Ind Surface High \ Satura Water	ydrology Indicators: dicators (any one indic ce Water (A1) Water Table (A2) ation (A3) r Marks (B1)		Water-S MLR Salt Cru Aquatic	<b>A 1, 2, 4</b> ist (B11) Inverteb	A and 4B)			Water-Stain  4A and 4  Drainage Pa  Dry-Season	ned Leaves (B9) ( <b>MLF</b> 4 <b>B</b> ) atterns (B10) a Water Table (C2)	RA 1, 2,
Wetland Hy Primary Ind Surface High \ Satura Water Sedim	ydrology Indicators: dicators (any one indic ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2)		Water-S MLR Salt Cru Aquatic Hydroge	<b>A 1, 2, 4</b> Ist (B11) Inverteb en Sulfid	<b>A and 4B</b> ) rates (B13) e Odor (C1)			Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \	ned Leaves (B9) ( <b>MLF</b> <b>4B</b> ) atterns (B10) Water Table (C2) //sible on Aerial Imag	RA 1, 2,
Wetland Hyprimary Ind Surface High Ny Satura Water Sedim Drift D	ydrology Indicators: dicators (any one indicators (A1) Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3)		Water-S MLR. Salt Cru Aquatic Hydrogo	A 1, 2, 4, ust (B11) Inverteben Sulfider Rhizos	A and 4B) rates (B13) e Odor (C1) pheres alon	ng Living	Roots (C3)	Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \  X Geomorphic	ned Leaves (B9) ( <b>MLF</b> 4B) atterns (B10) Water Table (C2) Visible on Aerial Imag	RA 1, 2,
Wetland Hyprimary Ind Surface High V Satura Water Sedim Drift D Algal	ydrology Indicators: dicators (any one indicators (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4)		Water-S MLR Salt Cru Aquatic Hydroge Oxidize Presence	A 1, 2, 4, ast (B11) Inverteben Sulfided Rhizoste of Reco	A and 4B) rates (B13) e Odor (C1) pheres alon duced Iron (	ig Living C4)	Roots (C3)	Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \  X Geomorphic  Shallow Aqu	ned Leaves (B9) (MLF 4B) atterns (B10) Water Table (C2) /isible on Aerial Imag c Position (D2) uitard (D3)	RA 1, 2,
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Iron D	ydrology Indicators: dicators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)		Water-S MLR Salt Cru Aquatic Hydroge Oxidize Present Recent	A 1, 2, 4, ast (B11) Inverteben Sulfided Rhizoste of Recollection Red	A and 4B) rates (B13) e Odor (C1) pheres alon duced Iron ( uction in Ple	ng Living C4) powed Sc	Roots (C3) iils (C6)	Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \  X Geomorphic  Shallow Aqu  X FAC-Neutra	ned Leaves (B9) (MLF 4B) atterns (B10) water Table (C2) /isible on Aerial Imag c Position (D2) uitard (D3) al Test (D5)	RA 1, 2,
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal I Iron D Surface	ydrology Indicators: dicators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6)	ator is suff	Water-S MLR. Salt Cru Aquatic Hydrogo Oxidize Presend Recent Stunted	A 1, 2, 4, ust (B11) Inverteben Sulfided Rhizose of Record	A and 4B) rates (B13) e Odor (C1) pheres alon duced Iron ( uction in Ple sed Plants	ng Living C4) powed Sc	Roots (C3) iils (C6)	Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \  X Geomorphic  Shallow Aqu  X FAC-Neutra  Raised Ant	ned Leaves (B9) (MLF 4B) atterns (B10) Water Table (C2) /isible on Aerial Imag c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A	RA 1, 2,
Wetland Hy Primary Ind Surface High N Satura Water Sedim Drift D Algal I Iron D Surface Inunda	ydrology Indicators: dicators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6) ation Visible on Aerial	ator is suff	Water-S MLR. Salt Cru Aquatic Hydroge Oxidize Presene Recent Stunted B7) Water-S	A 1, 2, 4, ust (B11) Inverteben Sulfided Rhizose of Record	A and 4B) rates (B13) e Odor (C1) pheres alon duced Iron ( uction in Ple	ng Living C4) powed Sc	Roots (C3) iils (C6)	Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \  X Geomorphic  Shallow Aqu  X FAC-Neutra  Raised Ant	ned Leaves (B9) (MLF 4B) atterns (B10) water Table (C2) /isible on Aerial Imag c Position (D2) uitard (D3) al Test (D5)	RA 1, 2, ery (C9)
Primary Ind Surface High N Satura Water Sedim Drift D Algal I Iron D Surface Inunda	ydrology Indicators: dicators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) In Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) In Soil Cracks (B6)	ator is suff	Water-S MLR. Salt Cru Aquatic Hydroge Oxidize Presene Recent Stunted B7) Water-S	A 1, 2, 4, ust (B11) Inverteben Sulfided Rhizose of Record	A and 4B) rates (B13) e Odor (C1) pheres alon duced Iron ( uction in Ple sed Plants	ng Living C4) powed Sc	Roots (C3) iils (C6)	Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \  X Geomorphic  Shallow Aqu  X FAC-Neutra  Raised Ant	ned Leaves (B9) (MLF 4B) atterns (B10) Water Table (C2) /isible on Aerial Imag c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A	RA 1, 2, ery (C9)
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal I Iron D Surface Inunda Spars	ydrology Indicators: dicators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) In Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) In Soil Cracks (B6)	ator is suff	Water-S MLR. Salt Cru Aquatic Hydroge Oxidize Presend Recent Stunted B7) (B8)	A 1, 2, 4, ust (B11) Inverteben Sulfided Rhizose of Record	A and 4B) rates (B13) e Odor (C1) pheres alon duced Iron ( uction in Pla sed Plants in Remarks)	ng Living C4) powed Sc	Roots (C3) iils (C6)	Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \  X Geomorphic  Shallow Aqu  X FAC-Neutra  Raised Ant	ned Leaves (B9) (MLF 4B) atterns (B10) Water Table (C2) /isible on Aerial Imag c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A	RA 1, 2,
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal I Iron D Surface Inunda Spars Field Obse Surface Wa Water table	ydrology Indicators: dicators (any one indicators (any one indicator) Water Table (A2) ation (A3) In Marks (B1) In Marks (B1) In Marks (B2) In Marks (B2) In Marks (B3) Mat or Crust (B4) In Marks (B5) In Marks (B5) In Marks (B6) In Marks (B1) In Marks (B2) In	Imagery (Ive Surface	Water-S   MLR     Salt Cru     Aquatic     Hydroge     Oxidize     Present     Recent     Stunted     Stunted     B7     (B8)     No	A 1, 2, 4, ast (B11) Inverteben Sulfidd Rhizos ce of Record or Stres Explain in (inches a (inches)	A and 4B) rates (B13) e Odor (C1) pheres alon duced Iron ( uction in Pla sed Plants in Remarks)	ng Living C4) powed Sc	Roots (C3) oils (C6) tR A)	Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \  X Geomorphic  Shallow Aqu  X FAC-Neutra  Raised Ant  Frost-Heave	ned Leaves (B9) (MLF 4B) atterns (B10) water Table (C2) /isible on Aerial Imag c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A e Hummocks (D7)	ery (C9)
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal I Iron D Surface Inunda Spars Field Obse Surface Water table Saturation I	ydrology Indicators: dicators (any one indicators (any one indicator) Water Table (A2) ation (A3) In Marks (B1) In Marks (B1) In Marks (B2) In Marks (B2) In Marks (B3) Mat or Crust (B4) In Marks (B5) In Marks (B5) In Marks (B6) In Marks (B1) In Marks (B2) In	Imagery (Ive Surface	Water-S   MLR     Salt Cru     Aquatic     Hydroge     Oxidize     Present     Recent     Stunted     Stunted     B7     (B8)     No	A 1, 2, 4, ast (B11) Inverteben Sulfidd Rhizos ce of Record or Stress Explain in (inches)	A and 4B) rates (B13) e Odor (C1) pheres alon duced Iron ( uction in Pla sed Plants in Remarks)	ng Living C4) powed Sc	Roots (C3) oils (C6) tR A)	Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \  X Geomorphic  Shallow Aqu  X FAC-Neutra  Raised Ant	ned Leaves (B9) (MLF 4B) atterns (B10) water Table (C2) /isible on Aerial Imag c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A e Hummocks (D7)	ery (C9)
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal I Iron D Surface Inunda Spars Field Obse Surface Water table Saturation I (includes ca	ydrology Indicators: dicators (any one indicators (any one indicator) Water Table (A2) ation (A3) In Marks (B1) In Marks (B1) In Marks (B2) In Marks (B2) In Marks (B3) Mat or Crust (B4) In Marks (B5) In Marks (B5) In Marks (B6) In Marks (B1) In Marks (B2) In	Imagery (Ive Surface	Water-S   MLR     Salt Cru     Aquatic     Hydroge     Oxidize     Present     Recent     Stunted     Stunted     Hydroge     Oxidize     Present     Recent     Stunted     Other (E	A 1, 2, 4, ast (B11) Inverteben Sulfidd Rhizos ce of Recorder Stress Explain in (inches a (inche	A and 4B) rates (B13) e Odor (C1) pheres alon duced Iron ( uction in Pla sed Plants in Remarks)  : : : : : : : : : : : : : : : : : :	g Living C4) owed Sc (D1) (LR	Roots (C3)  ils (C6)  R A)  Wetland I	Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \  X Geomorphic  Shallow Aqu  X FAC-Neutra  Raised Ant  Frost-Heave	ned Leaves (B9) (MLF 4B) atterns (B10) water Table (C2) /isible on Aerial Imag c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A e Hummocks (D7)	ery (C9)
Wetland Hy Primary Ind Surface High \ Satura Water Sedim Drift D Algal I Iron D Surface Inunda Spars Field Obse Surface Wa Water table Saturation I (includes ca	ydrology Indicators: dicators (any one indicators (any one indicator) Water Table (A2) ation (A3) In Marks (B1) In Marks (B1) In Marks (B2) In Marks (B2) In Marks (B3) Mat or Crust (B4) In Marks (B5) In Marks (B5) In Marks (B6) In Marks (B1) In Marks (B2) In	Imagery (Ive Surface	Water-S   MLR     Salt Cru     Aquatic     Hydroge     Oxidize     Present     Recent     Stunted     Stunted     Hydroge     Oxidize     Present     Recent     Stunted     Other (E	A 1, 2, 4, ast (B11) Inverteben Sulfidd Rhizos ce of Recorder Stress Explain in (inches a (inche	A and 4B) rates (B13) e Odor (C1) pheres alon duced Iron ( uction in Pla sed Plants in Remarks)  : : : : : : : : : : : : : : : : : :	g Living C4) owed Sc (D1) (LR	Roots (C3)  ils (C6)  R A)  Wetland I	Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \  X Geomorphic  Shallow Aqu  X FAC-Neutra  Raised Ant  Frost-Heave	ned Leaves (B9) (MLF 4B) atterns (B10) water Table (C2) /isible on Aerial Imag c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A e Hummocks (D7)	ery (C9)
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal I Iron D Surface Inunda Spars Field Obse Surface Water table Saturation I (includes ca	ydrology Indicators: dicators (any one indicators (any one indicator) Water Table (A2) ation (A3) In Marks (B1) In Marks (B1) In Marks (B2) In Marks (B2) In Marks (B3) Mat or Crust (B4) In Marks (B5) In Marks (B5) In Marks (B6) In Marks (B1) In Marks (B2) In	Imagery (Ive Surface	Water-S   MLR     Salt Cru     Aquatic     Hydroge     Oxidize     Present     Recent     Stunted     Stunted     Hydroge     Oxidize     Present     Recent     Stunted     Other (E	A 1, 2, 4, ast (B11) Inverteben Sulfidd Rhizos ce of Recorder Stress Explain in (inches a (inche	A and 4B) rates (B13) e Odor (C1) pheres alon duced Iron ( uction in Pla sed Plants in Remarks)  : : : : : : : : : : : : : : : : : :	g Living C4) owed Sc (D1) (LR	Roots (C3)  ils (C6)  R A)  Wetland I	Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \  X Geomorphic  Shallow Aqu  X FAC-Neutra  Raised Ant  Frost-Heave	ned Leaves (B9) (MLF 4B) atterns (B10) water Table (C2) /isible on Aerial Imag c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A e Hummocks (D7)	ery (C9)
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal I Iron D Surface Inunda Spars Field Obse Surface Wa Water table Saturation I (includes ca	ydrology Indicators: dicators (any one indicators (any one indicator) Water Table (A2) ation (A3) In Marks (B1) In Marks (B1) In Marks (B2) In Marks (B2) In Marks (B3) Mat or Crust (B4) In Marks (B5) In Marks (B5) In Marks (B6) In Marks (B1) In Marks (B2) In	Imagery (Ive Surface	Water-S   MLR     Salt Cru     Aquatic     Hydroge     Oxidize     Present     Recent     Stunted     Stunted     Hydroge     Oxidize     Present     Recent     Stunted     Other (E	A 1, 2, 4, ast (B11) Inverteben Sulfidd Rhizos de of Red Iron Red or Stres Explain ir	A and 4B) rates (B13) e Odor (C1) pheres alon duced Iron ( uction in Pla sed Plants in Remarks)  : : : : : : : : : : : : : : : : : :	g Living C4) owed Sc (D1) (LR	Roots (C3)  ils (C6)  R A)  Wetland I	Water-Stain  4A and 4  Drainage Pa  Dry-Season  Saturation \  X Geomorphic  Shallow Aqu  X FAC-Neutra  Raised Ant  Frost-Heave	ned Leaves (B9) (MLF 4B) atterns (B10) water Table (C2) /isible on Aerial Imag c Position (D2) uitard (D3) al Test (D5) Mounds (D6) (LRR A e Hummocks (D7)	ery (C9)

Project/Site:	I-5 Woodland		City/County	: Woodland	/Cowlitz	Sampling Date: Oct.8, 2020
Applicant/Owner:	Logan Partners LLC				State: WA	Sampling Point: 11
Investigator(s):	KB		Section	n, Township	, Range: S13, T5N, R1W	
Landform (hillslope	e, terrace, etc.): terrace		_ Local re	elief (concav	e, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR):	Northwest Forests and Coast (LR	<del></del>		45.92	2219810 Long: -1	122.749204083 Datum:
Soil Map Unit Nam					NWI Classification:	
	ologic conditions on the site typical			Yes	X No	_` ' ' '
	, Soil, or Hydrolog					ces" Present? Yes X No
Are Vegetation	, Soil, or Hydrolog	gy	naturally pr	oblematic?	(If needed, explain any a	nswers in Remarks.)
SUMMARY OF	FINDINGS - Attach site ma	ap showing	sampling	point loca	ations, transects, impo	ortant features, etc.
Hydrophytic Vegeta	ation Present? Yes x	No	1.4.0			
Hydric Soil Present	t? Yes	No x		ampled Are a Wetland?	YAS	No x
Wetland Hydrology	Present? Yes	No <u>x</u>				
VEGETATION						
		Absolute	Dominant	Indicator	Dominance Test workshe	ent.
T 0:		% Cover	Species?	Status?	Number of Dominant Spec	
\	se scientific names.)	-			That Are OBL, FACW, or F	-ΔC-
<ol> <li>Populus balsa</li> <li>Prunus emargi</li> </ol>			Y	#ACU□	Total Number of Dominant	(A)
<ol> <li>Prunus emargi</li> <li>3.</li> </ol>	mata		· <del></del>		Species Across All Strata:	<b>4</b> (B)
4.			-			, ,
4.	Total Co	ver: 75	-	. ———	Percent of Dominant Speci That Are OBL, FACW, or F	
	rotal oc	70	•		That the OBE, I NOW, OI I	(775)
Shrub Stratum					Prevalence Index Worksh	neet:
Rubus armenia	acus	20	Υ	JFAC□	Total % Cover of:	Multiply by:
2.					OBL species	x1 = <b>0</b>
3.		_			FACW species	x2 = <b>0</b>
4			· <u></u>		FAC species	_x3 =
5		_			FACU species	x4 = <b>0</b>
	Total Co	over: 20			UPL species	_x5 = <b>0</b>
Herb Stratum					Column Totals: 0	_(A)(B)
1. Phalaris arund	linacea	30	Y	FACW □	Prevalence Index = B/A =	=
2			-	. ————		
			· <del></del>		Hydrophytic Vegetation II	
_						Hydrophytic Vegetation
			-	. ———	2 - Dominance Te 3 - Prevalence Inc	
7				-	<del></del>	Adaptation1 (Provide supporting
0				·		or on a separate sheet)
					5 - Wetland Non-	'
-				. ———		ophytic Vegetation <sup>1</sup> (Explain)
					Troblematio Tryan	spriyilo vegetation (Explain)
	Total Co	ver: 30		·		
Woody Vine S			•		<sup>1</sup> Indicators of hydric soil an	d wetland hydrology must
Rubus ursinus	<u></u>	60%	Υ		be present, unless disturbe	
2.					Hydrophytic	
	Total Co	over: 60			Vegetation	
% Bai	re Ground in Herb Stratum 50	% Cover of B	iotic Crust	0	Present?	Yes x No
Remarks:					1	

SOIL								Sampli	ng Point:	1
Profile Des	scription: (Describe	to the dep	th needed to doo	ument th	ne indicator	or confi	rm the abse	ence of indica	tors.)	
Depth	Matrix		Re	dox Feat	ures					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remark	KS
0-12	10YR3/2	100					SL			
Type: C=0	Concentration, D=Dep	oletion, RM=	=Reduced Matrix,	CS=Cove	ered or Coate	ed Sand	Grains. <sup>2</sup> Lo	ocation: PL=Po	ore Lining, M=Mat	rix.
Hydric Soi	I Indicators: (Applic	cable to all	LRRs, unless otl	herwise r	noted.)		Indicators	for Problema	tic Hydric Soils <sup>3</sup>	:
Histos	sol (A1)		Sandy	Redox (S	5)			2 cm Mu	ck (A10)	
Histic	Epipedon (A2)		Strippe	d Matrix (	S6)			Red Pare	ent Material (TF2)	
Black	Histic (A3)		Loamy	Mucky M	ineral (F1) ( <b>e</b>	xcept M	LRA 1)	Other (E	xplain in Remarks	,)
Hydro	gen Sulfide (A4)		Loamy	Gleyed M	latrix (F2)					
Deple	eted Below Dark Surfa	ace (A11)	Deplete	ed Matrix	(F3)					
Thick	Dark Surface (A12)		Redox	Dark Sur	face (F6)		<sup>3</sup> Indic	ators of hydro	ohytic vegetation a	and
	y Muck Mineral (S1)				urface (F7)				y must be present	•
Sandy	y gleyed Matrix (S4)		Redox	Depressi	ons (F8)		u	nless disturbe	d or problematic.	
Restrictive	Layer (if present):									
Type:	refusal									
Depth (inch	nes):1	2				Hyd	ric Soil Pre	sent?	Yes	Nox
Remarks:										
HYDROLOG	Y ydrology Indicators									
	dicators (any one indicators		ciont)					Socondar	y Indicators (2 or r	more required)
	ce Water (A1)	ator is sum		Stained I	eaves (B9) (	avcent			tained Leaves (B9	
	Water Table (A2)				eaves (B9) (c	except	-		nd 4B)	, (MEICA 1, 2,
	ation (A3)			ust (B11)	and 4D)		•		Patterns (B10)	
	r Marks (B1)				rates (B13)		•		son Water Table (	(C2)
	nent Deposits (B2)				e Odor (C1)		•		n Visible on Aeria	-
	Deposits (B3)				pheres along	l ivina F	Roots (C3)		phic Position (D2)	
	Mat or Crust (B4)				duced Iron (C	_			Aquitard (D3)	
	Deposits (B5)				uction in Plo	-	s (C6)		utral Test (D5)	
	ce Soil Cracks (B6)				sed Plants (E				ant Mounds (D6) (	LRR A)
	ation Visible on Aeria	l Imagery (E			Remarks)	., (=:::			ave Hummocks (I	
	sely Vegetated Conca		· — `		,		•		(-	,
Field Obse										
	ater Present? Ye	s	No X Dept	h (inches	):					
Water table				h (inches						
Saturation		s	No <u>x</u> Dept	h (inches	):		Wetland Hy	drology Pres	ent? Yes	Nox
	apillary fringe) corded Data (stream g	rauge moni	itoring well aerial	nhotos n	revious inspe	actions)	if available.			
Jeschbe Nec	colded Data (Stream g	jauge, mom	itoring well, aerial	priotos, p	revious irispe	ctions),	ii available.			
Remarks:										

Project/Site: I-5 Woodland		City/County:	Woodland	/Cowlitz Sampling Date: Oct.8, 2020
Applicant/Owner: Logan Partners LLC				State: WA Sampling Point:
Investigator(s): KB		Section	n, Township	, Range: S13, T5N, R1W
Landform (hillslope, terrace, etc.): terrace		_ Local re	elief (concav	e, convex, none): <u>none</u> Slope (%): <u>0-3%</u>
Subregion (LRR): Northwest Forests and Coast (LRF	RA) Lat:		45.92	1828685 Long: -122.749849080 Datum:
Soil Map Unit Name: Newberg fine sand loam				NWI Classification: PEM1A
Are climatic / hydrologic conditions on the site typical f			Yes_	X No (If no, explain in Remarks)
Are Vegetation, Soil, or Hydrolog				
Are Vegetation, Soil, or Hydrolog	у	naturally pro	oblematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	p showing	sampling	point loca	ations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes x	No			
Hydric Soil Present? Yes	No x		ampled Are a Wetland?	YAS NO Y
	No x	WILLIIII	a vvetianu:	<del></del>
VEGETATION				
Tree Stratum (Use scientific names.) 1.	Absolute % Cover	Dominant Species?	Indicator Status?	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:  4 (A)
2.	<u> </u>		· <del></del>	Total Number of Dominant
3.				Species Across All Strata: 4 (B)
1.				Percent of Dominant Species
Total Cov	/er: 0			That Are OBL, FACW, or FAC: 100% (A/B)
Shrub Stratum				Prevalence Index Worksheet:
1. Spiraea douglasii	20	Y	FACW □	Total % Cover of: Multiply by:
2.				OBL speciesx1 = <b>0</b>
3	<u> </u>			FACW species x2 = <b>0</b>
4				FAC speciesx3 =
5	-			FACU speciesx4 =0
Total Cov	/er: 20			UPL speciesx5 =0
Herb Stratum			ETA OVA/	Column Totals: 0 (A) 0 (B)
Phalaris arundinacea	50	<u>Y</u>	□FACW□ □FAC□	Prevalence Index = B/A =
2. Agrostis stolonifera	20 30		FAC□	Hydrophytic Vegetation Indicators:
3. Lotus corniculatus 4.		<u> </u>		1 - Rapid Test for Hydrophytic Vegetation
-	<u> </u>			X 2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7			· ———	4 - Morphological Adaptation1 (Provide supporting
3.				data in Remarks or on a separate sheet)
9.			· <del></del>	5 - Wetland Non-Vascular Plants <sup>1</sup>
10.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1.				
	/er: 100			
Woody Vine Stratum  I.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2				Hydrophytic
Total Cov				Vegetation
% Bare Ground in Herb Stratum 0	% Cover of B	otic Crust	0	Present?         Yesx         No
Remarks:				

epth	cription: (Describe Matrix		Pac	dox Featu	ıres					
-		0/			Type <sup>1</sup>	Loc <sup>2</sup>	Toyturo		Dom	o rico
hes)	Color (moist)	<u>%</u>	Color (moist)	%	туре	LOC	Texture		Rema	arks
0-3	10YR3/3	100 05	10VD2/6				SL			
3-9	10YR3/3	95	10YR3/6	5	<u>C</u>	M	SL			
9-16	10YR5/3	100					LS			
pe: C=0	Concentration, D=Dep	letion, RM	=Reduced Matrix, 0		red or Coa	ted Sand	d Grains. <sup>2</sup> Lo	cation: PL=P	ore Lining, M=M	latrix.
	Indicators: (Applic								ntic Hydric Soil	
	ol (A1)			Redox (S5	-			2 cm Mu	-	
Histic	Epipedon (A2)			d Matrix (S			-		ent Material (TF	2)
Black Hydro	Histic (A3) gen Sulfide (A4)		Loamy N	Mucky Mir Gleyed Ma	neral (F1) atrix (F2)	(except l	MLRA 1)		xplain in Remar	
-	ted Below Dark Surfa	ce (A11)		d Matrix (			2			_
_	Dark Surface (A12)			Dark Surfa	` '			-	phytic vegetatio	
_	Muck Mineral (S1)				urface (F7)				y must be prese	
Sandy	gleyed Matrix (S4)		Redox D	Depressio	ns (F8)		u	nless disturbe	d or problemation	C.
	es):		<u> </u>			Ну	dric Soil Pre	sent?	Yes	No _
pth (inch	es):		<del></del>			Ну	dric Soil Pre	sent?	Yes	No
pth (inch arks:						Ну	dric Soil Pre	sent?	Yes	No
pth (inch arks: ROLOG'	Y ydrology Indicators:					Ну	dric Soil Pre	sent?	Yes	No
pth (inch arks: ROLOG' etland Hy mary Ind	Y ydrology Indicators: icators (any one indic							Secondar	y Indicators (2 c	or more requir
pth (inch arks: ROLOG' etland Hy mary Ind Surface	ydrology Indicators: icators (any one indic ce Water (A1)		Water-S		eaves (B9)	(except		Secondar Water-S	y Indicators (2 c	or more requir
pth (inch arks: ROLOG' etland Hy mary Ind Surfac High V	Y ydrology Indicators: icators (any one indic ce Water (A1) Vater Table (A2)		Water-S MLR	A 1, 2, 4A	eaves (B9) a and 4B)	(except		Secondar Water-S 4A ar	y Indicators (2 c tained Leaves (I nd 4B)	or more requir B9) ( <b>MLRA</b> 1
pth (inch arks: ROLOG` etland Hy mary Ind Surfac High V	ydrology Indicators: icators (any one indic ce Water (A1) Vater Table (A2) ation (A3)		Water-S MLRA Salt Cru	<b>A 1, 2, 4A</b> ust (B11)	and 4B)	(except		Secondar Water-S 4A ar Drainage	y Indicators (2 c tained Leaves (i nd 4B) e Patterns (B10)	or more requir B9) ( <b>MLRA 1</b>
pth (inch arks: ROLOG' etland Hy mary Ind Surfac High V Satura Water	ydrology Indicators: icators (any one indicators (A1) vater Table (A2) ation (A3) Marks (B1)		Water-S MLRA Salt Cru Aquatic	<b>A 1, 2, 4A</b> ist (B11) Invertebra	and <b>4B</b> )	(except		Secondar Water-S 4A ar Drainage Dry-Sea	y Indicators (2 c tained Leaves ( nd 4B) e Patterns (B10) son Water Table	or more requir B9) ( <b>MLRA 1</b> e (C2)
ROLOG etland Hy mary Ind Surfac High V Satura Water Sedim	ydrology Indicators: icators (any one indicators (any one indicators (A1) water (A1) water Table (A2) ation (A3) Marks (B1) ient Deposits (B2)		Water-S MLRA Salt Cru Aquatic Hydroge	<b>A 1, 2, 4A</b> Ist (B11) Invertebra en Sulfide	and 4B) ates (B13) Odor (C1)	(except		Secondar Water-S 4A ar Drainage Dry-Sea	y Indicators (2 c tained Leaves (i nd 4B) e Patterns (B10) son Water Table on Visible on Ae	or more requir B9) ( <b>MLRA 1</b> e (C2) rial Imagery (
ROLOG' etland Hy mary Ind Surfac High V Satura Water Sedim Drift D	y ydrology Indicators: icators (any one indicate Water (A1) Vater Table (A2) ation (A3) Marks (B1) hent Deposits (B2) deposits (B3)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized	A 1, 2, 4A ist (B11) Invertebra en Sulfide d Rhizosp	and 4B) rates (B13) Odor (C1) oheres alor	(except		Secondar Water-S 4A ar Drainage Dry-Sea Saturatic Geomor	y Indicators (2 c tained Leaves (I nd 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D	or more requir B9) ( <b>MLRA 1</b> e (C2) rial Imagery (
pth (inch arks: ROLOG' etland Hy mary Ind Surface High V Satura Water Sedim Drift D	ydrology Indicators: icators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) Ident Deposits (B2) Ideposits (B3) Mat or Crust (B4)		Water-S  MLR/ Salt Cru Aquatic Hydroge Oxidized Presence	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp de of Redu	ates (B13) Odor (C1) Oheres alor uced Iron (	(except ) ng Living C4)	- - - - - Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatic Geomory Shallow	y Indicators (2 c tained Leaves ( nd 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3)	or more requir B9) ( <b>MLRA 1</b> e (C2) rial Imagery (
ROLOGY etland Hymary Ind Surfac High V Satura Water Sedim Drift D Algal I	ydrology Indicators: icators (any one indicators (any one indicators) icators (A1) Vater Table (A2) ation (A3) Marks (B1) icent Deposits (B2) iceposits (B3) Mat or Crust (B4) iceposits (B5)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent	A 1, 2, 4A ust (B11) Invertebra en Sulfide d Rhizosp ce of Redu Iron Redu	ates (B13) Odor (C1) Oheres alor uced Iron (	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatic Geomor Shallow FAC-Ne	y Indicators (2 ctained Leaves (ind 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5)	or more requir B9) ( <b>MLRA 1</b> ; e (C2) rial Imagery (
ROLOG etland Hymary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D	y ydrology Indicators: icators (any one indicators (A1) Vater Table (A2) ation (A3) Marks (B1) Ident Deposits (B2) Ideposits (B3) Mat or Crust (B4) Ideposits (B5) Ideposits (B6) Ideposits (B6)	ator is suff	Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presenc Recent Stunted	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp de of Redu Iron Redu or Stress	ates (B13) Odor (C1) Oheres alor uced Iron ( uction in Pl sed Plants	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatio Geomory Shallow FAC-Nei Raised A	y Indicators (2 contained Leaves (1 cond 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5)	e (C2) rial Imagery (
ROLOG  ROLOG  Surface High V Satura Water Sedim Drift D Algal I Iron D Surface Inunda	y ydrology Indicators: icators (any one indicators (any one indicators) water (A1) Vater Table (A2) ation (A3) Marks (B1) Ident Deposits (B2) Ideposits (B3) Wat or Crust (B4) Ideposits (B5) Ideposits (B5) Ideposits (B6)	ator is suff	Water-S  MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted Other (E	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp de of Redu Iron Redu or Stress	ates (B13) Odor (C1) Oheres alor uced Iron (	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatio Geomory Shallow FAC-Nei Raised A	y Indicators (2 ctained Leaves (ind 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5)	e (C2) rial Imagery (
ROLOGY etland Hymary Ind Surface High V Satura Vater Sedim Orift D Algal I Iron D Surface Inunda	y ydrology Indicators: icators (any one indicators (A1) Vater Table (A2) ation (A3) Marks (B1) Ident Deposits (B2) Ideposits (B3) Mat or Crust (B4) Ideposits (B5) Ideposits (B6) Ideposits (B6)	ator is suff	Water-S  MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted Other (E	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp de of Redu Iron Redu or Stress	ates (B13) Odor (C1) Oheres alor uced Iron ( uction in Pl sed Plants	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatio Geomory Shallow FAC-Nei Raised A	y Indicators (2 contained Leaves (1 cond 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5)	e (C2) rial Imagery (
ROLOGY  ROLOGY  ROLOGY  RIGHT IN  Surfact  High V  Satura  Water  Sedim  Drift D  Algal I  Iron D  Surfact  Iron D  Surfact  Inundat  Sparse  RIGHOBSE	ydrology Indicators: icators (any one indicators (any one indicators (any one indicators (any one indicators (A1) Vater Table (A2) ation (A3) Marks (B1) ation Deposits (B2) deposits (B3) Mat or Crust (B4) deposits (B5) deposits (B5) deposits (B6)	ator is suff Imagery (I	Water-S  MLR/ Salt Cru Aquatic Hydroge Oxidized Presenc Recent Stunted B7) Other (E	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp ce of Redu Iron Redu or Stress	ates (B13) Odor (C1) Oheres alor uced Iron ( uction in Pl sed Plants Remarks)	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatio Geomory Shallow FAC-Nei Raised A	y Indicators (2 contained Leaves (1 cond 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5)	e (C2) rial Imagery (
ROLOGY  ROLOGY	ydrology Indicators: icators (any one indicators (any one indicators) icators (A1) Vater Table (A2) ation (A3) Marks (B1) icent Deposits (B2) iceposits (B3) Mat or Crust (B4) iceposits (B5) ice Soil Cracks (B6) ication Visible on Aerial icely Vegetated Concaviryations: atter Present?	ator is suff Imagery (I	Water-S  MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted 37) (B8)  No X Depth	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp ee of Redu Iron Redu or Stress Explain in	ates (B13) Odor (C1) Oheres alor uced Iron ( uction in Pl sed Plants Remarks)	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatio Geomory Shallow FAC-Nei Raised A	y Indicators (2 contained Leaves (1 cond 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5)	e (C2) rial Imagery (
ROLOGY etland Hy mary Ind Surfac High V Satura Vater Sedim Drift D Algal I Iron D Surfac Inunda Sparse	ydrology Indicators: icators (any one indicators (any one indicators) icators (A1) Vater Table (A2) ation (A3) Marks (B1) ident Deposits (B2) ident Deposits (B3) Mat or Crust (B4) idenosits (B5) idenosits (B5) idenosits (B6) idenos	Imagery (I	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   Stunted   Stunted   Other (E (B8)   No	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp ee of Redu Iron Redu or Stress explain in (inches):	ates (B13) Odor (C1) Oheres alor uced Iron ( uction in Pl sed Plants Remarks)	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sear Saturatic Geomor Shallow FAC-Ner Raised A	y Indicators (2 ctained Leaves (ind 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5) Ant Mounds (D6) eave Hummocks	e (C2) rial Imagery (
ROLOGY  ROLOGY	ydrology Indicators: icators (any one indicators (any one indicators) icators (A1) Vater Table (A2) ation (A3) Marks (B1) ident Deposits (B2) ident Deposits (B3) Mat or Crust (B4) idenosits (B5) idenosits (B5) idenosits (B6) idenos	Imagery (I	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   Stunted   Stunted   Other (E (B8)   No	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp ee of Redu Iron Redu or Stress Explain in	ates (B13) Odor (C1) Oheres alor uced Iron ( uction in Pl sed Plants Remarks)	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatio Geomory Shallow FAC-Nei Raised A	y Indicators (2 ctained Leaves (ind 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5) Ant Mounds (D6) eave Hummocks	or more requir B9) (MLRA 1, e (C2) rial Imagery ( 2) ) (LRR A) 6 (D7)
ROLOGY  ROLOGY  ROLOGY  RIGHT IN	ydrology Indicators: icators (any one indicators (any one indicato	Imagery (I	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presence   Recent   Stunted   Stunted   Stunted   Other (E (B8)   Depth   No   x   Depth   Depth   No   x   Depth   Depth	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp de of Redu Iron Redu or Stress explain in a (inches): a (inches):	ates (B13) Odor (C1) Oheres alor uced Iron ( uction in Pl sed Plants Remarks)	(except ) ng Living C4) owed So (D1) (LR	Roots (C3) ils (C6) R A)  Wetland Hy	Secondar Water-S 4A ar Drainage Dry-Sear Saturatic Geomor Shallow FAC-Ner Raised A	y Indicators (2 ctained Leaves (ind 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5) Ant Mounds (D6) eave Hummocks	or more requir B9) (MLRA 1, e (C2) rial Imagery ( 2) ) (LRR A) 6 (D7)
imary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Sparse Eld Obse atter table atturation F cludes ca	ydrology Indicators: icators (any one indicators (any one indicato	Imagery (I	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presence   Recent   Stunted   Stunted   Stunted   Other (E (B8)   Depth   No   x   Depth   Depth   No   x   Depth   Depth	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp de of Redu Iron Redu or Stress explain in a (inches): a (inches):	ates (B13) Odor (C1) Oheres alor uced Iron ( uction in Pl sed Plants Remarks)	(except ) ng Living C4) owed So (D1) (LR	Roots (C3) ils (C6) R A)  Wetland Hy	Secondar Water-S 4A ar Drainage Dry-Sear Saturatic Geomor Shallow FAC-Ner Raised A	y Indicators (2 ctained Leaves (ind 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5) Ant Mounds (D6) eave Hummocks	or more requir B9) (MLRA 1, e (C2) rial Imagery ( 2) ) (LRR A) 6 (D7)

Project/Site:	I-5 Woodland		City/County	Woodland	/Cowlitz	Sampling Date: Oct.8, 2020
Applicant/Owner:	Logan Partners LLC				State: WA	Sampling Point: 13
Investigator(s):	KB		Section	n, Township	o, Range: S13, T5N, R1W	
Landform (hillslope	e, terrace, etc.): terrace		_ Local re	elief (concav	re, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR):	Northwest Forests and Coast (LRR	A) Lat:		45.92	1756108 Long: -1	122.750100460 Datum:
Soil Map Unit Nam	e: Newberg fine sandy loam				NWI Classification:	PEM1A
Are climatic / hydro	ologic conditions on the site typical for			Yes		(If no, explain in Remarks)
Are Vegetation	, Soil, or Hydrology				Are "Normal Circumstance	ces" Present? Yes X No
Are Vegetation	, Soil, or Hydrology		naturally pr	oblematic?	(If needed, explain any ar	nswers in Remarks.)
SUMMARY OF	FINDINGS - Attach site map	showing	sampling	point loc	ations, transects, impo	ortant features, etc.
Hydrophytic Veget	ation Present? Yes x N	No				
Hydric Soil Presen				ampled Are a Wetland?	YAS	No x
Wetland Hydrology		No x	Within	a vvenanu:		
VEGETATION						
VEGETATION						
		Absolute	Dominant	Indicator	Dominance Test workshe	
Tree Stratum (Us	se scientific names.)	% Cover	Species?	Status?	Number of Dominant Speci	
1					That Are OBL, FACW, or F	(A)
2					Total Number of Dominant	
3					Species Across All Strata:	(B)
4		-			Percent of Dominant Specie	
	Total Cove	er: 0	•		That Are OBL, FACW, or F.	AC: <u>67%</u> (A/B)
Shrub Stratum					Prevalence Index Worksh	noot:
Spiraea dougla	asii	5	Υ		Total % Cover of:	Multiply by:
2.	2011		· <del> '</del>		OBL species	x1 = <b>0</b>
3.	_				FACW species	<del></del>
4.		-			FAC species	x3 = <b>0</b>
5.					FACU species	x4 = <b>0</b>
	Total Cove	er: 5	. '		UPL species	x5 = <b>0</b>
Herb Stratum					Column Totals: 0	(A) <b>0</b> (B)
1. Phalaris arund	linacea	60	Y	FACW□	Prevalence Index = B/A =	=
2. Anthoxanthum	odoratum	5	Y	FACU□		
3. Lotus cornicula	atus	5		EAC□	Hydrophytic Vegetation Ir	ndicators:
4. Carex obnupta	1	5		OBL□	1 - Rapid Test for	Hydrophytic Vegetation
5. <u>Bidens cernua</u>		5		©BL□	X 2 - Dominance Te	
6					3 - Prevalence Inc	
				·		Adaptation1 (Provide supporting
				·		or on a separate sheet)
					5 - Wetland Non-\	
					Problematic Hydro	ophytic Vegetation <sup>1</sup> (Explain)
11	T-+-1 O		· <del></del>	· ———		
\\\ \\\ \\ \\ \\\ \\ \\	Total Cove	er: <u>80</u>			1	
Woody Vine S  1.					<sup>1</sup> Indicators of hydric soil and be present, unless disturbe	
					, ,	
-	Total Cove		-		Hydrophytic Vegetation	
% Ba	re Ground in Herb Stratum 20 %		iotic Crust	0	Present?	Yes x No
Remarks: within or					<u>L</u>	
1						

epth ches) Co	Matrix		Redo	ox Feature	es					
		% Colo	r (moist)			Loc <sup>2</sup> Tex	xture		Remarks	
								-		
		<del></del>								
/pe: C=Concent	ration, D=Depletio	n, RM=Reduc	ced Matrix, C	S=Covere	ed or Coate	d Sand Grains.	<sup>2</sup> Location	PL=Pore Lining	, M=Matrix.	
dric Soil Indicat	tors: (Applicable	to all LRRs,			ted.)	Indica		oblematic Hydri	c Soils³:	
Histosol (A1)	(1.5)	_	Sandy Re		_,			cm Muck (A10)		
Histic Epipedo		_		Matrix (S6				Red Parent Materi		
Black Histic (A	,	_		-		(cept MLRA 1)	—	other (Explain in F	Remarks)	
_ Hydrogen Sulf	iide (A4) w Dark Surface (/	Δ11)		leyed Mat Matrix (F:						
Thick Dark Su				ark Surfac	•	3	Indicators o	of hydrophytic veg	etation and	
Sandy Muck N	, ,	_		Dark Sur				ydrology must be		
Sandy gleyed		_		epression				disturbed or proble	•	
strictive Layer (				<u>-</u>				•		
oe:										
pth (inches):						Hydric Soi	I Present?	Yes	<u>:</u>	No
ROLOGY										
etland Hydrolog	=									
mary indicators (	any one indicator	is sufficient)					•		10	
			Water St	ained Lea	vos (B0) (c	veent		econdary Indicator		_
Surface Wate	` '	_			ves (B9) (e	except		Vater-Stained Lea		_
Surface Wate High Water Ta	able (A2)	_	MLRA	1, 2, 4A a	, , ,	except	V	Vater-Stained Lea	aves (B9) ( <b>MLI</b>	_
Surface Wate High Water Ta Saturation (A3	able (A2) 3)	_ _	MLRA Salt Crus	<b>1, 2, 4A a</b> st (B11)	and 4B)	except	V	Vater-Stained Lea  4A and 4B)  Orainage Patterns	(B10)	_
Surface Wate High Water Ta	(B1)	- - -	MLRA Salt Crus Aquatic Ir	1, 2, 4A a	and 4B) tes (B13)	except	V	Vater-Stained Lea	(B10) (MLI) (B10) (Table (C2)	RA 1,
Surface Wate High Water Ta Saturation (A3 Water Marks (	able (A2) B) (B1) posits (B2)	- - -	MLRA Salt Crus Aquatic Ir Hydroger	1, 2, 4A a t (B11) nvertebrat n Sulfide (	tes (B13) Odor (C1)	except  Living Roots (C	V	Vater-Stained Lea  4A and 4B)  Orainage Patterns Ory-Season Water	(B10) ( <b>MLI</b> (B10) r Table (C2) on Aerial Imag	RA 1,
Surface Wate High Water Ta Saturation (A3 Water Marks ( Sediment Dep	able (A2) 3) (B1) oosits (B2) (B3)	- - - -	MLRA Salt Crus Aquatic Ir Hydroger Oxidized	1, 2, 4A a et (B11) nvertebrat n Sulfide ( Rhizosph	tes (B13) Odor (C1)	Living Roots (C	V 	Vater-Stained Lea  4A and 4B)  Orainage Patterns Ory-Season Water Saturation Visible	(B10) (MLI (B10) r Table (C2) on Aerial Imag ion (D2)	RA 1,
Surface Wate High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits	able (A2) B) (B1) cosits (B2) (B3) crust (B4)	- - - - -	MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence	1, 2, 4A a et (B11) envertebrate en Sulfide C Rhizosph e of Reduce	tes (B13) Odor (C1) eres along ced Iron (C	Living Roots (C	V 	Vater-Stained Lea  4A and 4B)  Prainage Patterns  Pry-Season Water  Saturation Visible of  Geomorphic Positi	(B10) (MLI (B10) r Table (C2) on Aerial Imag ion (D2) D3)	RA 1,
Surface Wate High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C	able (A2) (B1) loosits (B2) (B3) crust (B4) (B5) Cracks (B6)	- - - - - -	MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted o	1, 2, 4A a et (B11) nvertebrat n Sulfide C Rhizosph e of Reduc on Reduc or Stresse	tes (B13) Odor (C1) eres along ced Iron (Cition in Ploy d Plants (D	Living Roots (C 4)	23)	Vater-Stained Lea  4A and 4B)  Prainage Patterns Pry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard ( AC-Neutral Test Raised Ant Mound	(B10) r Table (C2) on Aerial Imag ion (D2) D3) (D5) ds (D6) (LRR A	RA 1,
Surface Wate High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis	able (A2) (B1) cosits (B2) (B3) crust (B4) (B5) Cracks (B6) sible on Aerial Ima		MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted o	1, 2, 4A and the street of the street of Reduction Reduc	tes (B13) Odor (C1) eres along ced Iron (Cition in Ploy d Plants (D	Living Roots (C 4) ved Soils (C6)	23)	Vater-Stained Lea  4A and 4B)  Drainage Patterns  Dry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard ( FAC-Neutral Test	(B10) r Table (C2) on Aerial Imag ion (D2) D3) (D5) ds (D6) (LRR A	RA 1,
Surface Wate High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege	able (A2) (B1) cosits (B2) (B3) crust (B4) (B5) cracks (B6) cible on Aerial Imaletated Concave S		MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted o	1, 2, 4A a et (B11) nvertebrat n Sulfide C Rhizosph e of Reduc on Reduc or Stresse	tes (B13) Odor (C1) eres along ced Iron (Cition in Ploy d Plants (D	Living Roots (C 4) ved Soils (C6)	23)	Vater-Stained Lea  4A and 4B)  Prainage Patterns Pry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard ( AC-Neutral Test Raised Ant Mound	(B10) r Table (C2) on Aerial Imag ion (D2) D3) (D5) ds (D6) (LRR A	RA 1,
Surface Wate High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege	able (A2) (B1) cosits (B2) (B3) crust (B4) (B5) cracks (B6) cible on Aerial Imaletated Concave S	urface (B8)	MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted of	1, 2, 4A a t (B11) nvertebrat n Sulfide C Rhizosph e of Reduc on Reduc or Stresse xplain in R	tes (B13) Odor (C1) eres along ced Iron (Cition in Ploy d Plants (D	Living Roots (C 4) ved Soils (C6)	23)	Vater-Stained Lea  4A and 4B)  Prainage Patterns Pry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard ( AC-Neutral Test Raised Ant Mound	(B10) r Table (C2) on Aerial Imag ion (D2) D3) (D5) ds (D6) (LRR A	RA 1,
Surface Wate High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis	able (A2) (B1) cosits (B2) (B3) crust (B4) (B5) cracks (B6) cible on Aerial Imaletated Concave S s: sent? Yes		MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted co Other (Ex	1, 2, 4A a et (B11) nvertebrat n Sulfide C Rhizosph e of Reduc on Reduc or Stresse	tes (B13) Odor (C1) eres along ced Iron (Cition in Ploy d Plants (D	Living Roots (C 4) ved Soils (C6)	23)	Vater-Stained Lea  4A and 4B)  Prainage Patterns Pry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard ( AC-Neutral Test Raised Ant Mound	(B10) r Table (C2) on Aerial Imag ion (D2) D3) (D5) ds (D6) (LRR A	RA 1,
Surface Wate High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege eld Observations urface Water Presentaturation Present	able (A2) (B1) cosits (B2) (B3) crust (B4) (B5) cracks (B6) cible on Aerial Imaletated Concave S s: sent? Yes t? Yes Yes	urface (B8)	MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted co Other (Ex	1, 2, 4A a t (B11) nvertebrat n Sulfide C Rhizosph e of Reduc on Reduc or Stresse xplain in R	tes (B13) Odor (C1) eres along ced Iron (Cition in Ploy d Plants (D	Living Roots (C 4) ved Soils (C6) 1) ( <b>LRR A</b> )	23)	Vater-Stained Lea  4A and 4B)  Prainage Patterns Pry-Season Water Saturation Visible Geomorphic Positi Shallow Aquitard ( AC-Neutral Test Raised Ant Mound	(B10) r Table (C2) on Aerial Imag ion (D2) D3) (D5) ds (D6) (LRR A	RA 1,
Surface Wate High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege eld Observations urface Water Present turation Present cludes capillary f	able (A2) (B1) cosits (B2) (B3) crust (B4) (B5) cracks (B6) cible on Aerial Imaletated Concave S s: sent? Yes t? Yes ringe)	urface (B8)  No No No No	MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted co Other (Ex	1, 2, 4A a a a a a t (B11) invertebrat in Sulfide Con Reduction Reduction Reductor Stresse explain in Reduction Redu	tes (B13) Odor (C1) eres along ced Iron (Cotion in Plov d Plants (Cotemarks)	Living Roots (C 4) ved Soils (C6) 1) (LRR A)	23)	Vater-Stained Lea 4A and 4B) Prainage Patterns Dry-Season Water Seaturation Visible of Geomorphic Positi Shallow Aquitard ( FAC-Neutral Test Raised Ant Mound Frost-Heave Humr	(B10) r Table (C2) on Aerial Imag ion (D2) D3) (D5) ds (D6) (LRR A	RA 1,
Surface Wate High Water Ta Saturation (A3 Water Marks ( Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C Inundation Vis Sparsely Vege eld Observations urface Water Present turation Present cludes capillary f	able (A2) (B1) cosits (B2) (B3) crust (B4) (B5) cracks (B6) cible on Aerial Imaletated Concave S s: sent? Yes t? Yes Yes	urface (B8)  No No No No	MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted co Other (Ex	1, 2, 4A a a a a a t (B11) invertebrat in Sulfide Con Reduction Reduction Reductor Stresse explain in Reduction Redu	tes (B13) Odor (C1) eres along ced Iron (Cotion in Plov d Plants (Cotemarks)	Living Roots (C 4) ved Soils (C6) 1) (LRR A)	23)	Vater-Stained Lea 4A and 4B) Prainage Patterns Dry-Season Water Seaturation Visible of Geomorphic Positi Shallow Aquitard ( FAC-Neutral Test Raised Ant Mound Frost-Heave Humr	(B10) r Table (C2) on Aerial Imag ion (D2) D3) (D5) ds (D6) (LRR A	RA 1,

		State: WA  p, Range: S13, T5N, R1W  re, convex, none): none	Sampling Point: 1
Local re			Clone (0/ ): 0 20/
<del></del>	elief (concav	e, convex, none): none	Clana (0/ ), 0 20/
l at·		· · · · · —	Slope (%): <u>0-3%</u>
Lat	45.92	1734696 Long: -12	22.750298923 Datum:
		NWI Classification:	
ne of year?	Yes		(If no, explain in Remarks)
			es" Present? Yes X No
naturally pr	oblematic?	(If needed, explain any an	swers in Remarks.)
ing sampling	point loc	ations, transects, impor	rtant features, etc.
,	•	YAS	No x
« Within s	a Welland:		·
luta Dominant	Indicator	Dominance Test workshop	
			۸C٠
			1(A)
			<b>4</b> (D)
			(B)
)		Percent of Dominant Specie That Are OBL, FACW, or FA	
		December of Indox Markaba	- · •
		-	
			x1 = 0 x2 = 0
			x3 = <b>0</b>
			x4 = <b>0</b>
 )			x5 = <b>0</b>
		Column Totals: 0	(A) <b>0</b> (B)
0 Y	IFACW □	Prevalence Index = B/A =	
5	ØBL□		
5	FAC□	Hydrophytic Vegetation Inc	dicators:
		1 - Rapid Test for H	Hydrophytic Vegetation
		X 2 - Dominance Tes	st is >50%
		3 - Prevalence Inde	
			Adaptation1 (Provide supporting
		<del></del>	r on a separate sheet)
		<del></del>	
		Problematic Hydro	phytic Vegetation <sup>1</sup> (Explain)
0		1	
		'Indicators of hydric soil and be present, unless disturbed	
	<i>-</i>	Hydronhytic	
<u> </u>			
of Biotic Crust	0		Yes x No
	naturally pring sampling  Is the Swithin is species?  Dominant Species?	Is the Sampled Are within a Wetland?    Is the Sampled Are within a Wetland?	Is the Sampled Area within a Wetland?    Is the Sampled Area within a Wetland?   Yes

SOIL							Sampling Po	int:	14
Profile Des	scription: (Desc	cribe to the dep	oth needed to doo	ument the indicato	r or con	firm the abs	sence of indicators.)		
Depth	Mat	rix	Re	dox Features					
(inches)	Color (mois	st) %	Color (moist)	%Type <sup>1</sup>	Loc <sup>2</sup>	Texture	е	Remarks	
0-7	10YR2/2	100				SSiL			
7-16	2.5Y5/4	100				S			
'Type: C=0	Concentration, D	=Depletion, RM	=Reduced Matrix,	CS=Covered or Coa	ited Sand	d Grains. <sup>2</sup> L	ocation: PL=Pore Lin	ing, M=Matrix.	
Hydric Soi	I Indicators: (A	pplicable to all	LRRs, unless otl	nerwise noted.)		Indicators	s for Problematic Hy	dric Soils <sup>3</sup> :	
Histos	sol (A1)		Sandy	Redox (S5)			2 cm Muck (A1	0)	
Histic	Epipedon (A2)		Strippe	d Matrix (S6)			Red Parent Ma	terial (TF2)	
Black	Histic (A3)		Loamy	Mucky Mineral (F1)	(except l	MLRA 1)	Other (Explain	in Remarks)	
Hydro	gen Sulfide (A4)		Loamy	Gleyed Matrix (F2)					
Deple	ted Below Dark	Surface (A11)	Deplete	ed Matrix (F3)					
Thick	Dark Surface (A	12)	Redox	Dark Surface (F6)		<sup>3</sup> Indi	cators of hydrophytic	vegetation and	
Sandy	/ Muck Mineral (	S1)	Deplete	ed Dark Surface (F7)	)	We	etland hydrology must	be present,	
Sandy	gleyed Matrix (	54)	Redox	Depressions (F8)		ı	unless disturbed or pr	oblematic.	
Restrictive	Layer (if prese	nt):							
Type:									
Depth (inch	nes):				Ну	dric Soil Pr	esent?	Yes	No x
Remarks:									
HYDROLOG	Υ								
-	ydrology Indica								
	licators (any one	indicator is suff					Secondary Indic		
	ce Water (A1)			Stained Leaves (B9)	(except		Water-Stained		/ILRA 1, 2,
	Water Table (A2)	)		A 1, 2, 4A and 4B)			4A and 4B)		
	ation (A3)			ust (B11)			Drainage Patte		
	Marks (B1)			Invertebrates (B13)			Dry-Season W		
	nent Deposits (B	2)		en Sulfide Odor (C1)	•		Saturation Visit		agery (C9)
	Deposits (B3)			d Rhizospheres alor		Roots (C3)	Geomorphic Po		
	Mat or Crust (B4	)		ce of Reduced Iron (		(00)	Shallow Aquita		
	eposits (B5)			Iron Reduction in Pl			FAC-Neutral To		>
	ce Soil Cracks (E	•		d or Stressed Plants	, , ,	RA)	Raised Ant Mo		
	ation Visible on A		, <del></del> `	Explain in Remarks)			Frost-Heave H	JMMOCKS (D7)	
	ely Vegetated C	oncave Surface	(B8)						
Field Obse	ervations: ater Present?	Yes	No X Dept	h (inches):					
Water table		Yes		h (inches):					
Saturation I		Yes		h (inches):		Wetland H	ydrology Present?	Yes	No x
•	apillary fringe)								
Describe Rec	orded Data (stre	am gauge, mor	itoring well, aerial	photos, previous insp	pections)	, if available:			
Remarks:									
ı									

Project/Site: I-5 Woodland		City/County	: Woodland	//Cowlitz Sampling Date: Oct.8, 2020
Applicant/Owner: Logan Partners LLC				State: WA Sampling Point:1
Investigator(s): KB		_		o, Range: <u>S13, T5N, R1W</u>
Landform (hillslope, terrace, etc.): terrace		_	•	re, convex, none): concave Slope (%): 0-3%
Subregion (LRR): Northwest Forests and Coast (LRR	<u>(A)</u> Lat:		45.92	1923487 Long: -122.750839799 Datum:
Soil Map Unit Name: Maytown silt loam				NWI Classification: PEM1A
Are climatic / hydrologic conditions on the site typical for		•	Yes_	X No (If no, explain in Remarks)
Are Vegetation, Soil, or Hydrology				
Are Vegetation, Soil, or Hydrology		naturally pr	oblematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site maj	o showing	sampling	point loca	ations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes x	No			
Hydric Soil Present? Yes x	No		ampled Are a Wetland?	YAS Y NO
Wetland Hydrology Present? Yes x	No		a welland:	
VEGETATION				
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Use scientific names.)	% Cover	Species?	Status?	Number of Dominant Species
1	-		- ——	That Are OBL, FACW, or FAC:
2.				Total Number of Dominant
3.				Species Across All Strata: 2 (B)
4.				Percent of Dominant Species
Total Cove	er: 0	=		That Are OBL, FACW, or FAC: 100% (A/B)
Shrub Stratum				Prevalence Index Worksheet:
1. Spiraea douglasii	60	Υ		
2.			. ———	OBL species x1 = <b>0</b>
3.				FACW species x2 = 0
4.				FAC species x3 = <b>0</b>
5				FACU speciesx4 = <b>0</b>
Total Cove	er: 60	_		UPL speciesx5 = <b>0</b>
Herb Stratum				Column Totals: (A) (B)
Phalaris arundinacea	40	Y	FACW □	Prevalence Index = B/A =
2.			-	
3.		-		Hydrophytic Vegetation Indicators:
4			- ——	1 - Rapid Test for Hydrophytic Vegetation
5 6.		· .	· <del></del>	2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹
7				4 - Morphological Adaptation1 (Provide supporting
			- ——	data in Remarks or on a separate sheet)
<u> </u>			· <del></del>	5 - Wetland Non-Vascular Plants <sup>1</sup>
10		·		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
11.				
Total Cov	er: 40		. ———	
Woody Vine Stratum  1.		<del>-</del>		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.		· -		Hydrophytic
Total Cov	er:			Vegetation
% Bare Ground in Herb Stratum0	% Cover of B	iotic Crust	0	Present?
Remarks: within open field.				

SOIL								Samp	ling Point:	1
Profile De	scription: (Describe	to the de	pth needed to doc	ument t	he indicato	r or co	onfirm the abs	sence of indica	ators.)	
Depth	Matrix		Red	lox Feat	tures					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<del>_</del> Textur	e	Remarks	3
0-16	10YR3/2	95	7.5YR3/4	5	C	M	SSiL			
							_			
							_			
							_			
							_			
							_			
							_			
								<del></del>	-	
<sup>1</sup> Type: C=	Concentration, D=Dep	letion, RM	N=Reduced Matrix, C	CS=Cov	ered or Coa	ited Sai	nd Grains. <sup>2</sup> L	ocation: PL=P	ore Lining, M=Matrix	х.
Hydric So	il Indicators: (Applic	able to al	I LRRs, unless oth	erwise	noted.)		Indicator	s for Problema	atic Hydric Soils <sup>3</sup> :	
Histo	sol (A1)		Sandy F	Redox (S	S5)			2 cm Mu	ıck (A10)	
Histic	Epipedon (A2)		Stripped	l Matrix	(S6)			Red Par	ent Material (TF2)	
Black	K Histic (A3)		Loamy I	Mucky M	lineral (F1)	(excep	t MLRA 1)	Other (E	xplain in Remarks)	
Hydro	ogen Sulfide (A4)		Loamy (	Gleyed N	Matrix (F2)					
Deple	eted Below Dark Surfa	ce (A11)	Deplete	d Matrix	(F3)					
Thick	Dark Surface (A12)		x Redox [	Oark Sui	rface (F6)		<sup>3</sup> Indi	cators of hydro	phytic vegetation an	nd
Sand	ly Muck Mineral (S1)		Deplete	d Dark S	Surface (F7)	)	W	etland hydrolog	y must be present,	
Sand	ly gleyed Matrix (S4)		Redox [	Depress	ions (F8)			unless disturbe	ed or problematic.	
Restrictive	e Layer (if present):									
Type:										
Depth (incl	hes):						Hydric Soil Pr	esent?	Yes x	No
Remarks:	, <u> </u>									
HYDROLOG										
	lydrology Indicators:									
	dicators (any one indic		ficient)					Secondar	ry Indicators (2 or mo	ore required)
	ace Water (A1)			Stained I	_eaves (B9)	(excer	nt		tained Leaves (B9)	
	Water Table (A2)				A and 4B)	(CXOC)	<b>,</b>		nd 4B)	(, _,
	ration (A3)		Salt Cru						e Patterns (B10)	
	er Marks (B1)			, ,	rates (B13)				son Water Table (C	.3)
	ment Deposits (B2)				le Odor (C1				on Visible on Aerial I	-
	Deposits (B3)				•		ng Roots (C3)		phic Position (D2)	inagery (C9)
	Mat or Crust (B4)					-	ig itoots (C3)		Aguitard (D3)	
	• •				duced Iron ( duction in Pl		Soile (C6)		. ,	
	Deposits (B5)						( )		utral Test (D5)	DD A)
	ace Soil Cracks (B6)	lmagarı (			ssed Plants	. , .	KK A)		Ant Mounds (D6) (Li	
	dation Visible on Aerial			xpiain ii	n Remarks)			FIOSI-HE	eave Hummocks (D7	7)
	sely Vegetated Concav	e Surrace	e (B8)				•			
Field Obs			No V Donato	(in all a						
	ater Present? Yes e Present? Yes			(inches (inches	· —					
Saturation				(inches			Wetland H	lydrology Pres	sent? Yes x	k No
	capillary fringe)			(				,		
Describe Red	corded Data (stream g	auge, mo	nitoring well, aerial p	hotos, p	orevious insp	pection	s), if available	:		
Remarks:										

Project/Site:	I-5 Woodland		City/County:	Woodland	/Cowlitz	Sampling Date: Oct.8, 2020
Applicant/Owner:	Logan Partners LLC				State: WA	Sampling Point: 16
Investigator(s):	KB		Section	n, Township	o, Range: S13, T5N, R1W	
Landform (hillslope	· · · · —		_ Local re	elief (concav	re, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR):	Northwest Forests and Coast (	LRR A) Lat:		45.92	1921488 Long: -1	122.750854634 Datum:
Soil Map Unit Nam					NWI Classification:	
	ologic conditions on the site typic			Yes	X No	_` ' ' '
	, Soil, or Hydro					ces" Present? Yes X No
Are Vegetation	, Soil, or Hydro	logy	naturally pro	oblematic?	(If needed, explain any a	nswers in Remarks.)
SUMMARY OF	FINDINGS - Attach site	map showing	sampling	point loc	ations, transects, impo	ortant features, etc.
Hydrophytic Veget	ation Present? Yes x	No	1.41.0			
Hydric Soil Presen	t? Yes	No <u>x</u>		ampled Are a Wetland?	PAY	No x
Wetland Hydrology	/ Present? Yes	Nox				
VEGETATION						
VEGETATION			<b>.</b>		Daminana Taat washaha	
		Absolute % Cover	Dominant Species?	Indicator Status?	Dominance Test workshe	
`	se scientific names.)	70 00001	<u>—————————————————————————————————————</u>		Number of Dominant Spec That Are OBL, FACW, or F	-ΔC·
1						(A)
2.		<del></del>			Total Number of Dominant Species Across All Strata:	
3 4.		<u> </u>	-			(B)
4	Total	Cover: 0		· <del></del>	Percent of Dominant Speci That Are OBL, FACW, or F	
	Total	Cover. 0			That Ale Obt, I AOW, OIT	AC. 100% (A/B)
Shrub Stratum					Prevalence Index Worksh	neet:
Rosa pisocarp	a	5	Υ	JFAC□	Total % Cover of:	Multiply by:
2.					OBL species	x1 = <b>0</b>
3.					FACW species	x2 = <b>0</b>
4					FAC species	_x3 =
5					FACU species	x4 = <b>0</b>
	Total	Cover: 5			UPL species	_x5 =
Herb Stratum					Column Totals: 0	(A)(B)
1. Phalaris arund			<u> </u>	#ACW	Prevalence Index = B/A =	=
2. Agrostis stolor			Y	FAC□		
3. Lotus cornicula	atus		Y	FAC□	Hydrophytic Vegetation II	
4		<del></del>				Hydrophytic Vegetation
^			-		2 - Dominance Te 3 - Prevalence Inc	
7		· ·				Adaptation1 (Provide supporting
			-			or on a separate sheet)
_					5 - Wetland Non-	. ,
						ophytic Vegetation <sup>1</sup> (Explain)
						2.p.,
		Cover: 110				
Woody Vine S					<sup>1</sup> Indicators of hydric soil an be present, unless disturbe	
0					Hydrophytic	
		Cover:			Vegetation	
% Ba	re Ground in Herb Stratum 0	% Cover of B	otic Crust	0	Present?	Yes x No
Remarks:						

epth	Matı	IA		Red	dox Feat	ures					
nches)	Color (mois	t) %	Colo	r (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	<u> </u>	Remarks	
0-16	10YR3/3	95	10	YR3/4	5	C	M	SSiL			
						· <u> </u>					
ype: C=0	Concentration, D	=Depletion, R	RM=Reduc	ed Matrix, (	CS=Cove	ered or Coa	ted San	d Grains. <sup>2</sup> Lo	ocation: PL=Por	re Lining, M=Matrix.	
ydric Soi	I Indicators: (A	oplicable to	all LRRs,	unless oth	erwise r	noted.)		Indicators	for Problemati	ic Hydric Soils <sup>3</sup> :	
Histos	sol (A1)			Sandy F	Redox (S	5)		_	2 cm Muc	k (A10)	
Histic	Epipedon (A2)			Stripped	d Matrix (	S6)			Red Parer	nt Material (TF2)	
Black	Histic (A3)			Loamy I	Mucky M	ineral (F1)	(except	MLRA 1)	Other (Ex	plain in Remarks)	
Hydro	gen Sulfide (A4)			Loamy	Gleyed M	latrix (F2)					
	ted Below Dark S	Surface (A11)	<u> </u>		d Matrix						
_	Dark Surface (A					face (F6)		<sup>3</sup> Indic	ators of hydropl	hytic vegetation and	
	y Muck Mineral (S		_			urface (F7	)			must be present,	
_	, y gleyed Matrix (S		_		Depression	•			nless disturbed	•	
	Layer (if prese				<u>'</u>	( /				<u> </u>	
		,									
(D.O.)											
	nes):						Н	dric Soil Pre	sent?	Yes	No
epth (inch	nes):						Ну	ydric Soil Pre	sent?	Yes	No _
epth (inch							Ну	ydric Soil Pre	sent?	Yes	No _
epth (inch narks: DROLOG etland H	Y ydrology Indica						Ну	ydric Soil Pre			
PROLOG etland H	Y ydrology Indica dicators (any one		ufficient)						Secondary	Indicators (2 or mor	e requir
PROLOG etland H imary Inc	Y ydrology Indica dicators (any one ce Water (A1)	indicator is s	ufficient)			eaves (B9)			Secondary Water-Sta	Indicators (2 or mor nined Leaves (B9) (I	e requir
PROLOG etland H imary Inc	Y ydrology Indica dicators (any one	indicator is s	ufficient)			eaves (B9) <b>A and 4B</b> )			Secondary Water-Sta	Indicators (2 or mornined Leaves (B9) (I	e requir
PROLOG etland H imary Inc Surfac High \( \)	Y ydrology Indica dicators (any one ce Water (A1)	indicator is s	ufficient)	MLR.					Secondary Water-Sta 4A and Drainage	Indicators (2 or mor nined Leaves (B9) ( <b>f</b> 1 <b>4B</b> ) Patterns (B10)	re requir
PROLOG etland H imary Inc Surfac High \ Satura	Y ydrology Indica dicators (any one ce Water (A1) Water Table (A2)	indicator is s	ufficient)	MLR Salt Cru	<b>A 1, 2, 4</b> / ist (B11)		(except		Secondary Water-Sta 4A and Drainage	Indicators (2 or mornined Leaves (B9) (I	re requir
PROLOG etland H imary Inc Surfac High \ Satura	Y ydrology Indicaticators (any one ce Water (A1) Water Table (A2)	indicator is s	ufficient)	MLRA Salt Cru Aquatic	<b>A 1, 2, 4</b> / ist (B11) Inverteb	A and 4B)	(except		Secondary Water-Sta 4A and Drainage Dry-Seaso	Indicators (2 or mor nined Leaves (B9) ( <b>f</b> 1 <b>4B</b> ) Patterns (B10)	re requir
PROLOG etland H imary Inc Surfac High \ Satura Water Sedin	ydrology Indicadicators (any one ce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	indicator is s	ufficient)	MLRA Salt Cru Aquatic Hydroge	<b>A 1, 2, 4</b> / Ist (B11) Inverteb en Sulfide	A and 4B) rates (B13) e Odor (C1	(except		Secondary Water-Sta 4A and Drainage Dry-Seaso Saturation	Indicators (2 or moi nined Leaves (B9) ( <b>I</b> 14B) Patterns (B10) on Water Table (C2	re requir
PROLOG etland H imary Inc High V Satura Water Sedim Drift E	ydrology Indicadicators (any one ce Water (A1) Water Table (A2) ation (A3) or Marks (B1) nent Deposits (B2)	indicator is s	ufficient)	MLRA Salt Cru Aquatic Hydroge Oxidize	A 1, 2, 4, ust (B11) Inverteben Sulfided Rhizos	A and 4B) rates (B13) e Odor (C1	(except		Secondary Water-Sta 4A and Drainage Dry-Seaso Saturation Geomorph	Indicators (2 or mor hined Leaves (B9) ( <b>I</b> 14B) Patterns (B10) on Water Table (C2 n Visible on Aerial In	re requir
PROLOG etland H imary Inc Surfac High V Satura Water Sedin Drift E Algal	ydrology Indicaticators (any one ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)	indicator is s	ufficient)	MLRA Salt Cru Aquatic Hydroge Oxidized	A 1, 2, 4,4 list (B11) Inverteben Sulfide d Rhizos de of Rec	A and 4B) rates (B13) e Odor (C1) pheres alor	(except ) ng Living (C4)	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A	Indicators (2 or mor nined Leaves (B9) (I 1 4B) Patterns (B10) on Water Table (C2 n Visible on Aerial In nic Position (D2)	re requir
PROLOG Petland H Pimary Inc Satura Watel Sedin Drift E Algal Iron D	y ydrology Indicar dicators (any one ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)	indicator is s	ufficient)	MLR. Salt Cru Aquatic Hydroge Oxidize Present Recent	A 1, 2, 4/ Ist (B11) Inverteben Sulfide d Rhizos de of Red Iron Red	A and 4B) rates (B13) e Odor (C1 pheres alor	(except ) ng Living (C4) owed Sc	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut	Indicators (2 or mornined Leaves (B9) (Feb. 1994) Patterns (B10) on Water Table (C2) Visible on Aerial Indic Position (D2) quitard (D3)	re requir MLRA 1;
PROLOG etland H imary Inc Surfac High \ Satura Vater Sedim Drift E Algal Iron E Surfac	y ydrology Indicar dicators (any one ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	indicator is s	- - - - - -	MLR. Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted	A 1, 2, 4/ list (B11) Inverteben Sulfide d Rhizos de of Red Iron Red or Stres	A and 4B) rates (B13) e Odor (C1) pheres alou luced Iron uction in P	(except ) ng Living (C4) owed Sc (D1) (LF	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar	Indicators (2 or mornined Leaves (B9) (Ind 14B) Patterns (B10) On Water Table (C2) On Visible on Aerial Indic Position (D2) quitard (D3) On Table (D5)	re requir MLRA 1
PROLOG etland H imary Inc Surfac High V Satura Vater Sedim Drift D Algal Iron D Surfac	y ydrology Indicadicators (any one ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B	indicator is s  2)  6)  erial Imagery		MLR. Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted	A 1, 2, 4/ list (B11) Inverteben Sulfide d Rhizos de of Red Iron Red or Stres	A and 4B) rates (B13) e Odor (C1 pheres alor duced Iron uction in Pl sed Plants	(except ) ng Living (C4) owed Sc (D1) (LF	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar	Indicators (2 or mornined Leaves (B9) (Indicators (B9) (Indicators (B10))  Patterns (B10)  Patterns (B10)  Patterns (B10)  Patterns (B10)  Patterns (B2)  Patterns (D3)  Patterns (D5)  Patterns (D5)  Patterns (D6) (LR)	re requir MLRA 1 ) nagery (
PROLOG PROLOG Petland H Primary Inc Satura Water Sedim Drift E Algal Iron E Surfac Inund Spars	yydrology Indicaticators (any one ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (Bation Visible on A	indicator is s  2)  6)  erial Imagery		MLR. Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted	A 1, 2, 4/ list (B11) Inverteben Sulfide d Rhizos de of Red Iron Red or Stres	A and 4B) rates (B13) e Odor (C1 pheres alor duced Iron uction in Pl sed Plants	(except ) ng Living (C4) owed Sc (D1) (LF	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar	Indicators (2 or mornined Leaves (B9) (Indicators (B9) (Indicators (B10))  Patterns (B10)  Patterns (B10)  Patterns (B10)  Patterns (B10)  Patterns (B2)  Patterns (D3)  Patterns (D5)  Patterns (D5)  Patterns (D6) (LR)	re requir MLRA 1 ) nagery (
DROLOG Vetland H rimary Inc Surfac High V Satura Water Sedin Drift E Algal Iron E Surfac Inund Spars Veld Obse	y ydrology Indicaticators (any one ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B ation Visible on A cely Vegetated Coervations: ater Present?	2) 6) derial Imagery ncave Surfa	/ (B7) ce (B8)	MLR. Salt Cru Aquatic Hydroge Oxidize Presend Recent Stunted Other (E	A 1, 2, 4, 4, 4, 4, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	A and 4B) rates (B13) e Odor (C1 pheres alor duced Iron uction in P sed Plants Remarks)	(except ) ng Living (C4) owed Sc (D1) (LF	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar	Indicators (2 or mornined Leaves (B9) (Indicators (B9) (Indicators (B10))  Patterns (B10)  Patterns (B10)  Patterns (B10)  Patterns (B10)  Patterns (B2)  Patterns (D3)  Patterns (D5)  Patterns (D5)  Patterns (D6) (LR)	re requir MLRA 1, ) nagery (
DROLOG Vetland H rimary Inc Surfar High V Satura Water Sedin Drift E Algal Iron E Surfar Inund Spars ield Obse	y ydrology Indicaticators (any one ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B ation Visible on A rely Vegetated Control cervations: ater Present?	2) 6) derial Imagery ncave Surfa Yes Yes	/ (B7) ce (B8)	MLR. Salt Cru Aquatic Hydroge Oxidize Presend Recent Stunted Other (E	A 1, 2, 4/ list (B11) Inverteben Sulfided d Rhizos de of Recollon Red or Stres Explain in	A and 4B) rates (B13) e Odor (C1 pheres alor duced Iron uction in P sed Plants Remarks)	(except ) ng Living (C4) owed Sc (D1) (LF	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar Frost-Hea	Indicators (2 or more inned Leaves (B9) (File 14B) Patterns (B10) on Water Table (C2) of Visible on Aerial Infic Position (D2) quitard (D3) real Test (D5) of Mounds (D6) (LR) ree Hummocks (D7)	re requir MLRA 1, nagery (f
DROLOG Vetland H rimary Inc Surfac High V Satura Water Sedim Drift E Algal Iron E Surfac Inund Spars ield Obse urface Water table aturation	y ydrology Indicaticators (any one ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B ation Visible on A rely Vegetated Control cervations: ater Present?	2) 6) derial Imagery ncave Surfa	/ (B7) ce (B8)	MLR. Salt Cru Aquatic Hydroge Oxidize Presend Recent Stunted Other (E	A 1, 2, 4, 4, 4, 4, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	A and 4B) rates (B13) e Odor (C1 pheres alor duced Iron uction in P sed Plants Remarks)	(except ) ng Living (C4) owed Sc (D1) (LF	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar	Indicators (2 or more inned Leaves (B9) (File 14B) Patterns (B10) on Water Table (C2) of Visible on Aerial Infic Position (D2) quitard (D3) real Test (D5) of Mounds (D6) (LR) ree Hummocks (D7)	re requir MLRA 1 ) nagery (
DROLOG Vetland H rimary Inc Surfac High V Satura Water Sedim Drift E Algal Iron E Surfac Inund Spars ield Obse vater table aturation ncludes c	y ydrology Indicaticators (any one ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B ation Visible on A cely Vegetated Co cervations: ater Present? Present?	2) 6) derial Imagery oncave Surfa  Yes Yes Yes Yes	/ (B7) ce (B8) No No	MLR. Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted Other (E	A 1, 2, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	A and 4B) rates (B13) e Odor (C1 pheres alor duced Iron uction in P sed Plants Remarks) : : :	(except ) ng Living (C4) owed So (D1) (LF	Roots (C3)  pils (C6)  RR A)  Wetland Hy	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar Frost-Hea	Indicators (2 or more inned Leaves (B9) (File 14B) Patterns (B10) on Water Table (C2) of Visible on Aerial Infic Position (D2) quitard (D3) real Test (D5) of Mounds (D6) (LR) ree Hummocks (D7)	re requir MLRA 1; nagery (
Surfar  Surfar  High V  Saturar  Water  Sedim  Drift E  Algal  Iron E  Surfar  Inund  Spars  ield Observation  attertable  attration  ncludes care	y ydrology Indicaticators (any one ce Water (A1) Water Table (A2) ation (A3) If Marks (B1) Inent Deposits (B3) Mat or Crust (B4) Deposits (B5) Ince Soil Cracks (B) ation Visible on Action Visi	2) 6) derial Imagery oncave Surfa  Yes Yes Yes Yes	/ (B7) ce (B8) No No	MLR. Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted Other (E	A 1, 2, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	A and 4B) rates (B13) e Odor (C1 pheres alor duced Iron uction in P sed Plants Remarks) : : :	(except ) ng Living (C4) owed So (D1) (LF	Roots (C3)  pils (C6)  RR A)  Wetland Hy	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar Frost-Hea	Indicators (2 or more inned Leaves (B9) (File 14B) Patterns (B10) on Water Table (C2) of Visible on Aerial Infic Position (D2) quitard (D3) real Test (D5) of Mounds (D6) (LR) ree Hummocks (D7)	re requir MLRA 1, nagery (f

	_		State: <u>WA</u> Sampling Point:, Range: <u>S13, T5N, R1W</u>	1
	_			
	Local re-	1:-4/		
		ilet (concave	e, convex, none): none Slope (%): 0-39	<u>%</u>
Lat:		45.922	2074917 Long: -122.750387944 Datum:	
			NWI Classification: PEM1A	
		Yes_	X No (If no, explain in Remarks)	
	naturally pro	oblematic?	(If needed, explain any answers in Remarks.)	
owing s	sampling	point loca	ations, transects, important features, etc.	
	la tha Cr	amalad Ara	_	
Х		•	YAS NO Y	
Х				
osolute	Dominant	Indicator	Dominance Test worksheet:	
Cover	Species?	Status?	Number of Dominant Species That Are OBL, FACW, or FAC:  2 (A)	
			Total Number of Dominant	
			Species Across All Strata: 2 (B)	
			Percent of Dominant Species	
0			That Are OBL, FACW, or FAC:(A/B	3)
			Bury James Index Washabada	
20	Y	FACW□		
			FAC species x3 = <b>0</b>	
			FACU species x4 = 0	
20			UPL speciesx5 = <b>0</b>	
			Column Totals: <b>0</b> (A) <b>0</b> (B)	
60	Y	FACW □	Prevalence Index = B/A =	
15		FACU□		
10		IFAC□	Hydrophytic Vegetation Indicators:	
5		EAC□	1 - Rapid Test for Hydrophytic Vegetation	
			X 2 - Dominance Test is >50%	
			I ———	
				j
			I <del></del>	
			Problematic Hydrophytic Vegetation (Explain)	
90			1	
			be present, unless disturbed or problematic.	
			· · · · · · · · · · · · · · · · · · ·	
			• • •	
	otic Crust	0	Present? Yes x No	
	<del>-</del>			
	20 20 15 10 5	owing sampling  Is the Sawithin a  Solute Cover Species?  O Y  20 Y  20 Y  15 10 5	significantly disturbed? naturally problematic?  Dowing sampling point locate within a Wetland?  Is the Sampled Are within a Wetland?  Dominant Species? Status?  O  20  Y  FACW  15  FACU  10  5  FACU  90	significantly disturbed? Are "Normal Circumstances" Present? Yes X No (If needed, explain any answers in Remarks.)    No

SOIL								Samplir	ng Point:	
Profile Des	cription: (Desc	ribe to the de	pth needed to d	ocument t	he indicate	or or con	firm the abse	ence of indicat	ors.)	
Depth	 Matr		-	Redox Feat					-	
(inches)	Color (mois		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	e
0-16	10YR3/2	95	10YR3/3		C	M	SiL		Remarks	<u>,                                      </u>
0 10	1011(0/2		1011(3/3			101	OIL			
				_						
				_			· <u></u>	<del></del>		
					- ——			<u> </u>		
				_			·			
						-				
<sup>1</sup> Type: C=C	Concentration, D	=Depletion, RM	/=Reduced Matrix	c, CS=Cove	ered or Co	ated Sand	d Grains. <sup>2</sup> Lo	cation: PL=Po	re Lining, M=Matri	ix.
Hvdric Soil	Indicators: (A	oplicable to a	II LRRs, unless o	therwise	noted.)		Indicators	for Problemat	ic Hydric Soils <sup>3</sup> :	
	ol (A1)			y Redox (S				2 cm Muc	-	
	Epipedon (A2)			ed Matrix			-		nt Material (TF2)	
	Histic (A3)				(55) lineral (F1)	(excent	MIRA1)		plain in Remarks)	
	gen Sulfide (A4)				ллегал (г. т.) Лatrix (F2)	-	<u>.</u>		piani in remarko)	
	ted Below Dark S	Surface (A11)		eted Matrix						
	Dark Surface (A			x Dark Sur			<sup>3</sup> Indic	ators of hydron	hytic vegetation ar	nd
	Muck Mineral (S	•			Surface (F7	<b>'</b> \			must be present,	TIG .
	gleyed Matrix (S			x Depressi	-	)			or problematic.	
				x Debiessi	ions (i o)		u u	niess disturbed	or problematic.	
Restrictive	Layer (if preser	nt):								
Type:						١			.,	
Depth (inch	es):					Ну	dric Soil Pre	sent?	Yes	No
	_									
YDROLOGY Wetland Hy	r /drology Indicat	tors:								
Primary Indi	icators (any one	indicator is su	fficient)					Secondary	Indicators (2 or m	ore required
	e Water (A1)			r-Stained L	eaves (B9	) (except			ained Leaves (B9)	
	Vater Table (A2)				A and 4B)		-	 4A an		,
	ation (A3)			. , , Crust (B11)			-		Patterns (B10)	
	Marks (B1)		Agua	tic Inverteb	rates (B13	3)	-		on Water Table (C	(2)
	ent Deposits (B2	2)			e Odor (C1		-		n Visible on Aerial	-
	eposits (B3)	,		_	-	•	Roots (C3)		hic Position (D2)	<b>5</b> , (
	Mat or Crust (B4)	)			duced Iron		()		Aquitard (D3)	
	eposits (B5)				duction in F	` '	oils (C6)		tral Test (D5)	
	e Soil Cracks (B	6)			sed Plants		` '		nt Mounds (D6) ( <b>L</b>	RR A)
	ation Visible on A				n Remarks		,		ave Hummocks (D	
	ely Vegetated Co	• •	· · · —	(Explain ii	T TOMANO	,	-		tvo riaminicono (B	• ,
Field Obse		Ticave Guilaci					ı			
	iter Present?	Yes	No X De	oth (inches	:)-					
Water table		Yes			s):					
Saturation F	Present?	Yes		oth (inches			Wetland Hy	drology Prese	ent? Yes	No
•	apillary fringe)									
escribe Rec	orded Data (strea	am gauge, mo	nitoring well, aeria	al photos, p	revious ins	spections)	), if available:			
emarks:										
emarks.										

Project/Site: I-5 Woodland		_City/County	: Woodland	l/Cowlitz	Sampling Date: Oct.8, 2020
Applicant/Owner: Logan Partners LLC				State: WA	Sampling Point:1
Investigator(s): KB		Section	n, Township	o, Range: S13, T5N, R1W	
Landform (hillslope, terrace, etc.): terrace	;	Local re	elief (concav	ve, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR): Northwest Forests and Coas	st (LRR A) Lat:		45.92	2190515 Long: -1:	22.750321868 Datum:
Soil Map Unit Name: Newberg fine sandy				NWI Classification:	
Are climatic / hydrologic conditions on the site ty			Yes	X No	(If no, explain in Remarks)
Are Vegetation, Soil, or Hy					es" Present? Yes X No
Are Vegetation, Soil, or Hy	drology	naturally pr	oblematic?	(If needed, explain any ar	swers in Remarks.)
SUMMARY OF FINDINGS – Attach sit	te map showing	sampling	point loc	ations, transects, impo	rtant features, etc.
Hydrophytic Vegetation Present? Yes	x No_	la tha C	ampled Are	-	
Hydric Soil Present? Yes	Nox		ampled Are a Wetland?	YAS	No x
Wetland Hydrology Present? Yes	No <u>x</u>	_			
VEGETATION				T Danie - Tank -	
Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status?	Number of Dominant Specie	es
Populus balsamifera	20	Υ	IFAC□	That Are OBL, FACW, or FA	AC: <b>2</b> (A)
2				Total Number of Dominant	
3				Species Across All Strata:	(B)
1				Percent of Dominant Specie	
Tot	tal Cover: 20	_		That Are OBL, FACW, or FA	AC: <u>67%</u> (A/B)
1	tal Cover: 0	Y		FAC species FACU species UPL species Column Totals: 0	Multiply by:  x1 = 0  x2 = 0  x3 = 0  x4 = 0  x5 = 0  (A) 0 (B)
2. Anthoxanthum odoratum	20	Y	FACU□	<u></u>	
3. Lotus corniculatus	10			Hydrophytic Vegetation In	idicators:
4. Equisetum arvense	2			1 - Rapid Test for	Hydrophytic Vegetation
5				X 2 - Dominance Tes	st is >50%
6				3 - Prevalence Ind	lex is ≤3.0 <sup>1</sup>
7				I	Adaptation1 (Provide supporting
3				<del></del>	or on a separate sheet)
9				5 - Wetland Non-V	
10				Problematic Hydro	ophytic Vegetation <sup>1</sup> (Explain)
l1					
	tal Cover: 102	-			
Woody Vine Stratum  1.				<sup>1</sup> Indicators of hydric soil and be present, unless disturbed	
2				Hydrophytic	
To	tal Cover:	_		Vegetation	
% Bare Ground in Herb Stratum	0 % Cover of B	iotic Crust	0	Present?	Yes x No
Remarks: Plot taken within small patch of cottor	nwood.				

SOIL										Sampling Po	oint:	
Profile Desc	ription: (Desc	cribe to the de	pth neede	d to doc	ument tl	he indicat	or or c	onfirm the	absence o	f indicators.	)	
Depth	Mat		•		lox Feat						,	
-	Color (mois		Color (ı		%	4	Loc		exture		Domarka	
(inches)	,		COIOI (I	ilioist)	70	rype	LUC		exture	-	Remarks	
0-16	10YR3/2	100					-	SiL				
									2			
'Type: C=Co	oncentration, D	=Depletion, RM	l=Reduced	d Matrix, (	CS=Cove	ered or Co	ated Sa	and Grains.	. 'Location	: PL=Pore Li	ning, M=Matrix.	
		pplicable to al	l LRRs, ui					Indica			ydric Soils³:	
Histosol	I (A1)			Sandy F						cm Muck (A		
Histic E	pipedon (A2)			Stripped	l Matrix (	(S6)			F	Red Parent M	aterial (TF2)	
Black H	listic (A3)			Loamy I	Лиску M	ineral (F1	) (exce	pt MLRA 1	) (	Other (Explair	n in Remarks)	
Hydroge	en Sulfide (A4)			Loamy (	Gleyed M	/latrix (F2	)					
Deplete	d Below Dark	Surface (A11)		Deplete	d Matrix	(F3)						
	ark Surface (A			•		face (F6)		;	<sup>3</sup> Indicators of	of hydrophytic	vegetation and	l
	Muck Mineral (					Surface (F	7)				st be present,	
	gleyed Matrix (	*				ons (F8)	. ,			disturbed or p	•	
	ayer (if prese			1100071			I		4111000		A CONTINUE OF	
Type:	, (											
Depth (inches	e).							Hydric So	il Present?		Yes	No x
emarks:			<u> </u>									
YDROLOGY												
Wetland Hyd	drology Indica	tors:										
Primary Indic	ators (any one	indicator is suf	ficient)						Se	econdary Indi	cators (2 or mo	re required)
Surface	Water (A1)			Water-S	tained L	eaves (B9	exce	ept		Vater-Stained	d Leaves (B9) (I	MLRA 1, 2,
	ater Table (A2)	)				A and 4B)		-		4A and 4B	3)	
Saturati				Salt Cru					<u> </u>	Drainage Patt	•	
	Лarks (В1)				` ,	rates (B13	3)			•	Vater Table (C2	)
	nt Deposits (B2	2)		-		e Odor (C				-	ible on Aerial In	-
	posits (B3)	-)				,	•	ing Roots (		Geomorphic F		nagory (Oo)
		\				•	•	ing roots (	· —	-		
	at or Crust (B4	)				duced Iron		0-:1- (00)		Shallow Aquit	` '	
	posits (B5)							Soils (C6)		AC-Neutral		
	Soil Cracks (E	•				sed Plants		(LRR A)			ounds (D6) ( <b>LR</b>	
Inundati	ion Visible on A	Aerial Imagery (	B7)	Other (E	xplain ir	n Remarks	s)		<sup>f</sup>	rost-Heave I	Hummocks (D7)	
Sparsel	y Vegetated Co	oncave Surface	e (B8)									
Field Observ			NI V	Б (1	<i>(</i> : 1	`						
Surface Wate		Yes	No X		(inches							
Water table F Saturation Pr		Yes Yes	No x		(inches	):		Wetlar	nd Hydrolo	gy Present?	Yes	No x
(includes cap					(11101100	,		Wetta	ila riyarolo	gy i resent.		
		am gauge, mor	nitorina we	II. aerial c	hotos, p	revious in	spectio	ns), if avail	able:			
		gg-,		,	, բ			,,				
emarks:												

Project/Site: I-5 Woodland			City/County:	: Woodland/	Cowlitz Sampling Date: Oct.8, 2020
Applicant/Owner: Logan Partners LLC					State: WA Sampling Point:
nvestigator(s): KB			Section	n, Township,	, Range: S13, T5N, R1W
_andform (hillslope, terrace, etc.): terra			_ Local re	,	e, convex, none): none Slope (%): 0-3%
Subregion (LRR): Northwest Forests and C	oast (LRR A)	Lat:		45.922	2128080 Long: -122.750872100 Datum:
Soil Map Unit Name: Maytown silt loam					NWI Classification: PEM1A
Are climatic / hydrologic conditions on the site			•	Yes_	X No (If no, explain in Remarks)
Are Vegetation, Soil, or					Are "Normal Circumstances" Present? Yes X No
Are Vegetation, Soil, or	Hydrology		naturally pr	oblematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach	site map s	howing	sampling	point loca	ations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	x No		1.4.6		
Hydric Soil Present? Yes	No.	Х		ampled Area a Wetland?	Yes No x
Wetland Hydrology Present? Yes	No	Х		a Wolland.	
VEGETATION		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Use scientific names.)		% Cover	Species?	Status?	Number of Dominant Species
1. Corylus cornuta		15	Y	FACU□	That Are OBL, FACW, or FAC: 2 (A)
2					Total Number of Dominant
3					Species Across All Strata: 3 (B)
1					Percent of Dominant Species
	Total Cover:	15			That Are OBL, FACW, or FAC: 67% (A/B)
Shrub Stratum					Prevalence Index Worksheet:
1. Spiraea douglasii		30	Y	<u> </u>	Total % Cover of: Multiply by:
2.					OBL species x1 = 0
3.			-		FACW speciesx2 =0
1			-		FAC species x3 = 0
5	Total Cover:	20			FACU species x4 = <b>0</b> UPL species x5 = <b>0</b>
Herb Stratum	Total Cover.	30			UPL speciesx5 = Column Totals: 0 (A) 0 (B)
I. Phalaris arundinacea		70	Υ		Prevalence Index = B/A =
2.		70			1 Tovalence Index = B/T =
3.					Hydrophytic Vegetation Indicators:
i.					1 - Rapid Test for Hydrophytic Vegetation
j.					X 2 - Dominance Test is >50%
i.					3 - Prevalence Index is ≤3.0 <sup>1</sup>
					4 - Morphological Adaptation1 (Provide supporting
3.					data in Remarks or on a separate sheet)
).					5 - Wetland Non-Vascular Plants <sup>1</sup>
0					Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1.					
	Total Cover:	70			
Woody Vine Stratum .					<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
					Hydrophytic
<u> </u>		•			• • •
-	Total Cover:			I	vegetation
2	•			0	Vegetation           Present?         Yesx No

Type: C=Concen Hydric Soil Indica Histosol (A1) Histic Epiped Black Histic ( Hydrogen Su Depleted Bel Thick Dark S Sandy Muck Sandy gleyed Restrictive Layer Type: Depth (inches): marks:  DROLOGY Wetland Hydrolog Primary Indicators Surface Wate	Matrix  blor (moist) 10YR3/3 10YR3/3 10YR3/3  tration, D=Dep  ttors: (Applic  on (A2) A3) Ifide (A4) bw Dark Surfac urface (A12) Mineral (S1) I Matrix (S4)	% 100 95	10YR3/ 1=Reduced M I LRRs, unle	Redox  pist)  /4  Matrix, CS=	Features % 5  Covered ox (S5) atrix (S6) cky Mine yed Matri latrix (F3 k Surface ark Surface	s Type <sup>1</sup> C d or Coa ed.) ) ral (F1) (ix (F2) 3) e (F6) face (F7)	M ted Sanc	Texture SSiL SSiL SSiL SSiL  Indicators  MLRA 1)	eocation: PL=P s for Problema     2 cm Mu     Red Par     Other (E cators of hydro etland hydrolog unless disturbe	Remarks  Pore Lining, M=Matrix  Ratic Hydric Soils <sup>3</sup> :  Luck (A10)  Tent Material (TF2)  Explain in Remarks)  Pophytic vegetation and gy must be present, and or problematic.  Yes	
Type: C=Concen  Hydric Soil Indica  Histosol (A1)  Histic Epiped  Black Histic (  Hydrogen Su  Depleted Bel  Thick Dark S  Sandy Muck  Sandy Gleyec  Restrictive Layer  Type: Depth (inches): marks:  TOROLOGY  Wetland Hydrolog  Primary Indicators  Surface Wate	tration, D=Dep tors: (Applic on (A2) A3) lfide (A4) ow Dark Surfac urface (A12) Mineral (S1) I Matrix (S4)	95 letion, RM	10YR3/	Matrix, CS= ess otherw Sandy Red Stripped Matrix, CS= coamy Mucton Coamy Gley Depleted Matrix Coamy Gley Depleted Deplet	5  Covered  vise note ox (S5) atrix (S6) cky Mine yed Matr latrix (F3 k Surface ark Surface	C C d or Coa ed.)  ral (F1) (rix (F2) 3) e (F6) (race (F7)	ted Sanc	SSIL SSIL SSIL  Indicators  MLRA 1)	ocation: PL=P  s for Problema 2 cm Mu Red Par Other (E  cators of hydro etland hydrolog unless disturbe	Pore Lining, M=Matrix.  atic Hydric Soils <sup>3</sup> :  uck (A10)  rent Material (TF2)  Explain in Remarks)  ophytic vegetation and gy must be present, ed or problematic.	d
Type: C=Concen Hydric Soil Indica Histosol (A1) Histic Epiped Black Histic ( Hydrogen Su Depleted Bel Thick Dark S Sandy Muck Sandy gleyed Restrictive Layer Type: Depth (inches): marks:  DROLOGY Wetland Hydrolog Primary Indicators Surface Wate	tration, D=Dep trors: (Applic on (A2) A3) Ifide (A4) ow Dark Surfac urface (A12) Mineral (S1)	95 letion, RM	10YR3/	Matrix, CS= ess otherv Sandy Red Stripped Ma oamy Muc oamy Gley Depleted M Redox Darl	5  Covered  vise note ox (S5) atrix (S6) cky Mine yed Matrix (F3 k Surface ark Surface	C	ted Sanc	SSIL SSIL SSIL  Indicators  MLRA 1)	ocation: PL=P  s for Problema 2 cm Mu Red Par Other (E  cators of hydro etland hydrolog unless disturbe	Pore Lining, M=Matrix.  atic Hydric Soils <sup>3</sup> :  uck (A10)  rent Material (TF2)  Explain in Remarks)  ophytic vegetation and gy must be present, ed or problematic.	d
Type: C=Concen Hydric Soil Indica Histosol (A1) Histic Epiped Black Histic ( Hydrogen Su Depleted Bel Thick Dark S Sandy Muck Sandy gleyed Restrictive Layer Type: Depth (inches): marks:  DROLOGY Wetland Hydrolog Primary Indicators Surface Wate	tration, D=Dep ttors: (Applic on (A2) A3) Ifide (A4) ow Dark Surfac urface (A12) Mineral (S1)	95	I=Reduced M I LRRs, unle S S L L C F C	Matrix, CS= ess otherw Sandy Red Stripped Ma coamy Muc coamy Gley Depleted M Redox Darl	eCovered ox (S5) atrix (S6) cky Mine yed Matri latrix (F3 k Surface ark Surface	ed.) ) ral (F1) rix (F2) 3) e (F6) ace (F7)	ted Sanc	SSiL  Grains. <sup>2</sup> L  Indicators  MLRA 1) <sup>3</sup> Indicators	s for Problema 2 cm Mu Red Par Other (E	atic Hydric Soils <sup>3</sup> :  uck (A10)  rent Material (TF2)  Explain in Remarks)  ophytic vegetation and gy must be present, ed or problematic.	d
Type: C=Concen  Hydric Soil Indica  Histosol (A1)  Histic Epiped  Black Histic (  Hydrogen Su  Depleted Bel  Thick Dark S  Sandy Muck  Sandy gleyed  Restrictive Layer  Type: Depth (inches): marks:  DROLOGY  Wetland Hydrolog  Primary Indicators  Surface Wate	tration, D=Dep tors: (Applic on (A2) A3) Iffide (A4) ow Dark Surfac urface (A12) Mineral (S1) I Matrix (S4)	letion, RM	I=Reduced M I LRRs, unle S S L L C F C	Matrix, CS= ess otherw Sandy Red Stripped Ma coamy Muc coamy Gley Depleted M Redox Darl	eCovered ox (S5) atrix (S6) cky Mine yed Matri latrix (F3 k Surface ark Surface	ed.) ) ral (F1) rix (F2) 3) e (F6) ace (F7)	ted Sanc	Indicators  MLRA 1)  3Indicators	s for Problema 2 cm Mu Red Par Other (E	atic Hydric Soils <sup>3</sup> :  uck (A10)  rent Material (TF2)  Explain in Remarks)  ophytic vegetation and gy must be present, ed or problematic.	d
Hydric Soil Indica Histosol (A1) Histic Epiped Black Histic ( Hydrogen Su Depleted Bel Thick Dark S Sandy Muck Sandy gleyed Restrictive Layer Type: Depth (inches): marks:  DROLOGY Vetland Hydrolog Surface Wate	on (A2) A3) Ifide (A4) ow Dark Surface urface (A12) Mineral (S1) I Matrix (S4)	able to all	I LRRs, unle S S S L L L C C	ess otherw Sandy Red Stripped Ma coamy Muc coamy Gleg Depleted M Redox Darl Depleted D	vise note ox (S5) atrix (S6) cky Mine yed Matr yed Matrix (F3 k Surface ark Surface	ed.) ) ral (F1) (rix (F2) 3) e (F6) face (F7)	(except	Indicators MLRA 1)  3Indicators	s for Problema 2 cm Mu Red Par Other (E	atic Hydric Soils <sup>3</sup> :  uck (A10)  rent Material (TF2)  Explain in Remarks)  ophytic vegetation and gy must be present, ed or problematic.	d
ydric Soil Indica Histosol (A1) Histic Epiped Black Histic ( Hydrogen Su Depleted Bel Thick Dark S Sandy Muck Sandy gleyed estrictive Layer ype: epth (inches): narks:  DROLOGY //etland Hydrolog rimary Indicators Surface Wate	on (A2) A3) Ifide (A4) ow Dark Surface urface (A12) Mineral (S1) I Matrix (S4)	able to all	I LRRs, unle S S S L L L C C	ess otherw Sandy Red Stripped Ma coamy Muc coamy Gleg Depleted M Redox Darl Depleted D	vise note ox (S5) atrix (S6) cky Mine yed Matr yed Matrix (F3 k Surface ark Surface	ed.) ) ral (F1) (rix (F2) 3) e (F6) face (F7)	(except	Indicators MLRA 1)  3Indicators	s for Problema 2 cm Mu Red Par Other (E	atic Hydric Soils <sup>3</sup> :  uck (A10)  rent Material (TF2)  Explain in Remarks)  ophytic vegetation and gy must be present, ed or problematic.	d
ydric Soil Indica Histosol (A1) Histic Epiped Black Histic ( Hydrogen Su Depleted Bel Thick Dark S Sandy Muck Sandy gleyed estrictive Layer ype: epth (inches): narks:  DROLOGY //etland Hydrolog mimary Indicators Surface Wate	on (A2) A3) Ifide (A4) ow Dark Surface urface (A12) Mineral (S1) I Matrix (S4)	able to all	I LRRs, unle S S S L L L C C	ess otherw Sandy Red Stripped Ma coamy Muc coamy Gleg Depleted M Redox Darl Depleted D	vise note ox (S5) atrix (S6) cky Mine yed Matr yed Matrix (F3 k Surface ark Surface	ed.) ) ral (F1) (rix (F2) 3) e (F6) face (F7)	(except	Indicators MLRA 1)  3Indicators	s for Problema 2 cm Mu Red Par Other (E	atic Hydric Soils <sup>3</sup> :  uck (A10)  rent Material (TF2)  Explain in Remarks)  ophytic vegetation and gy must be present, ed or problematic.	d
Histosol (A1) Histic Epiped Black Histic ( Hydrogen Su Depleted Bel Thick Dark S Sandy Muck Sandy gleyed estrictive Layer ype: lepth (inches): marks:  DROLOGY Vetland Hydrolog rimary Indicators Surface Wate	on (A2) A3) Ifide (A4) ow Dark Surfac urface (A12) Mineral (S1) I Matrix (S4)		S L L G	Sandy Red Stripped Ma .oamy Muc .oamy Gle Depleted M Redox Darl Depleted D	ox (S5) atrix (S6) cky Mine yed Matr yed Matrix (F3 k Surface ark Surface	) ral (F1) ( rix (F2) B) e (F6) ace (F7)		<b>MLRA 1</b> ) <sup>3</sup> Indi we u	2 cm Mu Red Par Other (E cators of hydro etland hydrolog unless disturbe	cuck (A10) rent Material (TF2) Explain in Remarks) ophytic vegetation and gy must be present, ed or problematic.	
Histic Epiped Black Histic ( Hydrogen Su Depleted Bel Thick Dark S Sandy Muck Sandy gleyed estrictive Layer ype: epth (inches): marks:  DROLOGY Vetland Hydrolog rimary Indicators Surface Wate	A3) Ifide (A4) ow Dark Surfac urface (A12) Mineral (S1) I Matrix (S4)	ce (A11)	S L C	Stripped Ma .oamy Muc .oamy Gleg Depleted M Redox Dark Depleted D	atrix (S6) cky Mine yed Matr latrix (F3 k Surface ark Surface	ral (F1) ( rix (F2) 3) e (F6) ace (F7)		<sup>3</sup> India we u	Red Par Other (E cators of hydro etland hydrolog unless disturbe	rent Material (TF2) Explain in Remarks) Ophytic vegetation and By must be present, Ed or problematic.	
Black Histic ( Hydrogen Su Depleted Bel Thick Dark S Sandy Muck Sandy gleyed Restrictive Layer Type: Pepth (inches): marks:  DROLOGY Vetland Hydrolog Surface Wate	A3) Ifide (A4) ow Dark Surfac urface (A12) Mineral (S1) I Matrix (S4)	ce (A11)		oamy Muc oamy Gleg Depleted M Redox Darl Depleted D	cky Mine yed Matr latrix (F3 k Surface ark Surfa	ral (F1) ( rix (F2) 3) e (F6) ace (F7)		<sup>3</sup> India we u	Other (E cators of hydro etland hydrolog unless disturbe	explain in Remarks)  ophytic vegetation and  gy must be present,  ed or problematic.	
Hydrogen Su Depleted Bel Thick Dark S Sandy Muck Sandy gleyed Restrictive Layer Type: Depth (inches): marks:  DROLOGY Vetland Hydrolog Surface Wate	lfide (A4) ow Dark Surfac urface (A12) Mineral (S1) I Matrix (S4)	ce (A11)		oamy Gley Depleted M Redox Dark Depleted D	yed Matr latrix (F3 k Surface ark Surfa	rix (F2) 3) e (F6) ace (F7)		<sup>3</sup> India we u	cators of hydro etland hydrolog unless disturbe	ophytic vegetation and gy must be present, ed or problematic.	
Depleted Bel Thick Dark S Sandy Muck Sandy gleyed Destrictive Layer Sandy gleyed Destrictive Layer Des	ow Dark Surfac urface (A12) Mineral (S1) I Matrix (S4)	ce (A11)		Depleted M Redox Dark Depleted D	latrix (F3 k Surface ark Surfa	3) e (F6) ace (F7)		We	etland hydrolog unless disturbe	gy must be present, ed or problematic.	
Thick Dark S Sandy Muck Sandy gleyed estrictive Layer ype: epth (inches): narks:  DROLOGY /etland Hydrolog rimary Indicators Surface Wate	urface (A12) Mineral (S1) I Matrix (S4)	ce (A11)	F	Redox Darl Depleted D	k Surface ark Surfa	e (F6) ace (F7)		We	etland hydrolog unless disturbe	gy must be present, ed or problematic.	
Sandy Muck Sandy gleyed Sestrictive Layer Specific (inches): marks:  DROLOGY Vetland Hydrolog surface Wate Surface Wate	Mineral (S1) I Matrix (S4)		<u> </u>	Depleted D	ark Surfa	ace (F7)		We	etland hydrolog unless disturbe	gy must be present, ed or problematic.	
Sandy gleyed estrictive Layer ype: lepth (inches): marks:  DROLOGY Vetland Hydrolog rimary Indicators Surface Wate	Matrix (S4)							ţ	unless disturbe	ed or problematic.	No
pestrictive Layer ype: lepth (inches): marks:  DROLOGY Vetland Hydrolog rimary Indicators Surface Wate	<u> </u>		F	Redox Dep	ressions	s (F8)	Ну			<u> </u>	No
ype:epth (inches):narks:	(if present):		_				Ну	/dric Soil Pro	esent?	Yes	No
epth (inches):							Ну	dric Soil Pro	esent?	Yes	No
DROLOGY /etland Hydrolog rimary Indicators Surface Wate							Ну	dric Soil Pro	esent?	Yes	No
DROLOGY etland Hydrolog imary Indicators Surface Wate											
Vetland Hydrolog rimary Indicators Surface Wate											
rimary Indicators Surface Wate	av Indicators:										
Surface Water			ficient)						Secondar	ry Indicators (2 or mo	re require
	`			Vater-Stair	ned Leav	ves (B9)	(except			Stained Leaves (B9) (	
High water i	able (A2)			MLRA 1,			(except			nd 4B)	,
Saturation (A			S	Salt Crust (						e Patterns (B10)	
Water Marks	,			Aquatic Inv	,	es (B13)				ison Water Table (C2	<b>)</b> )
Sediment De				tydrogen S						on Visible on Aerial Ir	•
Drift Deposits				-				Roots (C3)		phic Position (D2)	nagery (c
							-	110015 (03)			
Algal Mat or (				Presence o				vila (C6)		Aquitard (D3)	
_ Iron Deposits				Recent Iron						eutral Test (D5)	D A)
Surface Soil		l (1		Stunted or			(D1) ( <b>LR</b>	KK A)		Ant Mounds (D6) ( <b>LR</b>	
	sible on Aerial			Other (Expl	iain in Re	emarks)			Frost-He	eave Hummocks (D7)	)
_	etated Concav	e Surface	e (B8)								
ield Observation			NI V	D 41 (*)							
Surface Water Pre Vater table Prese			No X No x	Depth (in Depth (in							
aturation Present			No x	Depth (in			—	Wetland H	lydrology Pres	sent? Yes	No
ncludes capillary				_ op (					., o.og, o		
scribe Recorded [	• ,	auge, mor	nitoring well,	aerial phot	tos, prev	ious ins	pections)	), if available:	•		
		<u> </u>		<u> </u>		<u> </u>					
marks:			· · · · · · · · · · · · · · · · · · ·					· · · · · · · · · · · · · · · · · · ·	<u></u>		

Project/Site:	I-5 Woodland			City/County:	Sampling Date:			Oct.8, 20	20			
Applicant/Owner:	Logan Partners LLC						State: \	ΝA	Samp	ling Point:		20
Investigator(s):	KB			Section	n, Township,	Range:	S13, T5	N, R1W				•
Landform (hillslope	e, terrace, etc.):	terrace		Local re	elief (concave	e, convex	k, none): r	none		Slope	e (%): <u>0-</u> 3	3%
Subregion (LRR):	Northwest Forests a	nd Coast (LRR A)	Lat:		45.922	2357753	Long:	-1	22.75080	1961 E	Datum:	
Soil Map Unit Nam	ne: Maytown silt	loam				·	NWI Clas	sification:	PEM1A			•
Are climatic / hydro	ologic conditions on th	e site typical for tl	nis time of	year?	Yes	Х	No_		(If no, ex	plain in Re	marks)	
Are Vegetation	, Soil									nt? Yes		)
Are Vegetation	, Soil						eded, expl	lain any ar	nswers in	Remarks.)		
SUMMARY OF	FINDINGS – Atta	ach site map s	howing	sampling	point loca	ations, 1	transec	ts, impo	rtant fe	atures, e	tc.	
Hydrophytic Veget	ation Present?	Yes x No										
Hydric Soil Presen		Yes No			ampled Area a Wetland?	а	Yes		No	x		
Wetland Hydrolog		Yes No		- within a	a welland?		_				•	
VEGETATION												
· · · · · · · · · · · · · · · · · · ·			Abaquita	Dominant	Indicator	Domina	nco Tost	workshe	ot:			
			Absolute % Cover	Species?	Indicator Status?			ant Speci				
	se scientific names.)		70 00101					ACW, or F				_
1										2	(A)	)
2							umber of I Across A	Dominant				
3.						Opecies	ACIUSS A	iii Siiaia.		2	(B)	)
4								ant Speci		4000/		<b>(D)</b>
		Total Cover:	0	-		i nat Are	e OBL, F	ACW, or F	AC:	100%	(A/	/B)
Shrub Stratum					=	Provalo	nce Inde	x Worksh	oot:			
Spiraea dougl	acii		100	Υ	ı∄ACW □		tal % Cov		eet.	Multiply b	v.	
2.	asıı		100	· <u> </u>		OBL spe		ei oi.			<u>y.</u>	
3.		<del></del>		. ———	-							
1						FAC spe			x3 =			
5.							_					
·		Total Cover:	100		-	UPL spe	_		x5 =			
Herb Stratum				-				0			(B)	)
1. Phalaris arund	dinacea		30	Υ	JFACW □					-		•
2.		_										
3.					-	Hydrop	hytic Veg	etation Ir	ndicators			
4.							1 - Rapi	d Test for	Hydrophy	tic Vegetat	ion	
5.						Х	2 - Dom	inance Te	st is >50%	6		
6.							3 - Preva	alence Inc	lex is ≤3.	0 <sup>1</sup>		
7							4 - Morp	hological	Adaptatio	n1 (Provide	supportir	ng
8							data in F	Remarks o	or on a se	parate shee	et)	
9						·	5 - Wetla	and Non-\	/ascular F	Plants <sup>1</sup>		
10						·	Problem	atic Hydro	ophytic Ve	getation <sup>1</sup> (	Explain)	
11												
		Total Cover:	30	-								
Woody Vine S	<u>Stratum</u>									hydrology	must	
1						be prese	ent, unles	s disturbe	d or probl	ematic.		
2						Hydrop	hvtic					
		Total Cover:		<u>-</u>		Vegetat	tion					
% Ba	re Ground in Herb Stra	atum <u>70</u> %	Cover of B	iotic Crust	0	Present	t?		Yes	x No		_
Remarks:												

SOIL								Samplir	ng Point:	
Profile Des	cription: (Describ	be to the dep	th needed to do	cument t	he indicate	or or cor	nfirm the abse	ence of indicat	ors.)	
Depth	Matrix		R	edox Fea	tures					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	- Texture		Remarks	:
0-16	10YR3/3		10YR3/4	5	C	M	SSiL		Romana	<u>'</u>
0 10	101110/3		101110/4			101	OOIL			
							_			
				. ———		-	-			
							-			
							_			
<sup>1</sup> Type: C=C	oncentration, D=D	epletion, RM:	=Reduced Matrix	CS=Cov	ered or Co	ated San	d Grains. <sup>2</sup> Lo	cation: PL=Po	re Lining, M=Matri	X.
	Indicators: (App	licable to all					indicators		ic Hydric Soils <sup>3</sup> :	
Histos				Redox (S			-	2 cm Mud		
	Epipedon (A2)			ed Matrix			<b>-</b>		nt Material (TF2)	
	Histic (A3)				/lineral (F1)		MLRA 1)	Other (Ex	plain in Remarks)	
	gen Sulfide (A4)			-	Matrix (F2)	1				
Deplet	ed Below Dark Sur	rface (A11)	Deple	ed Matrix	(F3)					
Thick I	Dark Surface (A12)	)	Redox	Dark Su	rface (F6)		<sup>3</sup> Indic	ators of hydrop	hytic vegetation ar	nd
Sandy	Muck Mineral (S1)	)	Deple	ed Dark S	Surface (F7	<b>'</b> )	wet	land hydrology	must be present,	
Sandy	gleyed Matrix (S4)	)	Redox	Depress	ions (F8)		u	nless disturbed	or problematic.	
Restrictive	Layer (if present)	:								
Type:										
Depth (inche	es):					Hy	ydric Soil Pre	sent?	Yes	No x
emarks:										
YDROLOGY Wetland Hy	drology Indicator	re.								
_	cators (any one inc		icient)					Secondary	Indicators (2 or m	ore required)
	e Water (A1)	alcator is sum	•	Stained I	Leaves (B9	) (except	<u>.                                    </u>		ained Leaves (B9)	
					Leaves (B9 IA and 4B)		•	4A an	` ′	(1111177 1, 2,
	/ater Table (A2) tion (A3)			ust (B11)			-		•	
	,			,	,	١١.	-		Patterns (B10)	2)
	Marks (B1) ent Deposits (B2)				orates (B13 de Odor (C1		-		on Water Table (C	-
	. , ,				-	-	- Dooto (C2)		n Visible on Aerial	illiagery (C9
	eposits (B3)				•		Roots (C3)		hic Position (D2)	
	Mat or Crust (B4)				duced Iron	` '	-:I- (OC)		Aquitard (D3)	
	eposits (B5)				duction in F				tral Test (D5)	DD 4\
	e Soil Cracks (B6)				ssed Plants		RR A) _		nt Mounds (D6) (L	
	tion Visible on Aer		· —	(Explain i	n Remarks	)	-	Frost-Hea	ave Hummocks (D	7)
Sparse	ely Vegetated Cond	cave Surface	(B8)							
Field Obser		,	N V 5		,					
Surface Wa				th (inches						
Water table Saturation F				th (inches	s):		Wetland Hy	drology Prese	ent? Yes	No x
	pillary fringe)			(				g,		
	orded Data (stream	n gauge, mon	itoring well, aeria	photos, p	orevious ins	spections	), if available:			
emarks:										

Project/Site:	I-5 Woodland		City/County:	Woodland	/Cowlitz	Sampling Date: Oct.8, 2020
Applicant/Owner:	Logan Partners LLC				State: WA	Sampling Point: 21
Investigator(s):	KB		Section	n, Township	, Range: S13, T5N, R1W	
Landform (hillslope	· —		_ Local re	elief (concav	e, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR):	Northwest Forests and Coast (LRR	A) Lat:		45.92	<u>2662217</u> Long: <u>-1</u>	122.750806006 Datum:
Soil Map Unit Nam					NWI Classification:	
	ologic conditions on the site typical fo			Yes_	X No	<u>-</u> ` ' '
	, Soil, or Hydrology					ces" Present? Yes X No
Are Vegetation	, Soil, or Hydrology		naturally pro	oblematic?	(If needed, explain any ar	nswers in Remarks.)
SUMMARY OF	FINDINGS – Attach site map	showing	sampling	point loca	ations, transects, impo	ortant features, etc.
Hydrophytic Vegeta	ation Present? Yes x I	No	1.4.0			
Hydric Soil Present	t? YesI	No <u>x</u>		ampled Are a Wetland?	YAS	No x
Wetland Hydrology	Present? YesI	No <u>x</u>				
VEGETATION						
VEGETATION			<u> </u>		Daminana Tastunalista	
		Absolute % Cover	Dominant Species?	Indicator Status?	Dominance Test workshe	
\	se scientific names.)				Number of Dominant Speci That Are OBL, FACW, or F	-ΔC·
1			-	· ——		(A)
2.				· ——	Total Number of Dominant Species Across All Strata:	
3 4.						(B)
4	Total Cove	er: 0			Percent of Dominant Speci That Are OBL, FACW, or F	
	Total Cove	JI. <u>U</u>			That Ale Obl., I AOW, OI I	AC. 100% (A/B)
Shrub Stratum					Prevalence Index Worksh	neet:
Spiraea dougla	asii	30	Υ	JFACW □	Total % Cover of:	Multiply by:
2.					OBL species	x1 = <b>0</b>
3.					FACW species	x2 = <b>0</b>
4					FAC species	_x3 =
5			-		FACU species	x4 = <b>0</b>
	Total Cove	er: <u>30</u>			UPL species	_x5 =
Herb Stratum				-54 014/-	Column Totals: 0	(A)(B)
1. Phalaris arund		80	Y	FACW□	Prevalence Index = B/A =	<u> </u>
2. Anthoxanthum		10	-	FACU□	H. Land C. Warrington I	
3. Lotus cornicula		10		□FAC□ □FAC□	Hydrophytic Vegetation Ir	
4. <u>Cirsium arvens</u>	Se	2			X 2 - Dominance Te	Hydrophytic Vegetation
5 6.					3 - Prevalence Inc	
						Adaptation1 (Provide supporting
						or on a separate sheet)
				. ———	5 - Wetland Non-\	• /
-						ophytic Vegetation <sup>1</sup> (Explain)
11.					1 100101114110111	sprifile regetation (Explain)
		er: 102				
Woody Vine St					<sup>1</sup> Indicators of hydric soil and be present, unless disturbe	
0					Hydrophytic	
	Total Cove	er:			Vegetation	
% Bai	re Ground in Herb Stratum0	% Cover of B	iotic Crust	0	Present?	Yes x No
Remarks:						

epth	Matrix		Red	lox Featu	ıres					
ches) Color	moist) 9	<u>6</u> (	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	S
0-7 10Y	R2/2 10	00					L			
7-16 2.5	(4/3 9	<u>5                                    </u>	2.5Y5/6	5	C	M	<u>S</u>			
					<u></u>					
/pe: C=Concentration	on, D=Depletion	n, RM=Re	educed Matrix, C	S=Cove	red or Coa	ted Sand	d Grains. <sup>2</sup> Lo	cation: PL=Po	ore Lining, M=Matri	x.
dric Soil Indicators	: (Applicable	to all LR	RRs, unless other	erwise n	oted.)		Indicators	for Problema	tic Hydric Soils <sup>3</sup> :	
Histosol (A1)			Sandy R				-	2 cm Mu		
_ Histic Epipedon (	<b>A2</b> )		Stripped				-		ent Material (TF2)	
Black Histic (A3)				-	neral (F1)	(except	MLRA 1)	Other (E	xplain in Remarks)	
_ Hydrogen Sulfide				-	atrix (F2)					
_ Depleted Below [		.11)	Depleted				2			
Thick Dark Surface	, ,				ace (F6)			-	ohytic vegetation a	nd
Sandy Muck Mine					urface (F7)				y must be present,	
_ Sandy gleyed Ma	, ,		Redox D	epressio	ons (F8)		u	nless disturbe	d or problematic.	
strictive Layer (if p	resent):									
								_		
pth (inches):			_			Ну	rdric Soil Pre	sent?	Yes	No _
pth (inches): arks: ROLOGY	dicators		_			Ну	rdric Soil Pre	sent?	Yes	_ No _
pth (inches): arks: ROLOGY etland Hydrology Ir		s sufficie	ent)			Ну	rdric Soil Pre			
pth (inches): arks: ROLOGY etland Hydrology Ir mary Indicators (any	one indicator i	s sufficie		tained La	eaves (R9)			Secondar	y Indicators (2 or m	ore requi
pth (inches):  arks:  ROLOGY  etland Hydrology Ir  mary Indicators (any  Surface Water (A	one indicator i	s sufficie	Water-S		eaves (B9)	(except		Secondar Water-S	y Indicators (2 or mained Leaves (B9)	ore requi
pth (inches):  arks:  ROLOGY  etland Hydrology Ir  mary Indicators (any  Surface Water (A  High Water Table	one indicator i	s sufficie	Water-S MLRA	A 1, 2, 4A	eaves (B9) A and 4B)	(except		Secondar Water-Si 4A ar	y Indicators (2 or mained Leaves (B9)	ore requi
pth (inches):  arks:  ROLOGY  etland Hydrology Ir  mary Indicators (any  Surface Water (A  High Water Table  Saturation (A3)	one indicator in the control of the	s sufficie	Water-S MLRA Salt Crus	<b>1, 2, 4</b> 4 st (B11)	A and 4B)	(except		Secondar Water-S <b>4A ar</b> Drainage	/ Indicators (2 or mained Leaves (B9) ad 4B)	ore requii
pth (inches):  arks:  ROLOGY  etland Hydrology Ir  mary Indicators (any  Surface Water (A  High Water Table  Saturation (A3)  Water Marks (B1)	one indicator i 1) (A2)	s sufficie	Water-S MLRA Salt Crus Aquatic	<b>A 1, 2, 4</b> <i>A</i> st (B11) Invertebr	A and 4B)	(except		Secondar Water-Si 4A ar Drainage Dry-Seas	y Indicators (2 or mained Leaves (B9) and 4B) be Patterns (B10) son Water Table (C	ore requii (MLRA 1
pth (inches):  arks:  ROLOGY  etland Hydrology Ir  mary Indicators (any  Surface Water (A  High Water Table  Saturation (A3)  Water Marks (B1  Sediment Deposi	r one indicator i 1) (A2) ss (B2)	s sufficie	Water-S MLRA Salt Crue Aquatic Hydroge	<b>A 1, 2, 4</b> st (B11) Invertebr n Sulfide	and 4B) rates (B13) Properties (C1)	(except		Secondar Water-Si 4A ar Drainage Dry-Seas Saturatio	y Indicators (2 or m rained Leaves (B9) ad <b>4B</b> ) Patterns (B10) son Water Table (C n Visible on Aerial	ore requii (MLRA 1
pth (inches):  arks:  ROLOGY  etland Hydrology Ir  mary Indicators (any  Surface Water (A  High Water Table  Saturation (A3)  Water Marks (B1)	r one indicator i 1) (A2) ss (B2)	s sufficie	Water-S MLRA Salt Crus Aquatic Hydroge Oxidized	<b>1, 2, 4</b> A st (B11) Invertebr n Sulfide I Rhizosp	rates (B13) Odor (C1 oheres alor	(except		Secondar Water-Si 4A ar Drainage Dry-Seas Saturatio	y Indicators (2 or mained Leaves (B9) od 4B) Patterns (B10) son Water Table (Con Visible on Aerial obic Position (D2)	ore requii (MLRA 1
pth (inches):  arks:  ROLOGY  etland Hydrology Ir  mary Indicators (any  Surface Water (A  High Water Table  Saturation (A3)  Water Marks (B1  Sediment Deposit  Drift Deposits (B3)	r one indicator i 1) (A2) is (B2) b) t (B4)	s sufficie	Water-S MLRA Salt Crus Aquatic Hydroge Oxidized Presence	A 1, 2, 4A st (B11) Invertebr n Sulfide I Rhizosp e of Red	and 4B) rates (B13) Properties (C1)	(except ) ng Living (C4)	- - - - - Roots (C3)	Secondar Water-Si 4A ar Drainage Dry-Seas Saturatic Geomory Shallow	y Indicators (2 or m rained Leaves (B9) ad <b>4B</b> ) Patterns (B10) son Water Table (C n Visible on Aerial	ore requii (MLRA 1
pth (inches):  arks:  ROLOGY  etland Hydrology Ir  mary Indicators (any  Surface Water (A  High Water Table  Saturation (A3)  Water Marks (B1  Sediment Deposit  Drift Deposits (B3  Algal Mat or Crus	r one indicator i 1) (A2) is (B2) b) t (B4)	s sufficie	Water-S  MLRA  Salt Crue Aquatic Hydroge Oxidized Presenc Recent I	A 1, 2, 4A st (B11) Invertebr n Sulfide I Rhizosp e of Red ron Red	rates (B13) c Odor (C1 oheres alor uced Iron (	(except ) ng Living C4) owed Sc	Roots (C3)	Secondar Water-Si 4A ar Drainage Dry-Seas Saturatic Geomory Shallow FAC-Net	y Indicators (2 or mained Leaves (B9) ad 4B) Patterns (B10) Son Water Table (Con Visible on Aerial Ohic Position (D2) Aquitard (D3)	ore requii ( <b>MLRA 1</b> (2) Imagery (
pth (inches):  arks:  ROLOGY  etland Hydrology Ir  mary Indicators (any  Surface Water (A  High Water Table  Saturation (A3)  Water Marks (B1  Sediment Deposit  Drift Deposits (B3  Algal Mat or Crus  Iron Deposits (B5	r one indicator i 1) (A2) is (B2) b) t (B4) ) ks (B6)		Water-S  MLRA  Salt Crue  Aquatic  Hydroge  Oxidized  Presenc  Recent I  Stunted	A 1, 2, 4A st (B11) Invertebr n Sulfide I Rhizosp e of Red ron Redu or Stress	ates (B13) Odor (C1 Oheres alor uced Iron ( uction in Pl	(except ) ng Living C4) owed Sc	Roots (C3)	Secondar Water-Si 4A ar Drainage Dry-Seas Saturatio Geomory Shallow FAC-Nei	y Indicators (2 or meaned Leaves (B9) and 4B) Patterns (B10) Son Water Table (Con Visible on Aerial Orlic Position (D2) Aquitard (D3)	ore requir (MLRA 1 (2) Imagery (
pth (inches):  arks:  ROLOGY  etland Hydrology Ir  mary Indicators (an)  Surface Water (A  High Water Table  Saturation (A3)  Water Marks (B1)  Sediment Deposit  Drift Deposits (B3)  Algal Mat or Crus  Iron Deposits (B5)  Surface Soil Crace	r one indicator i 1) (A2) is (B2) b) t (B4) ) ks (B6) e on Aerial Imag	gery (B7)	Water-S MLRA Salt Crus Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	A 1, 2, 4A st (B11) Invertebr n Sulfide I Rhizosp e of Red ron Redu or Stress	ates (B13) e Odor (C1 oheres alor uced Iron ( uction in Pl sed Plants	(except ) ng Living C4) owed Sc	Roots (C3)	Secondar Water-Si 4A ar Drainage Dry-Seas Saturatio Geomory Shallow FAC-Nei	y Indicators (2 or mained Leaves (B9) and 4B) Patterns (B10) Son Water Table (Con Visible on Aerial Ohic Position (D2) Aquitard (D3) Utral Test (D5) Int Mounds (D6) (L	ore requir (MLRA 1 (2) Imagery (
pth (inches):  arks:  ROLOGY  etland Hydrology Ir  mary Indicators (any  Surface Water (A  High Water Table  Saturation (A3)  Water Marks (B1  Sediment Deposit  Drift Deposits (B3  Algal Mat or Crus  Iron Deposits (B5  Surface Soil Crac  Inundation Visible  Sparsely Vegetat	r one indicator i 1) (A2) is (B2) b) t (B4) ) ks (B6) e on Aerial Imag	gery (B7)	Water-S MLRA Salt Crus Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	A 1, 2, 4A st (B11) Invertebr n Sulfide I Rhizosp e of Red ron Redu or Stress	ates (B13) e Odor (C1 oheres alor uced Iron ( uction in Pl sed Plants	(except ) ng Living C4) owed Sc	Roots (C3)	Secondar Water-Si 4A ar Drainage Dry-Seas Saturatio Geomory Shallow FAC-Nei	y Indicators (2 or mained Leaves (B9) and 4B) Patterns (B10) Son Water Table (Con Visible on Aerial Ohic Position (D2) Aquitard (D3) Utral Test (D5) Int Mounds (D6) (L	ore requir (MLRA 1 (2) Imagery (
ROLOGY etland Hydrology Ir imary Indicators (any Surface Water (A High Water Table Saturation (A3) Water Marks (B1 Sediment Deposit Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 Surface Soil Crac Inundation Visible Sparsely Vegetat eld Observations: Irface Water Present	t one indicator in the control of th	gery (B7) Irface (B8	Water-S  MLRA  Salt Crus  Aquatic   Hydroge Oxidized Presenc Recent   Stunted Other (E	A 1, 2, 4A st (B11) Invertebr n Sulfide I Rhizosp e of Red ron Redu or Stress explain in	and 4B) rates (B13) rates (C1) rates alor uced Iron ( uction in Pl sed Plants Remarks)	(except ) ng Living C4) owed Sc	Roots (C3)	Secondar Water-Si 4A ar Drainage Dry-Seas Saturatio Geomory Shallow FAC-Nei	y Indicators (2 or mained Leaves (B9) and 4B) Patterns (B10) Son Water Table (Con Visible on Aerial Ohic Position (D2) Aquitard (D3) Utral Test (D5) Int Mounds (D6) (L	ore requir (MLRA 1 (2) Imagery (
ROLOGY etland Hydrology Ir imary Indicators (any Surface Water (A High Water Table Saturation (A3) Water Marks (B1 Sediment Deposit Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 Surface Soil Crac Inundation Visible Sparsely Vegetat eld Observations: urface Water Present ater table Present?	t one indicator in the control of th	gery (B7) Irface (B8 No No	Water-S  MLRA  Salt Crus  Aquatic   Hydroge  Oxidized Presenc Recent I Stunted Other (E	A 1, 2, 4A st (B11) Invertebr n Sulfide I Rhizosp e of Red ron Redu or Stress explain in (inches) (inches)	and 4B) rates (B13) rates (C1) rates alor (C2) rates alor (C3) rates (B13) rat	(except ) ng Living C4) owed Sc	Roots (C3)	Secondar Water-Si 4A ar Drainage Dry-Seas Saturatic Geomory Shallow FAC-Net Raised A Frost-He	y Indicators (2 or mained Leaves (B9) and 4B) Patterns (B10) Son Water Table (Con Visible on Aerial Ohic Position (D2) Aquitard (D3) Utral Test (D5) Ant Mounds (D6) (Loave Hummocks (D)	ore requii (MLRA 1 (2) Imagery ( RR A) 7)
pth (inches):  arks:  ROLOGY  etland Hydrology Ir mary Indicators (any Surface Water (A High Water Table Saturation (A3) Water Marks (B1 Sediment Deposit Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 Surface Soil Crac Inundation Visible Sparsely Vegetat eld Observations: rface Water Present ater table Present? turation Present?	t one indicator in the control of th	gery (B7) Irface (B8	Water-S  MLRA  Salt Crus  Aquatic   Hydroge  Oxidized Presenc Recent I Stunted Other (E	A 1, 2, 4A st (B11) Invertebr n Sulfide I Rhizosp e of Red ron Redu or Stress explain in	and 4B) rates (B13) rates (C1) rates alor (C2) rates alor (C3) rates (B13) rat	(except ) ng Living C4) owed Sc	Roots (C3)	Secondar Water-Si 4A ar Drainage Dry-Seas Saturatio Geomory Shallow FAC-Nei	y Indicators (2 or mained Leaves (B9) and 4B) Patterns (B10) Son Water Table (Con Visible on Aerial Ohic Position (D2) Aquitard (D3) Utral Test (D5) Ant Mounds (D6) (Loave Hummocks (D)	ore requir (MLRA 1 (2) Imagery (
pth (inches):  arks:  ROLOGY  etland Hydrology Ir mary Indicators (any Surface Water (A High Water Table Saturation (A3) Water Marks (B1 Sediment Deposit Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 Surface Soil Crac Inundation Visible Sparsely Vegetat eld Observations: rface Water Present ater table Present? turation Present? cludes capillary fring	r one indicator i  1)  (A2)  Is (B2)  It (B4)  It (B4)  It (B6)  It on Aerial Imaged Concave Surves  Yes Yes Yes Yes E	gery (B7) Irface (B8 No No	Water-S  MLRA  Salt Crus  Aquatic   Hydroge  Oxidized  Presenc  Recent   Stunted  Other (E	A 1, 2, 4A st (B11) Invertebr in Sulfide I Rhizosp e of Red ron Redu or Stress explain in (inches) (inches)	and 4B) rates (B13) rates (B13) rates (C1) rates alor uced Iron ( uction in Pl sed Plants Remarks)	(except ) ng Living C4) owed So (D1) (LR	Roots (C3)  iils (C6)  R A)  Wetland Hy	Secondar Water-Si 4A ar Drainage Dry-Seas Saturatic Geomory Shallow FAC-Net Raised A Frost-He	y Indicators (2 or mained Leaves (B9) and 4B) Patterns (B10) Son Water Table (Con Visible on Aerial Ohic Position (D2) Aquitard (D3) Utral Test (D5) Ant Mounds (D6) (Loave Hummocks (D)	ore requii (MLRA 1 (2) Imagery ( RR A) 7)
High Water Table Saturation (A3) Water Marks (B1 Sediment Deposi Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 Surface Soil Crac Inundation Visible	r one indicator i  1)  (A2)  Is (B2)  It (B4)  It (B4)  It (B6)  It on Aerial Imaged Concave Surves  Yes Yes Yes Yes E	gery (B7) Irface (B8 No No	Water-S  MLRA  Salt Crus  Aquatic   Hydroge  Oxidized  Presenc  Recent   Stunted  Other (E	A 1, 2, 4A st (B11) Invertebr in Sulfide I Rhizosp e of Red ron Redu or Stress explain in (inches) (inches)	and 4B) rates (B13) rates (B13) rates (C1) rates alor uced Iron ( uction in Pl sed Plants Remarks)	(except ) ng Living C4) owed So (D1) (LR	Roots (C3)  iils (C6)  R A)  Wetland Hy	Secondar Water-Si 4A ar Drainage Dry-Seas Saturatic Geomory Shallow FAC-Net Raised A Frost-He	y Indicators (2 or mained Leaves (B9) and 4B) Patterns (B10) Son Water Table (Con Visible on Aerial Ohic Position (D2) Aquitard (D3) Utral Test (D5) Ant Mounds (D6) (Loave Hummocks (D)	ore requii (MLRA 1 (2) Imagery ( RR A) 7)

Project/Site:	I-5 Woodland			City/County:	Woodland	/Cowlitz		Sampling D	Date: Oct.8,	2020
Applicant/Owner:	Logan Partners LLC						State: WA	Sampling P	Point:	22
Investigator(s):	KB			Section	n, Township	, Range:	S13, T5N, R1W			
Landform (hillslope	· -	errace		_ Local re	lief (concav	e, convex	, none): none		Slope (%):	0-3%
Subregion (LRR):	Northwest Forests an	d Coast (LRR A)	Lat:		45.92	2648464	Long:	-122.751438558	Datum:	
Soil Map Unit Nam							NWI Classificatio			
	ologic conditions on the				Yes_	X	No	<u> </u>		
	, Soil,							nces" Present?		_No
Are Vegetation	, Soil,	or Hydrology		naturally pro	oblematic?	(If nee	ded, explain any	answers in Rema	arks.)	
SUMMARY OF	FINDINGS - Atta	ch site map s	howing	sampling	point loca	ations, t	ransects, imp	ortant feature	es, etc.	
Hydrophytic Veget	ation Present?	Yes x No		1. 11 . 0						
Hydric Soil Presen	t? '	Yes No	х		ampled Are a Wetland?		Yes	No x		
Wetland Hydrology	y Present?	YesNo	Х		a Trottana.					
VEGETATION										
			Absolute	Dominant	Indicator	Domina	nce Test worksl	neet:		
Tree Stratum (Us	se scientific names.)		% Cover		Status?	Number	of Dominant Spe	ecies		
1.	oc odientino names.)				· <del></del>	That Are	OBL, FACW, or	FAC:	2	(A)
2.						Total Nu	ımber of Dominar			_(- '/
3.						Species	Across All Strata	ı:	2	(B)
4.						Percent	of Dominant Spe	ecies		• ` ′
		Total Cover:	0				OBL, FACW, or		00%	_(A/B)
4 5			50	Y	FACW	Tot OBL spe FACW s FAC spe FACU spe UPL spe Column Preval	pecies pecies pecies pecies Totals: oence Index = B/A  pytic Vegetation 1 - Rapid Test for 2 - Dominance	Mult		- - - - - (B)
							3 - Prevalence I			
0								al Adaptation1 (P		orting
•								s or on a separate n-Vascular Plants	,	
								drophytic Vegetati		2)
					· <del></del>		r robiematic riye	nopriyuc vegetat	ion (Explain	1)
		Total Cover:	50							
Woody Vine S	<u>tratum</u>	•						and wetland hydro bed or problemati		
0						Hydropl	nvtic			
		Total Cover:				Vegetat	•			
% Ba	re Ground in Herb Stra	tum <u>50</u> % (	Cover of Bi	otic Crust	0	Present	?	Yes x	No	
Remarks:										

1 Type: C=Concentratio  Hydric Soil Indicators Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Depleted Below D Thick Dark Surface	Matrix moist) % 3/2 10	Color 0 , RM=Reduce	Redo	x Feature	Type <sup>1</sup>	Loc <sup>2</sup>	Texture SSiL	nce of indicator	Remarks	
Depth (inches) Color	Matrix moist) % 3/2 10	Color 0 , RM=Reduce	Redo	x Feature	Type <sup>1</sup>		Texture			
1 Type: C=Concentratio  Hydric Soil Indicators Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Depleted Below D Thick Dark Surface	n, D=Depletion	, RM=Reduce	(moist)	% -	Type <sup>1</sup>	Loc <sup>2</sup>			Remarks	
O-16 10YF  Type: C=Concentratio  Hydric Soil Indicators  Histosol (A1)  Histic Epipedon (A  Black Histic (A3)  Hydrogen Sulfide  Depleted Below D  Thick Dark Surface	n, D=Depletion  (Applicable to	, RM=Reduce							Kemarks	
Type: C=Concentratio  Hydric Soil Indicators  Histosol (A1)  Histic Epipedon (A  Black Histic (A3)  Hydrogen Sulfide  Depleted Below D  Thick Dark Surfac	n, D=Depletion	, RM=Reduce	ed Matrix, C	S=Covere						
Hydric Soil Indicators  Histosol (A1)  Histic Epipedon (A  Black Histic (A3)  Hydrogen Sulfide  Depleted Below D  Thick Dark Surfac	(Applicable t		ed Matrix, C	S=Covere						
Hydric Soil Indicators  Histosol (A1)  Histic Epipedon (A  Black Histic (A3)  Hydrogen Sulfide  Depleted Below D  Thick Dark Surfac	(Applicable t		ed Matrix, C	S=Covere						
Hydric Soil Indicators  Histosol (A1)  Histic Epipedon (A  Black Histic (A3)  Hydrogen Sulfide  Depleted Below D  Thick Dark Surfac	(Applicable t		ed Matrix, C	S=Covere						
Hydric Soil Indicators  Histosol (A1)  Histic Epipedon (A  Black Histic (A3)  Hydrogen Sulfide  Depleted Below D  Thick Dark Surfac	(Applicable t		ed Matrix, C	S=Covere						
Hydric Soil Indicators  Histosol (A1)  Histic Epipedon (A  Black Histic (A3)  Hydrogen Sulfide  Depleted Below D  Thick Dark Surface	(Applicable t		ed Matrix, C	S=Covere						
Hydric Soil Indicators  Histosol (A1)  Histic Epipedon (A  Black Histic (A3)  Hydrogen Sulfide  Depleted Below D  Thick Dark Surface	(Applicable t		ed Matrix, C	S=Covere						
Hydric Soil Indicators  Histosol (A1)  Histic Epipedon (A  Black Histic (A3)  Hydrogen Sulfide  Depleted Below D  Thick Dark Surface	(Applicable t		ed Matrix, C	S=Covere						
Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Depleted Below D Thick Dark Surfac		to all LRRs, ı			d or Coa	ted Sand	l Grains. <sup>2</sup> Loc	ation: PL=Pore	Lining, M=Matrix.	
Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Depleted Below D Thick Dark Surfac		.o a =o, .	inless othe	rwise not	ed.)		Indicators f	or Problematic	Hydric Soils <sup>3</sup>	
Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Depleted Below D Thick Dark Surfac	.2)		Sandy Re		July		maioatoro i	2 cm Muck	-	
Black Histic (A3) Hydrogen Sulfide Depleted Below D Thick Dark Surfac	(Z)		_	Matrix (S6	)		_		: Material (TF2)	
Hydrogen Sulfide Depleted Below D Thick Dark Surfac			-	ucky Mine		(evcent l	MI PA 1)		ain in Remarks)	
Depleted Below D Thick Dark Surfac	(			leyed Mati		(except i	<u>"</u>	Other (Expire	alli ili Nelliaiks)	
Thick Dark Surfac	. ,			Matrix (F3						
				•	,		3Indian	tore of budrophy	tic vogetation and	
Conduit Missle Miss	, ,	_		ark Surfac					ytic vegetation and	
Sandy Muck Mine				Dark Surf		)		and hydrology m	*	
Sandy gleyed Mat			_ Redox De	epressions	S (F8)	-	un	less disturbed o	r problematic.	
Restrictive Layer (if pr	esent):									
Type:								_		
Depth (inches):						Hy	dric Soil Pres	ent?	Yes	No x
YDDOL OOY										
YDROLOGY Wetland Hydrology In	dicators:									
Primary Indicators (any	one indicator is	sufficient)						Secondary Ir	ndicators (2 or more	e required)
Surface Water (A	)		Water-St	ained Lea	ves (B9)	(except			ned Leaves (B9) (N	
High Water Table	(A2)		- MLRA	1, 2, 4A a	nd 4B)		_	 4A and 4	<b>4B</b> )	
Saturation (A3)			Salt Crus	t (B11)			_	Drainage Pa	atterns (B10)	
Water Marks (B1)			- Aquatic Iı	nvertebrat	es (B13)		_	_	n Water Table (C2)	)
Sediment Deposits	s (B2)			Sulfide C			_		Visible on Aerial Im	
Drift Deposits (B3)	, ,		_		-		Roots (C3)		c Position (D2)	
Algal Mat or Crust			_	of Reduc			` ′ _	 Shallow Aqu		
Iron Deposits (B5)			_	on Reduct		,	ils (C6)	FAC-Neutra		
Surface Soil Crack			_	r Stresse					Mounds (D6) (LRF	RA)
Inundation Visible		erv (B7)		plain in R					e Hummocks (D7)	
Sparsely Vegetate	•	· · · —	_ 011101 (2)	.piaiii iii i	omamo		_		o Hammooko (B7)	
	d Correave Cur	lace (Bo)				<u> </u>				
Field Observations: Surface Water Present	? Yes	No >	C Depth	(inches):						
Water table Present?	Yes			(inches):		_				
Saturation Present?	Yes	No >		(inches):			Wetland Hyd	drology Present	t? Yes	No x
(includes capillary fringe	•									
acariba Danardada Dari	(stream gauge,	monitoring w	ell, aerial ph	otos, prev	ious ins	pections)	, if available:			
escribe Recorded Data										
escribe Recorded Data emarks:										

Project/Site: I-5 Woodland		City/County:	Woodland	/Cowlitz	Sampling Date: Oct.8, 2020
Applicant/Owner: Logan Partners LLC				State: WA	Sampling Point: 23
Investigator(s): KB		Section	n, Township	, Range: S13, T5N, R1W	
Landform (hillslope, terrace, etc.): terrace	<u>ce</u>	Local re	elief (concav	e, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR): Northwest Forests and Co	ast (LRR A) Lat:		45.92	1591067 Long: -1:	22.749573787 Datum:
Soil Map Unit Name: Newberg fine sand	•			NWI Classification:	PEM1A
Are climatic / hydrologic conditions on the site			Yes	X No	_(If no, explain in Remarks)
Are Vegetation, Soil, or H					es" Present? Yes X No
Are Vegetation, Soil, or H	lydrology	naturally pro	oblematic?	(If needed, explain any ar	swers in Remarks.)
SUMMARY OF FINDINGS – Attach s	ite map showing	sampling	point loc	ations, transects, impo	rtant features, etc.
Hydrophytic Vegetation Present? Yes _	x No_	la tha C	II Ava		
Hydric Soil Present? Yes _	xNo		ampled Are a Wetland?	YAS V	No
Wetland Hydrology Present? Yes _	No	_			
VEGETATION	Absolute	Dominant	Indicator	Dominance Test workshe	et·
Tree Stratum (Use scientific names.) 1.	% Cover		Status?	Number of Dominant Specie That Are OBL, FACW, or FA	es
2		- ·		Total Number of Dominant	
3				Species Across All Strata:	(B)
4				Percent of Dominant Specie	
Т	otal Cover: 0	-		That Are OBL, FACW, or FA	AC: <u>100%</u> (A/B)
<u>Shrub Stratum</u> 1. <u>Spiraea douglasii</u>	90	Y	FACW□	Prevalence Index Workshir Total % Cover of:	eet: Multiply by:
2		- ·		OBL species	_x1 =
3		<u> </u>		FACW species	x2 = <b>0</b>
4		-	·	FAC species	_x3 =
5		-	· ———	FACU species	x4 =
	otal Cover: 90	-		UPL species	_x5 =(2)
Herb Stratum	40	V	IFACW □	Column Totals: 0	(A) <b>0</b> (B)
1. Phalaris arundinacea	10	Y		Prevalence Index = B/A =	:
2 3.			· ———	Hydrophytic Vegetation In	
, <del>-</del>		-			Hydrophytic Vegetation
4 5		-		X 2 - Dominance Tes	
6.	· ·	-		3 - Prevalence Ind	
7.					Adaptation1 (Provide supporting
3.					or on a separate sheet)
9.				5 - Wetland Non-V	•
10.				Problematic Hydro	ophytic Vegetation <sup>1</sup> (Explain)
11.					
•	otal Cover: 10				
Woody Vine Stratum  1.				<sup>1</sup> Indicators of hydric soil and be present, unless disturbed	
2				Hydrophytic	
	otal Cover:	-		Vegetation	
% Bare Ground in Herb Stratum	90 % Cover of B	iotic Crust	0	Present?	Yes x No
Remarks:					

SOIL								Sampling Po	oint:	23
Profile Des	scription: (Describe	to the dep	oth needed to doc	ument t	he indicate	or or co	onfirm the abse	ence of indicators.	)	
Depth	Matrix		Red	dox Fea	tures					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<del>_</del> Texture	•	Remarks	
0-4	10YR3/2	100	, ,				SiSL			
4-16	10YR3/2	95	7.5YR3/4	5	С	М	SiSL			
							_			
								<u> </u>		
1- 0		<del></del>						<del></del>		
Type: C=0	Concentration, D=De <sub>l</sub>	pletion, RM	=Reduced Matrix, (	JS=Cov	ered or Coa	ated Sa	nd Grains. Lo	ocation: PL=Pore Li	ning, M=Matrix.	
Hydric Soi	il Indicators: (Applic	cable to all	LRRs, unless oth	erwise	noted.)		Indicators	for Problematic H	ydric Soils³:	
Histos	sol (A1)		Sandy F	Redox (S	S5)			2 cm Muck (A	10)	
	Epipedon (A2)		Stripped	l Matrix	(S6)			Red Parent M	aterial (TF2)	
	Histic (A3)			-	/lineral (F1)		t MLRA 1)	Other (Explain	ı in Remarks)	
	ogen Sulfide (A4)			•	Matrix (F2)					
	eted Below Dark Surfa	ace (A11)	Deplete		, ,		_			
	Dark Surface (A12)				rface (F6)			ators of hydrophytic	=	
	y Muck Mineral (S1)				Surface (F7	<b>'</b> )		tland hydrology mus		
	y gleyed Matrix (S4)		Redox D	Depress	ions (F8)		u	ınless disturbed or p	roblematic.	
Restrictive	E Layer (if present):									
Type:										
Depth (inch	nes):						Hydric Soil Pre	esent?	Yes	No
HYDROLOG	Υ									
	ydrology Indicators									
	dicators (any one indic	cator is suff							cators (2 or more r	
	ce Water (A1)				Leaves (B9)	) (excep	ot _		d Leaves (B9) ( <b>ML</b> I	RA 1, 2,
	Water Table (A2)				A and 4B)		-	4A and 4B	•	
	ation (A3)		Salt Cru				-	Drainage Patt		
	r Marks (B1)				orates (B13	•	-		Vater Table (C2)	(00)
	nent Deposits (B2)				de Odor (C1		Deete (C2)		ible on Aerial Imag	gery (C9)
	Deposits (B3)					-	ng Roots (C3)	x Geomorphic F	` ,	
	Mat or Crust (B4)				duced Iron		Poile (C6)	Shallow Aquita	` '	
	Deposits (B5) ce Soil Cracks (B6)				duction in P ssed Plants			x FAC-Neutral 7	ounds (D6) ( <b>LRR A</b>	١)
	lation Visible on Aeria	l Imagon, (I			n Remarks		-KK A)		Hummocks (D7)	4)
	sely Vegetated Conca		· — `	-хріаіі і	II Kelliaiks	)	-	Flost-neave F	iulilliocks (D7)	
		ve Suriace	(60)							
Field Obse	ervations: ater Present?        Ye	· C	No X Depth	(inches	s).					
Water table				(inches						
Saturation		s	No x Depth	(inches	s):		Wetland Hy	drology Present?	Yes <u>x</u>	No
	apillary fringe)		tenden over Honoret II.	l4			-) '#! - -			
Describe Red	corded Data (stream o	gauge, mon	nitoring well, aerial p	motos, p	orevious ins	spection	is), it available:			
Remarks:										

Project/Site:	I-5 Woodland			City/County:	Woodland	/Cowlitz		Sampling [	Date: Oct.8,	, 2020
Applicant/Owner:	Logan Partners LLC	;					State: WA	Sampling F	Point:	24
Investigator(s):	KB			Section	n, Township	, Range:	S13, T5N, R1W			
Landform (hillslope	·	terrace		_ Local re	lief (concav	e, convex	, none): none		Slope (%):	0-3%
Subregion (LRR):	Northwest Forests a	nd Coast (LRR A)	Lat:		45.92	1556334	Long:	122.749588595	_ Datum:	
Soil Map Unit Nam							NWI Classification			
	ologic conditions on the				Yes	X	No	<u> </u>		
Are Vegetation	, Soil						lormal Circumstan			_No
Are Vegetation	, Soil	, or Hydrology		naturally pro	oblematic?	(If nee	ded, explain any a	answers in Rema	arks.)	
SUMMARY OF	FINDINGS - Att	ach site map s	howing	sampling	point loc	ations, t	ransects, imp	ortant featur	es, etc.	
Hydrophytic Veget	ation Present?	Yes x No								
Hydric Soil Presen		Yes No			ampled Are a Wetland?		Yes	No x		
Wetland Hydrology	y Present?	Yes No		Within	a welland:		<u></u>			
VEGETATION										
			Absolute	Dominant	Indicator	Domina	nce Test worksh	eet:		
Tree Stratum (Us	se scientific names.)		% Cover	Species?	Status?		of Dominant Spece OBL, FACW, or		1	(A)
2.						Total Nu	ımber of Dominan	t		_( )
3.						Species	Across All Strata:		1	(B)
4.						Percent	of Dominant Spec	cies		- ' '
		Total Cover:	0				e OBL, FACW, or		00%	_(A/B)
Shrub Stratum						Prevale	nce Index Works	heet:		
1.							al % Cover of:		tiply by:	
2.						OBL spe		x1 =	0	=
3.							species	_	0	-
4.						FAC spe		x3 =	0	<u>-</u>
5.						FACU s	pecies	x4 =	0	<u>-</u>
		Total Cover:	0			UPL spe	ecies	x5 =	0	_
Herb Stratum						Column	Totals: 0	(A)	0	_(B)
1. Phalaris arund	dinacea		100	Y	FACW =	Preval	ence Index = B/A	=		-
2.										
						Hydropi	hytic Vegetation			
_							1 - Rapid Test fo		getation	
						X	<ul><li>2 - Dominance T</li><li>3 - Prevalence Ir</li></ul>			
7							4 - Morphologica		trovido cupo	orting
0							data in Remarks			orang
_							5 - Wetland Non-	•	,	
							Problematic Hyd			n)
								. op., jo . ogotat	(=/,p.c	.,
		Total Cover:	100							
Woody Vine S	<u>tratum</u>	•					ors of hydric soil ar ent, unless disturb			
						Hydropi	hytic			
		Total Cover:				Vegetat	•			
% Ba	re Ground in Herb Str	atum <u>50</u> %	Cover of Bi	otic Crust	0	Present		Yes x	No	
Remarks:						•				

SOIL									pling Point:			2
Profile Des	scription: (Describ	e to the de	oth needed to doo	ument th	ne indicator	r or co	nfirm the abso	ence of indi	cators.)			
Depth	Matrix		Re	dox Feat			_					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	<u> </u>	R	emarks		
0-16	10YR3/2	100					SSiL					
							_					
					· ——							
					. —— -							
							_					
					· <del></del> -							
<sup>1</sup> Type: C=0	Concentration, D=De	epletion, RM	=Reduced Matrix,	CS=Cove	ered or Coat	ed San	nd Grains. <sup>2</sup> Lo	cation: PL=	Pore Lining, M	1=Matrix.		
										3		
-	I Indicators: (Appl	icable to all			-		Indicators		natic Hydric S	Soils":		
	sol (A1)			Redox (S					luck (A10)	(TEO)		
	Epipedon (A2)			d Matrix (			MI DA 4)		arent Material			
	Histic (A3)				ineral (F1) (	except	(WILKA 1)	Other	(Explain in Rer	narks)		
	gen Sulfide (A4) ted Below Dark Surf	inco (A11)		ed Matrix	Matrix (F2)							
	Dark Surface (A12)	ace (ATT)			face (F6)		<sup>3</sup> Indic	ators of hyd	rophytic vegeta	ation and		
	/ Muck Mineral (S1)				Surface (F7)			-	ngy must be pr			
	gleyed Matrix (S4)			Depression 1				-	oed or problem			
	Layer (if present):		<u> </u>		( /							
Type:	, , ,											
Depth (inch	nes):					Н	ydric Soil Pre	sent?	Yes		No	х
emarks:	<u>-</u>									-		
YDROLOG												
	ydrology Indicators licators (any one ind		icient)					Second	ary Indicators	(2 or more	require	ad)
	ce Water (A1)	icator is suri		Stained L	eaves (B9)	(eycen	<u> </u>	_	Stained Leave			
	Water Table (A2)				A and 4B)	(СХССР			and 4B)	33 (B3) (IIII		_,
	ation (A3)			ust (B11)			•		ge Patterns (B	310)		
	Marks (B1)			, ,	rates (B13)		•		eason Water T			
	nent Deposits (B2)				e Odor (C1)		•		tion Visible on	, ,	igery (0	C9)
	Deposits (B3)						g Roots (C3)		orphic Position		5 , (	,
	Mat or Crust (B4)				duced Iron (0	-	. , ,		w Aquitard (D3			
	eposits (B5)				uction in Plo		oils (C6)	FAC-N	leutral Test (D	5)		
Surfac	ce Soil Cracks (B6)		Stunted	or Stres	sed Plants (	(D1) ( <b>L</b> l	RR A)	Raised	Ant Mounds (	(D6) ( <b>LRR</b>	A)	
Inund	ation Visible on Aeri	al Imagery (I	B7) Other (	Explain in	Remarks)			Frost-l	Heave Hummo	cks (D7)		
Spars	ely Vegetated Conc	ave Surface	(B8)									
Field Obse	ervations:											
		es		n (inches)								
Water table Saturation		es es		h (inches) h (inches)			Wetland Hy	/drology Pro	esent? Y	es	No	х
	apillary fringe)		<u>χ</u> Βορι	(	,·		l voliana n	, a. o.ogy	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
escribe Rec	orded Data (stream	gauge, mor	itoring well, aerial	photos, p	revious insp	ections	s), if available:					
emarks:												
Ciliains.												

Project/Site:	I-5 Woodland		City/County:	lland/Cowlitz				Sampling Date: Oct.8, 2020			
Applicant/Owner:	Logan Partners LLC						State: V	VA	Samp	ling Point:	25
Investigator(s):	KB			Section	n, Township,	Range:	S13, T5	N, R1W			
Landform (hillslope	e, terrace, etc.):	terrace		Local re	elief (concave	e, convex	k, none): <u>n</u>	one		Slope	e (%): <u>0-3%</u>
Subregion (LRR):	Northwest Forests a	nd Coast (LRR A)	) Lat:		45.922	2849244	Long: _	-1	22.75202	3925 D	atum:
Soil Map Unit Nam	ne: Maytown silt	loam					NWI Clas	sification:	PEM1A		
Are climatic / hydro	ologic conditions on th	e site typical for tl	his time of	year?	Yes_	Х	No_		_(If no, ex	plain in Re	marks)
Are Vegetation	, Soil	, or Hydrology		significantly	disturbed?	Are "N	Normal Cir	cumstanc	es" Prese	nt? Yes	X No
Are Vegetation	, Soil	, or Hydrology		naturally pro	oblematic?	(If nee	eded, expl	ain any ar	nswers in	Remarks.)	
SUMMARY OF	FINDINGS – Atta	ach site map s	showing	sampling	point loca	itions, 1	transect	ts, impo	rtant fe	atures, e	tc.
Hydrophytic Veget	ation Present?	Yes x No	1								
Hydric Soil Presen		Yes No			ampled Area	3	Yes		No	x	
Wetland Hydrolog		Yes No		within	a Wetland?		_				
VEGETATION											
VEGETATION											
			Absolute	Dominant	Indicator		nce Test				
Tree Stratum (U	se scientific names.)		% Cover	Species?	Status?		r of Domin				
1						i nat Are	e OBL, FA	CVV, or F.	AC:	2	(A)
2.							umber of D				
3						Species	Across A	II Strata:		2	(B)
4						Percent	of Domina	ant Specie	es		
		Total Cover:	0	•		That Are	e OBL, FA	CW, or F	AC:	100%	(A/B)
0					-						
Shrub Stratum			00	V	IFAC□		nce Index		eet:	NA . Itim b . b .	_
<ol> <li>Rubus armeni</li> <li>2.</li> </ol>	acus			Y			tal % Cove			Multiply by	<u>/-</u>
2 3.				: ( <del></del>		OBL spe	ecies species		_x1 =		
1						FAC spe	_		_x2 = x3 =		
5.							pecies _				
J		Total Cover:	20		-	UPL spe	_		x5 =		
Herb Stratum		Total Gover.		•			Totals:	n			(B)
Phalaris arund	dinacea		90	Υ	ŒACW □						
Lotus cornicular		<del></del>	5		FAC□	ricva	icrice inde	5X - D/A -			<del></del>
3.	aius			: ( <del></del>		Hydron	hytic Veg	etation In	ndicators		
					·	yu.op				tic Vegetati	on
5.				• •		x			est is >50%	_	•
6.									dexis ≤3.0		
7.											supporting
					-					parate shee	
9.					-				/ascular P		-,
10					-					getation <sup>1</sup> (E	Explain)
11.					-				,	J (-	
		Total Cover:	95		-						
Woody Vine S	Stratum			•		1Indicate	ors of hvdr	ric soil and	d wetland	hydrology r	nust
1.							ent, unless				
2.					-	Uhadasa	h				
		Total Cover:				Hydrop Vegetat	-				
% Ba	re Ground in Herb Stra			iotic Crust	0	Present			Yes	x No	
Remarks:									<del></del>		

SOIL								Sampl	ing Point:		25
Profile Des	scription: (Describe	to the dep	th needed to do	cument th	e indicator	or conf	firm the abs	ence of indica	itors.)		
Depth	Matrix		R	edox Featu	res						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Э	Ren	narks	
0-7	10YR2/2	100					L				
7-9	10YR4/4	100					S				
9-12	10YR2/2	100					L				
12-14	10YR4/4	100					S				
Type: C=0	Concentration, D=Dep	oletion, RM=	Reduced Matrix	, CS=Cove	red or Coate	ed Sand	Grains. <sup>2</sup> L	ocation: PL=P	ore Lining, M=	Matrix.	
Hydric Soil	I Indicators: (Applic	able to all	LRRs, unless o	therwise n	oted.)		Indicators	for Problema	itic Hydric So	ils³:	
Histos	sol (A1)		Sandy	Redox (S5	5)			2 cm Mu	ck (A10)		
Histic	Epipedon (A2)		Stripp	ed Matrix (S	S6)			Red Par	ent Material (T	F2)	
Black	Histic (A3)		Loam	y Mucky Mii	neral (F1) (	except l	MLRA 1)	Other (E	xplain in Rema	arks)	
Hydro	gen Sulfide (A4)		Loam	y Gleyed Ma	atrix (F2)						
Deple	ted Below Dark Surfa	ce (A11)	Deple	ted Matrix (	F3)						
Thick	Dark Surface (A12)		Redox	k Dark Surfa	ace (F6)		<sup>3</sup> Indi	cators of hydro	phytic vegetati	on and	
Sandy	/ Muck Mineral (S1)		Deple	ted Dark Su	urface (F7)		We	etland hydrolog	y must be pres	sent,	
Sandy	gleyed Matrix (S4)		Redox	c Depressio	ns (F8)		ι	unless disturbe	d or problemat	tic.	
Restrictive	Layer (if present):										
Type:											
Depth (inch	nes):					Ну	dric Soil Pro	esent?	Yes		No <u>x</u>
Remarks:											
HYDROLOG	Υ										
Wetland Hy	ydrology Indicators:										
Primary Ind	licators (any one indic	ator is suffi	cient)					Secondar	y Indicators (2	or more r	equired)
Surfac	ce Water (A1)		Water	-Stained Le	eaves (B9) (	except		Water-S	tained Leaves	(B9) ( <b>ML</b> I	RA 1, 2,
High V	Water Table (A2)		ML	RA 1, 2, 4A	and 4B)			4A aı	nd 4B)		
Satura	ation (A3)		Salt C	rust (B11)				Drainage	e Patterns (B10	0)	
Water	Marks (B1)		Aquat	ic Invertebr	ates (B13)			Dry-Sea	son Water Tab	ole (C2)	
Sedim	nent Deposits (B2)		Hydro	gen Sulfide	Odor (C1)			Saturation	on Visible on A	erial Imag	jery (C9)
Drift D	Deposits (B3)		Oxidiz	ed Rhizosp	heres alono	Living	Roots (C3)	Geomor	phic Position (I	D2)	
Algal I	Mat or Crust (B4)		Prese	nce of Red	uced Iron (C	24)		Shallow	Aquitard (D3)		
Iron D	eposits (B5)		Recer	nt Iron Redu	uction in Plo	wed Soi	ils (C6)	FAC-Ne	utral Test (D5)		
Surfac	ce Soil Cracks (B6)		Stunte	ed or Stress	ed Plants (l	D1) ( <b>LR</b>	R A)	Raised A	Ant Mounds (D	6) ( <b>LRR A</b>	4)
Inunda	ation Visible on Aerial	Imagery (B	37) Other	(Explain in	Remarks)			Frost-He	ave Hummock	(s (D7)	
Spars	ely Vegetated Concav	ve Surface	(B8)								
Field Obse	ervations:										
Surface Wa	ater Present? Yes			oth (inches):							
Water table				oth (inches):			W-41		10 V		M=
Saturation F	Present?	· ˈ	No <u>x</u> Dep	oth (inches):		_	wetiand H	ydrology Pres	ent? Yes	·	No x
	orded Data (stream g	auge, moni	toring well. aeria	l photos. pr	evious insp	ections)	, if available:				
	,			2 -7 I	-1-	- /					
Remarks:											

Project/Site:	I-5 Woodland			City/County:	Woodland/	Cowlitz			Samp	ling Date:	Oct.8, 2020
Applicant/Owner:	Logan Partners LLC						State:	WA	Samp	ling Point:	26
Investigator(s):	KB			Section	n, Township,	Range:	S13, T5	5N, R1W			
Landform (hillslope	e, terrace, etc.): swa	ale		_ Local re	lief (concave	e, convex	k, none):	concave		Slope	e (%): <u>0-3%</u>
Subregion (LRR):	Northwest Forests and C	oast (LRR A)	Lat:		45.921	1962459	Long:	-1	122.75129	8741 D	atum:
Soil Map Unit Nam	ne: Maytown silt loam	1					NWI Cla	ssification	PEM1A		
Are climatic / hydro	ologic conditions on the sit	e typical for tl	nis time of	year?	Yes_	Х	No		_(If no, ex	cplain in Rer	narks)
Are Vegetation	, Soil, or	Hydrology		significantly	disturbed?	Are "N	Normal C	ircumstand	ces" Prese	ent? Yes _	X No
Are Vegetation	, Soil, or	Hydrology		naturally pro	oblematic?	(If nee	eded, exp	lain any a	nswers in	Remarks.)	
SUMMARY OF	FINDINGS – Attach	site map s	showing	sampling	point loca	ntions, 1	transec	ts, impo	ortant fe	atures, et	:c.
Hydrophytic Veget	ation Present? Yes	No	x								
Hydric Soil Presen		No			ampled Area	а	Yes		No	x	
Wetland Hydrolog		No		within a	a Wetland?		-				
L											
VEGETATION											
			Absolute	Dominant	Indicator	Domina	ance Tes	t workshe	eet:		
Tree Stratum (U	se scientific names.)		% Cover	Species?	Status?			nant Spec			
1						That Are	e OBL, F.	ACW, or F	AC:	1	(A)
2						Total No	umber of	Dominant			
3.						Species	Across	All Strata:		2	(B)
4						Percent	of Domi	nant Spec	ies		
		Total Cover:	0			That Are	e OBL, F	ACW, or F	AC:	50%	(A/B)
Shrub Stratum  1.					-		ence Inde	ex Worksh	neet:	Multiply by	r
<u> </u>						OBL sp			x1 =		<u>·</u>
0						-	-				
1						FAC sp			x3 =		
5.						FACU s	pecies		x4 =	0	
		Total Cover:	0			UPL spe	ecies		x5 =		
Herb Stratum						Column	Totals:	0	(A)	0	(B)
1. Phalaris arund	dinacea		70	Y	JFACW □	Preva	lence Inc	lex = B/A =	=		
2. Lotus cornicul	atus		5								
3. Anthoxanthum	n odoratum		20	Y	FACU□	Hydrop	-	getation I			
4. Cirsium arven	se		5		FAC□					tic Vegetation	on
5								ninance Te			
6								/alence In			
7								_		n1 (Provide	
8.										parate shee	t)
9.								land Non-			
•							Probler	natic Hydr	ophytic Ve	egetation <sup>1</sup> (E	.xplain)
11		Total Cavari	100								
Mandy Vina C		Total Cover:	100			1, ,, ,					
Woody Vine S  1.	<u>orratum</u>							aric soil an ss disturbe		hydrology nematic.	nust
2.				· <del></del>	-	•		oo diotarbe	or probl	omano.	
Z		Total Cover:				Hydrop	•				
% Ra	re Ground in Herb Stratum			iotic Crust	0	Vegetat Present			Yes	No	x
Remarks:				0							

OIL				iment th	e indicato		<i>c</i>				
Profile Des	cription: (Describe	to the dep	oth needed to doc			i oi coi	itirm the abs	ence of indica	ators.)		
Depth	Matrix		Red	lox Featu	ıres		_				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	<u> </u>	Rem	arks	
0-11	10YR2/2	100					L				
11-16	2.5YR4/3	98	10YR3/4	2	С	М	S				
		· —— ·									
		· ——									
<sup>1</sup> Type: C=0	Concentration, D=Dep	letion, RM	=Reduced Matrix, C	S=Cove	red or Coa	ted San	d Grains. <sup>2</sup> Lo	ocation: PL=P	ore Lining, M=N	Natrix.	
Hydric Soil	Indicators: (Applic	able to all	LRRs, unless oth	erwise n	oted.)		Indicators	for Problema	atic Hydric Soil	s <sup>3</sup> :	
	ol (A1)			edox (S					ick (A10)		
	Epipedon (A2)			Matrix (					ent Material (TF	·2)	
	Histic (A3)				neral (F1)	except	MLRA 1)		xplain in Remar	•	
	gen Sulfide (A4)			-	atrix (F2)	(CACC)	,			,	
	ted Below Dark Surfa	ce (A11)		d Matrix (							
	Dark Surface (A12)	,			ace (F6)		<sup>3</sup> Indic	ators of hvdro	phytic vegetatio	n and	
	Muck Mineral (S1)				urface (F7)			-	y must be prese		
	gleyed Matrix (S4)			)epressio					d or problemation		
	Layer (if present):			•					•		
	_u, c. ( p. ccc).										
T											
Type:	ec).		<u></u>			Н	vdric Soil Pre	sent?	Yes	No	Y
Type: Depth (inch emarks:	es):		<u> </u>			Hy	ydric Soil Pre	esent?	Yes	No _	×
Depth (inch						Hy	ydric Soil Pre	esent?	Yes	No _	X
Depth (inchemarks:						Н	ydric Soil Pre	esent?	Yes	No _	X
Depth (inchemarks:  /DROLOG* Wetland Hy	Y		ficient)			Н	ydric Soil Pre		Yes		
Depth (inchemarks:  /DROLOG' Wetland Hy Primary Ind	Y ydrology Indicators:			tained Le	eaves (B9)			Secondar		or more requ	ired)
Depth (inchemarks:  DROLOG Wetland Hy Primary Ind Surface	Y ydrology Indicators: icators (any one indic		Water-S		eaves (B9) <b>A and 4B</b> )			Secondar Water-S	y Indicators (2 d	or more requ	ired)
Depth (inchemarks:  DROLOG' Wetland Hy Primary Ind Surfact High V	ydrology Indicators: icators (any one indic se Water (A1)		Water-S	A 1, 2, 4 <i>A</i>				Secondar Water-S 4A ar	y Indicators (2 otained Leaves (	or more requi	ired)
Primary Ind Surfac High V Satura	Y ydrology Indicators: icators (any one indic be Water (A1) Water Table (A2)		Water-S MLRA Salt Cru	<b>A 1, 2, 4</b> / st (B11)		(except		Secondar Water-S 4A ar	y Indicators (2 o tained Leaves ( nd 4B)	or more requi B9) ( <b>MLRA</b> 2	ired)
OPPOLOGY Wetland Hy Primary Ind Surfac High V Satura Water	ydrology Indicators: icators (any one indic te Water (A1) Vater Table (A2) ation (A3)		Water-S MLR/ Salt Cru Aquatic	<b>1, 2, 4<i>4</i> st</b> (B11) Invertebi	A and 4B)	(except		Secondar Water-S 4A ar Drainage Dry-Sea	y Indicators (2 of tained Leaves ( ad 4B) e Patterns (B10)	or more requ B9) ( <b>MLRA</b> '	ired)
Primary Ind Surfac High V Satura Water Sedim	ydrology Indicators: icators (any one indic be Water (A1) Vater Table (A2) ation (A3) Marks (B1)		Water-S MLR/ Salt Cru Aquatic Hydroge	<b>A 1, 2, 4<i>f</i></b> st (B11) Invertebr en Sulfide	and 4B) rates (B13) e Odor (C1	(except		Secondar Water-S 4A ar Drainage Dry-Sea Saturatio	y Indicators (2 o tained Leaves ( nd 4B) e Patterns (B10) son Water Tabl	or more requ B9) ( <b>MLRA</b> / ) e (C2) erial Imagery	ired)
Primary Ind Surfac High V Satura Water Sedim Drift D	ydrology Indicators: icators (any one indic the Water (A1) Vater Table (A2) ation (A3) Marks (B1) tent Deposits (B2)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized	A 1, 2, 44 st (B11) Invertebren Sulfide d Rhizosp	and 4B) rates (B13) e Odor (C1	( <b>except</b>	1	Secondar Water-S 4A ar Drainage Dry-Sea Saturatio	y Indicators (2 of tained Leaves ( <b>nd 4B</b> ) e Patterns (B10) son Water Table on Visible on Ae	or more requ B9) ( <b>MLRA</b> / ) e (C2) erial Imagery	ired)
Primary Ind Surfac High V Satura Water Sedim Drift D Algal I	ydrology Indicators: icators (any one indicators (any one indicators (A1)) Vater Table (A2) ation (A3) Marks (B1) ient Deposits (B2)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presence	A 1, 2, 44 st (B11) Invertebren Sulfide d Rhizospee of Red	and 4B) rates (B13) Propose Odor (C1) otheres alor	(except	Roots (C3)	Secondar Water-S 4A al Drainage Dry-Sea Saturatie Geomor Shallow	y Indicators (2 of tained Leaves ( nd 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D	or more requ B9) ( <b>MLRA</b> / ) e (C2) erial Imagery	ired)
Primary Ind Satura Water Sedim Drift D Algal I	ydrology Indicators: icators (any one indicators (any one indicators (A1)) Water Table (A2) ation (A3) Marks (B1) tent Deposits (B2) deposits (B3) Mat or Crust (B4)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent	A 1, 2, 44 st (B11) Invertebren Sulfide d Rhizospee of Red	and 4B) rates (B13) Properties (B13) Odor (C1) Otheres alor uced Iron (	(except ) ng Living C4) owed So	t Roots (C3)	Secondar Water-S 4A al Drainage Dry-Sea Saturatic Geomor Shallow FAC-Ne	y Indicators (2 of tained Leaves ( nd 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3)	or more requi B9) ( <b>MLRA</b> ' ) e (C2) erial Imagery	ired)
Primary Ind Satura Water Sedim Drift D Algal I Surface	ydrology Indicators: icators (any one indicators (any one indicators) ice Water (A1) Vater Table (A2) ation (A3) Marks (B1) icent Deposits (B2) iceposits (B3) Mat or Crust (B4) iceposits (B5)	ator is suff	Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presenc Recent Stunted	A 1, 2, 44 st (B11) Invertebren Sulfide d Rhizospee of Red fron Rede or Stress	ates (B13) Odor (C1) Oheres alor uced Iron ( uction in Pl	(except ) ng Living C4) owed So	t Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea Saturatie Geomor Shallow FAC-Ne Raised A	y Indicators (2 of tained Leaves (and 4B) e Patterns (B10) son Water Table on Visible on Aephic Position (DAquitard (D3) utral Test (D5)	or more requi B9) (MLRA / ) e (C2) orial Imagery (2)	ired)
Primary Ind Surfac High V Satura Vater Sedim Drift D Algal I Iron D Surfac	y ydrology Indicators: icators (any one indicators (any one indicators (e Water (A1)) Vater Table (A2) ation (A3) Marks (B1) Ident Deposits (B2) Ideposits (B3) Mat or Crust (B4) Ideposits (B5) Ideposits (B5) Ideposits (B6)	ator is suff	Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted B7) Water-S Water-S Autor Salt Cru Aquatic Hydroge Oxidized	A 1, 2, 44 st (B11) Invertebren Sulfide d Rhizospee of Red fron Rede or Stress	ates (B13) e Odor (C1) oheres alor uced Iron ( uction in Pl sed Plants	(except ) ng Living C4) owed So	t Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea Saturatie Geomor Shallow FAC-Ne Raised A	y Indicators (2 of tained Leaves ( nd 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5) Ant Mounds (D6	or more requi B9) (MLRA / ) e (C2) orial Imagery (2)	ired)
Primary Ind Surfac High V Satura Vater Sedim Drift D Algal I Iron D Surfac	ydrology Indicators: icators (any one indicators (ewater (A1)) Vater Table (A2) ation (A3) Marks (B1) eent Deposits (B2) eeposits (B3) Mat or Crust (B4) eeposits (B5) ee Soil Cracks (B6) ation Visible on Aerial ely Vegetated Concav	ator is suff	Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted B7) Water-S Water-S Autor Salt Cru Aquatic Hydroge Oxidized	A 1, 2, 44 st (B11) Invertebren Sulfide d Rhizospee of Red fron Rede or Stress	ates (B13) e Odor (C1) oheres alor uced Iron ( uction in Pl sed Plants	(except ) ng Living C4) owed So	t Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea Saturatie Geomor Shallow FAC-Ne Raised A	y Indicators (2 of tained Leaves ( nd 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5) Ant Mounds (D6	or more requi B9) (MLRA / ) e (C2) orial Imagery (2)	ired)
Primary Ind Surfac Water Sedim Drift D Algal I Iron D Surfac Inunda Spars Field Obse Surface Wa	ydrology Indicators: icators (any one indicators (any one indicators) water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) ment Deposits (B3) Mat or Crust (B4) menosits (B5) menosits (B5) menosits (B6) menosits	ator is suff Imagery (I	Water-S  MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted B7) (B8)  No X Depth	A 1, 2, 4A st (B11) Invertebren Sulfide d Rhizospe of Red dron Red or Stress explain in (inches)	and 4B) rates (B13) rates (B13) rates (C1) rates alor uced Iron ( uction in Pl sed Plants Remarks)	(except ) ng Living C4) owed So	t Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea Saturatie Geomor Shallow FAC-Ne Raised A	y Indicators (2 of tained Leaves ( nd 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5) Ant Mounds (D6	or more requi B9) (MLRA / ) e (C2) orial Imagery (2)	ired)
Primary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Spars Field Obse Surface Wa	ydrology Indicators: icators (any one indicators (any one indicators) icators (A1) Vater Table (A2) ation (A3) Marks (B1) ident Deposits (B2) ident Deposits (B3) Mat or Crust (B4) ident Posits (B5) ident Cracks (B6) ident Visible on Aerial idely Vegetated Concavery inter Present?  Yes icators (Yes inter Present?	Imagery (I	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   B7)   Other (E (B8)   Other (E (B8)   Depth   No   X   Depth   Depth   Depth   Common   Common   Common   Depth   De	A 1, 2, 4A st (B11) Invertebren Sulfide d Rhizospere of Red dron Red or Stress explain in (inches) (inches)	and 4B) rates (B13) rates (B13) rates (C1) rates alor uced Iron ( uction in Pl sed Plants Remarks)	(except ) ng Living C4) owed So	Roots (C3) pils (C6) RR A)	Secondar Water-S 4A al Drainage Dry-Sea Saturatic Geomor Shallow FAC-Ne Raised A	y Indicators (2 of tained Leaves ( nd 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5) Ant Mounds (D6) eave Hummocks	or more requi B9) (MLRA? ) e (C2) erial Imagery (2) () (LRR A) s (D7)	1, 2,
Primary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Sparse Surface Wa Water table Saturation I	ydrology Indicators: icators (any one indicators (any one indicators) icators (A1) Vater Table (A2) ation (A3) Marks (B1) icent Deposits (B2) iceposits (B3) Mat or Crust (B4) iceposits (B5) ice Soil Cracks (B6) icetion Visible on Aerial icely Vegetated Concavery inter Present?  Yes inter Present?  Yes icerory Yes ice	Imagery (I	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   B7)   Other (E (B8)   Other (E (B8)   Depth   No   X   Depth   Depth   Depth   Common   Common   Common   Depth   De	A 1, 2, 4A st (B11) Invertebren Sulfide d Rhizospe of Red dron Red or Stress explain in (inches)	and 4B) rates (B13) rates (B13) rates (C1) rates alor uced Iron ( uction in Pl sed Plants Remarks)	(except ) ng Living C4) owed So	Roots (C3) pils (C6) RR A)	Secondar Water-S 4A ar Drainage Dry-Sea Saturatie Geomor Shallow FAC-Ne Raised A	y Indicators (2 of tained Leaves ( nd 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5) Ant Mounds (D6) eave Hummocks	or more requi B9) (MLRA / ) e (C2) orial Imagery (2)	(C9)
Primary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Sparse Field Obse Surface Wa Water table Saturation I (includes ca	ydrology Indicators: icators (any one indicators (any one indicators) icators (A1) Vater Table (A2) ation (A3) Marks (B1) icent Deposits (B2) iceposits (B3) Mat or Crust (B4) iceposits (B5) ice Soil Cracks (B6) icetion Visible on Aerial icely Vegetated Concavery inter Present? Inter Present	Imagery (I	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   B7)   Other (E(B8)   Other (E(B8)   Depth   No   X   Depth	A 1, 2, 4A st (B11) Invertebren Sulfide d Rhizospee of Red dron Redron Redron Stress explain in (inches) (inches)	and 4B) rates (B13) rates (B13	(except og Living C4) owed So (D1) (LF	Roots (C3) pils (C6) RR A)  Wetland H	Secondar Water-S 4A al Drainage Dry-Sea Saturatic Geomor Shallow FAC-Ne Raised A	y Indicators (2 of tained Leaves ( nd 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5) Ant Mounds (D6) eave Hummocks	or more requi B9) (MLRA? ) e (C2) erial Imagery (2) () (LRR A) s (D7)	(C9)
Primary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Sparse Field Obse Surface Wa Water table Saturation I (includes ca	ydrology Indicators: icators (any one indicators (any one indicators) icators (A1) Vater Table (A2) ation (A3) Marks (B1) icent Deposits (B2) iceposits (B3) Mat or Crust (B4) iceposits (B5) ice Soil Cracks (B6) icetion Visible on Aerial icely Vegetated Concavery inter Present?  Yes inter Present?  Yes icerory Yes ice	Imagery (I	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   B7)   Other (E(B8)   Other (E(B8)   Depth   No   X   Depth	A 1, 2, 4A st (B11) Invertebren Sulfide d Rhizospee of Red dron Redron Redron Stress explain in (inches) (inches)	and 4B) rates (B13) rates (B13	(except og Living C4) owed So (D1) (LF	Roots (C3) pils (C6) RR A)  Wetland H	Secondar Water-S 4A al Drainage Dry-Sea Saturatic Geomor Shallow FAC-Ne Raised A	y Indicators (2 of tained Leaves ( nd 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5) Ant Mounds (D6) eave Hummocks	or more requi B9) (MLRA? ) e (C2) erial Imagery (2) () (LRR A) s (D7)	ired)
Primary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Sparse Field Obse Surface Wa Water table Saturation I (includes ca	ydrology Indicators: icators (any one indicators (any one indicators) icators (A1) Vater Table (A2) ation (A3) Marks (B1) icent Deposits (B2) iceposits (B3) Mat or Crust (B4) iceposits (B5) ice Soil Cracks (B6) icetion Visible on Aerial icely Vegetated Concavery inter Present? Inter Present	Imagery (I	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   B7)   Other (E(B8)   Other (E(B8)   Depth   No   X   Depth	A 1, 2, 4A st (B11) Invertebren Sulfide d Rhizospee of Red dron Redron Redron Stress explain in (inches) (inches)	and 4B) rates (B13) rates (B13	(except og Living C4) owed So (D1) (LF	Roots (C3) pils (C6) RR A)  Wetland H	Secondar Water-S 4A al Drainage Dry-Sea Saturatic Geomor Shallow FAC-Ne Raised A	y Indicators (2 of tained Leaves ( nd 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5) Ant Mounds (D6) eave Hummocks	or more requi B9) (MLRA? ) e (C2) erial Imagery (2) () (LRR A) s (D7)	(C9
Primary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Surfac Inunda Sparsa Field Obse Surface Wa Water table Saturation F (includes ca	ydrology Indicators: icators (any one indicators (any one indicators) icators (A1) Vater Table (A2) ation (A3) Marks (B1) icent Deposits (B2) iceposits (B3) Mat or Crust (B4) iceposits (B5) ice Soil Cracks (B6) icetion Visible on Aerial icely Vegetated Concavery inter Present? Inter Present	Imagery (I	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   B7)   Other (E(B8)   Other (E(B8)   Depth   No   X   Depth	A 1, 2, 4A st (B11) Invertebren Sulfide d Rhizospee of Red dron Redron Redron Stress explain in (inches) (inches)	and 4B) rates (B13) rates (B13	(except og Living C4) owed So (D1) (LF	Roots (C3) pils (C6) RR A)  Wetland H	Secondar Water-S 4A al Drainage Dry-Sea Saturatic Geomor Shallow FAC-Ne Raised A	y Indicators (2 of tained Leaves ( nd 4B) e Patterns (B10) son Water Table on Visible on Ae phic Position (D Aquitard (D3) utral Test (D5) Ant Mounds (D6) eave Hummocks	or more requi B9) (MLRA? ) e (C2) erial Imagery (2) () (LRR A) s (D7)	(C9

Project/Site:	I-5 Woodland			City/County:	Woodland/	Cowlitz			Samp	oling Date:	Oct.8, 2020
Applicant/Owner:	Logan Partners LLC						State: \(\)	NA	Samp	oling Point: _	27
Investigator(s):	KB			Section	n, Township,	Range:	S13, T5	N, R1W			
Landform (hillslope	e, terrace, etc.):	terrace		Local re	elief (concave	e, convex	k, none): <u>r</u>	none		Slope	e (%): <u>0-3%</u>
Subregion (LRR):	Northwest Forests a	nd Coast (LRR A)	Lat:		45.921	1356422	Long:	-1	22.75066	88133 D	atum:
Soil Map Unit Nam	ne: Maytown silt	loam					NWI Clas	sification:	PEM1A		
Are climatic / hydro	ologic conditions on th	e site typical for tl	nis time of	year?	Yes_	Χ	No_		_(If no, e	xplain in Rer	marks)
Are Vegetation	, Soil	, or Hydrology		significantly	disturbed?	Are "N	Normal Cir	rcumstand	es" Prese	ent? Yes _	X No
Are Vegetation	, Soil	, or Hydrology		naturally pro	oblematic?	(If nee	eded, expl	lain any a	nswers in	Remarks.)	
SUMMARY OF	FINDINGS - Atta	ach site map s	showing	sampling	point loca	itions, t	transec	ts, impo	ortant fe	eatures, et	tc.
Hydrophytic Veget	ation Present?	Yes x No									
Hydric Soil Presen		Yes No			ampled Area	a	Yes		No	x	
Wetland Hydrology		Yes No		within a	a Wetland?		_			•	
VEGETATION											
			Absolute	Dominant	Indicator	Domina	nce Test	workshe	et:		
Tree Stratum (Us	se scientific names.)		% Cover	Species?	Status?		r of Domin				
1						i nat Are	e OBL, FA	ACVV, or F	AC:	1	(A)
2.				. ( <del> </del>			umber of [				
3				: (		Species	Across A	III Strata:		1	(B)
4							of Domin				
		Total Cover:	0			That Are	e OBL, FA	ACW, or F	AC:	100%	(A/B)
Shrub Stratum							ence Inde		neet:	<b>NA</b> 16: 1 1	
1.		<u> </u>					tal % Cov			Multiply by	<u>r:</u>
^						OBL spe	ecies species				<del></del>
. —						FAC spe	_		_^2 = x3 =		<del></del>
 5					. ———		pecies				
·		Total Cover:	0	· ·		UPL spe	_		x _x5 =		
Herb Stratum		. 516 5575		•			Totals:	0			(B)
Phalaris aruno	linacea		60	Υ	r FACW □					<u>-</u>	
Lotus cornicula			5	· <del></del>							
3.						Hydrop	hytic Veg	etation li	ndicators	:	
4.				. '			1 - Rapi	d Test for	Hydrophy	ytic Vegetation	on
5.						Х	2 - Dom	inance Te	est is >509	%	
6.							3 - Preva	alence Ind	dexis ≤3.	.0 <sup>1</sup>	
7							4 - Morp	hological	Adaptatio	n1 (Provide	supporting
8							data in F	Remarks	or on a se	parate shee	t)
9							5 - Wetla	and Non-\	√ascular l	Plants <sup>1</sup>	
10				· ·			Problem	atic Hydro	ophytic Ve	egetation <sup>1</sup> (E	Explain)
11				. ( <del> </del>							
		Total Cover:	65								
Woody Vine S	<u>tratum</u>									l hydrology n	nust
1		_			-	be prese	ent, unles	s disturbe	d or prob	lematic.	
2						Hydrop	-				
	0	Total Cover:			_	Vegetat			v		
	re Ground in Herb Stra	atum <u>10</u> %	Cover of B	iotic Crust	0	Present	t?		Yes	x No	
Remarks: Litter 25	5%										

Profile Des								Sampling Point:	
Donth	scription: (Describe	to the dep	oth needed to doc	ument th	e indicato	or con	firm the abso	ence of indicators.)	
Deptili	Matrix		Red	lox Featu	ıres		_		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Rem	arks
0-3	10YR3/2	100					SiL		
3-12	10YR3/2	98	10YR3/3	2	С	М	SiL		
12-14	10YR4/3	98	10YR3/4	2	С	М	S		
	·								
1 <sub>Tuma:</sub> C=0	Same attention D-Dan	letien DM	-Daduard Matrix C	20-0		- d C	d Craina 21 a	postion: DI Doro Lining M.A	Andrice
Type: C=C	Joncentration, D=Dep	ielion, Rivi	=Reduced Matrix, C	55=Cove	red or Coal	ed Sand	u Grains. Lo	ocation: PL=Pore Lining, M=N	viatrix.
Hydric Soil	I Indicators: (Applic	able to all	LRRs, unless oth	erwise r	oted.)		Indicators	for Problematic Hydric Soil	ls³:
Histos	sol (A1)		Sandy F	Redox (S	5)			2 cm Muck (A10)	
Histic	Epipedon (A2)		Stripped	l Matrix (	S6)		,	Red Parent Material (TF	=2)
Black	Histic (A3)		Loamy N	Лиску Мі	neral (F1) (	except	MLRA 1)	Other (Explain in Rema	rks)
Hydro	gen Sulfide (A4)		Loamy (	Gleyed M	atrix (F2)				
Deplet	ted Below Dark Surfac	ce (A11)	Deplete	d Matrix	(F3)				
Thick	Dark Surface (A12)		Redox [	Oark Surf	ace (F6)		<sup>3</sup> Indic	cators of hydrophytic vegetation	on and
Sandy	Muck Mineral (S1)		Deplete	d Dark S	urface (F7)		we	etland hydrology must be prese	ent,
Sandy	gleyed Matrix (S4)		Redox D	Depression	ons (F8)		U	ınless disturbed or problemati	C.
Restrictive	Layer (if present):								
Type:									
Depth (inch	es):					Ну	dric Soil Pre	esent? Yes	Nox
IYDROLOGY									
Wetland Hy	ydrology Indicators:							O a consideration (O	an a
Wetland Hy Primary Ind	ydrology Indicators: icators (any one indica			Main and I	(PO)	(2		Secondary Indicators (2 o	
Wetland Hy Primary Ind Surface	ydrology Indicators: icators (any one indicators) ce Water (A1)		Water-S		eaves (B9)	(except		Water-Stained Leaves (	
Wetland Hy Primary Ind Surface High V	ydrology Indicators: icators (any one indicators (A1) De Water (A1) Water Table (A2)		Water-S	A 1, 2, 4 <i>A</i>	eaves (B9) A and 4B)	(except	· · · · · · · · · · · · · · · · · · ·	Water-Stained Leaves ( 4A and 4B)	(B9) ( <b>MLRA 1, 2,</b>
Wetland Hy Primary Ind Surfac High V Satura	ydrology Indicators: icators (any one indicators (A1) water (A1) Water Table (A2) ation (A3)		Water-S MLRA Salt Cru	<b>A 1, 2, 4</b> / st (B11)	A and 4B)	(except		Water-Stained Leaves ( 4A and 4B) Drainage Patterns (B10	(B9) ( <b>MLRA 1, 2,</b>
Primary Ind Surface High V Satura Water	ydrology Indicators: icators (any one indicators (A1) water (A1) Vater Table (A2) ation (A3) Marks (B1)		Water-S MLRA Salt Cru Aquatic	<b>A 1, 2, 4</b> / st (B11) Inverteb	and 4B)	(except		Water-Stained Leaves ( 4A and 4B) Drainage Patterns (B10 Dry-Season Water Tabl	(B9) ( <b>MLRA 1, 2,</b> )) le (C2)
Primary Ind Surface High V Satura Water Sedim	ydrology Indicators: icators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2)		Water-S MLRA Salt Cru Aquatic Hydroge	<b>A 1, 2, 4</b> <i>A</i> st (B11) Invertebr en Sulfide	and 4B) rates (B13) e Odor (C1)	` •		Water-Stained Leaves ( 4A and 4B) Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae	(B9) ( <b>MLRA 1, 2,</b> 0) le (C2) erial Imagery (C9)
Primary Ind Surface High V Satura Water Sedim Drift D	ydrology Indicators: icators (any one indicators (any one indicators (A1) water (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized	A 1, 2, 44 st (B11) Invertebr en Sulfide d Rhizosp	rates (B13) Odor (C1) oheres alon	g Living	Roots (C3)	Water-Stained Leaves ( 4A and 4B) Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D	(B9) ( <b>MLRA 1, 2,</b> 0) le (C2) erial Imagery (C9)
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal N	ydrology Indicators: icators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presence	A 1, 2, 44 st (B11) Invertebren Sulfide d Rhizospee of Red	and 4B) rates (B13) Properties (B13) Pro	g Living C4)	Roots (C3)	Water-Stained Leaves ( 4A and 4B) Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3)	(B9) ( <b>MLRA 1, 2,</b> 0) le (C2) erial Imagery (C9)
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal N	ydrology Indicators: icators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) deposits (B3) Mat or Crust (B4) deposits (B5)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent	A 1, 2, 44 st (B11) Invertebren Sulfide d Rhizospere of Red Iron Red	A and 4B) rates (B13) Properties (C1) Properties alon uced Iron (Cuction in Plo	g Living C4) owed Sc	Roots (C3)	Water-Stained Leaves ( 4A and 4B)  Drainage Patterns (B10  Dry-Season Water Tabl  Saturation Visible on Ae  Geomorphic Position (D  Shallow Aquitard (D3)  FAC-Neutral Test (D5)	(B9) ( <b>MLRA 1, 2,</b> 0) le (C2) erial Imagery (C9) 02)
Primary Ind Surface High V Satura Water Sedim Drift D Algal N Surface	ydrology Indicators: icators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ient Deposits (B2) deposits (B3) Mat or Crust (B4) deposits (B5) de Soil Cracks (B6)	ator is suffi	Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted	A 1, 2, 44 st (B11) Invertebra en Sulfide d Rhizospe e of Red Iron Red or Stress	ates (B13) Codor (C1) Coheres alon uced Iron (Cuction in Placed Plants	g Living C4) owed Sc	Roots (C3)	Water-Stained Leaves ( 4A and 4B) Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6	(B9) (MLRA 1, 2, 0) le (C2) erial Imagery (C9) 02)
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal N Iron D Surface Inunda	ydrology Indicators: icators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) deposits (B3) Mat or Crust (B4) deposits (B5)	ator is suffi	Water-S  MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted Other (E	A 1, 2, 44 st (B11) Invertebra en Sulfide d Rhizospe e of Red Iron Red or Stress	A and 4B) rates (B13) Properties (C1) Properties alon uced Iron (Cuction in Plo	g Living C4) owed Sc	Roots (C3)	Water-Stained Leaves ( 4A and 4B)  Drainage Patterns (B10  Dry-Season Water Tabl  Saturation Visible on Ae  Geomorphic Position (D  Shallow Aquitard (D3)  FAC-Neutral Test (D5)	(B9) (MLRA 1, 2, 0) le (C2) erial Imagery (C9) 02)
Primary Ind Surface High V Satura Water Sedim Drift D Algal N Iron D Surface Inunda	ydrology Indicators: icators (any one indicators (any one indicators (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) deposits (B3) Mat or Crust (B4) deposits (B5) de Soil Cracks (B6) ation Visible on Aerial dely Vegetated Concave	ator is suffi	Water-S  MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted Other (E	A 1, 2, 44 st (B11) Invertebra en Sulfide d Rhizospe e of Red Iron Red or Stress	ates (B13) Codor (C1) Coheres alon uced Iron (Cuction in Placed Plants	g Living C4) owed Sc	Roots (C3)	Water-Stained Leaves ( 4A and 4B) Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6	(B9) (MLRA 1, 2, 0) le (C2) erial Imagery (C9) 02)
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal N Iron D Surface Inunda Sparse Surface Wa	ydrology Indicators: icators (any one indicators (any one indicators)  Marks (B1) Marks (B1) Marks (B1) Marks (B2) Marks (B3) Mat or Crust (B4) Mat or Crust (B4) Mat or Crust (B4) Mat or Crust (B6) Mat or Crust (B7) Mat or Crust (B4) Ma	ator is suffi	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   Stunted   Other (E (B8)   No _ X _ Depth	A 1, 2, 44 st (B11) Invertebren Sulfide en Sulfide di Rhizospe er of Red Iron Red or Stress Explain in	and 4B) rates (B13) Prates (B13	g Living C4) owed Sc	Roots (C3)	Water-Stained Leaves ( 4A and 4B) Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6	(B9) (MLRA 1, 2, 0) le (C2) erial Imagery (C9) 02)
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal N Iron D Surface Inunda Sparse Surface Wa Water table	ydrology Indicators: icators (any one indicators (any one indicators) attention (A3) And the Crust (B4) And the Crust (B4) And the Crust (B4) And the Crust (B4) And the Crust (B6) And the Crust (B6	Imagery (E	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   Stunted   Other (E (B8)	A 1, 2, 44 st (B11) Invertebren Sulfide en Sulfide di Rhizospe er of Red dron Red or Stress explain in (inches) (inches)	and 4B) rates (B13) Prates (B13	g Living C4) owed Sc	Poils (C3) RR A)	Water-Stained Leaves ( 4A and 4B)  Drainage Patterns (B10  Dry-Season Water Tabl  Saturation Visible on Ae  Geomorphic Position (D  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6)  Frost-Heave Hummocks	(B9) (MLRA 1, 2, b) le (C2) erial Imagery (C9) D2) D3) (LRR A) s (D7)
Primary Ind Surface High V Satura Water Sedim Drift D Algal N Iron D Surface Inunda Sparse Field Obse Surface Water table Saturation F	ydrology Indicators: icators (any one indicators (any one indicators) attent Deposits (B2) attent Deposits (B3) attent Deposits (B4) attent Deposits (B4) attent Deposits (B6) attent Crust (B4) attent Crust (B4) attent Crust (B6) attent Visible on Aerial attent Present? Yes attent Present? Yes attent Present? Yes attent Crust (B6) attent Cru	Imagery (E	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   Stunted   Other (E (B8)	A 1, 2, 44 st (B11) Invertebren Sulfide en Sulfide di Rhizospe er of Red Iron Red or Stress Explain in	and 4B) rates (B13) Prates (B13	g Living C4) owed Sc	Poils (C3) RR A)	Water-Stained Leaves ( 4A and 4B) Drainage Patterns (B10 Dry-Season Water Tabl Saturation Visible on Ae Geomorphic Position (D Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6	(B9) (MLRA 1, 2, b) le (C2) erial Imagery (C9) D2) D3) (LRR A) s (D7)
Primary Ind Surface High V Satura Water Sedim Drift D Algal N Iron D Surface Inunda Sparse Field Obse Surface Water table Saturation F (includes ca	ydrology Indicators: icators (any one indicators (any one indicators) attention (A3) And the Crust (B4) And the Crust (B4) And the Crust (B4) And the Crust (B4) And the Crust (B6) And the Crust (B6	Imagery (Eve Surface	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   Stunted   Stunted   Other (E (B8)	A 1, 2, 44 st (B11) Invertebren Sulfide en Sulfide di Rhizospe er of Red dron Red or Stress explain in (inches) (inches)	and 4B) rates (B13) rates (B13) rates (C1) rates alon uced Iron ( uction in Placed Plants ( Remarks)	g Living C4) owed Sc D1) ( <b>LR</b>	Roots (C3)  pils (C6)  RR A)  Wetland Hy	Water-Stained Leaves ( 4A and 4B)  Drainage Patterns (B10  Dry-Season Water Table Saturation Visible on Aeterory Geomorphic Position (D Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) Frost-Heave Hummocks  ydrology Present?  Yes	(B9) (MLRA 1, 2, b) le (C2) erial Imagery (C9) D2) D3) (LRR A) s (D7)
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal N Iron D Surface Inunda Sparse Field Obse Surface Water table Saturation F (includes ca	ydrology Indicators: icators (any one indicators (any one indicators) attent Deposits (B2) deposits (B3) Mat or Crust (B4) deposits (B5) deposits (B5) deposits (B5) deposits (B6) detion Visible on Aerial dely Vegetated Concavervations: atter Present?  Present?  Present?  Yes depillary fringe)	Imagery (Eve Surface	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   Stunted   Stunted   Other (E (B8)	A 1, 2, 44 st (B11) Invertebren Sulfide en Sulfide di Rhizospe er of Red dron Red or Stress explain in (inches) (inches)	and 4B) rates (B13) rates (B13) rates (C1) rates alon uced Iron ( uction in Placed Plants ( Remarks)	g Living C4) owed Sc D1) ( <b>LR</b>	Roots (C3)  pils (C6)  RR A)  Wetland Hy	Water-Stained Leaves ( 4A and 4B)  Drainage Patterns (B10  Dry-Season Water Table Saturation Visible on Aeterory Geomorphic Position (D Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) Frost-Heave Hummocks  ydrology Present?  Yes	(B9) (MLRA 1, 2, b) le (C2) erial Imagery (C9) D2) D3) (LRR A) s (D7)
Primary Ind Surface High V Satura Water Sedim Drift D Algal N Iron D Surface Inunda Sparse Field Obse Surface Water table Saturation F (includes ca	ydrology Indicators: icators (any one indicators (any one indicators) attent Deposits (B2) deposits (B3) Mat or Crust (B4) deposits (B5) deposits (B5) deposits (B5) deposits (B6) detion Visible on Aerial dely Vegetated Concavervations: atter Present?  Present?  Present?  Yes depillary fringe)	Imagery (Eve Surface	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   Stunted   Stunted   Other (E (B8)	A 1, 2, 44 st (B11) Invertebren Sulfide en Sulfide di Rhizospe er of Red dron Red or Stress explain in (inches) (inches)	and 4B) rates (B13) rates (B13) rates (C1) rates alon uced Iron ( uction in Placed Plants ( Remarks)	g Living C4) owed Sc D1) ( <b>LR</b>	Roots (C3)  pils (C6)  RR A)  Wetland Hy	Water-Stained Leaves ( 4A and 4B)  Drainage Patterns (B10  Dry-Season Water Table Saturation Visible on Aeterory Geomorphic Position (D Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) Frost-Heave Hummocks  ydrology Present?  Yes	(B9) (MLRA 1, 2, b) le (C2) erial Imagery (C9) D2) D3) (LRR A) s (D7)
Wetland Hy Primary Ind Surface High V Satura Water Sedim Drift D Algal N Iron D Surface Inunda Sparse Field Obse Surface Water table Saturation F (includes ca	ydrology Indicators: icators (any one indicators (any one indicators) attent Deposits (B2) deposits (B3) Mat or Crust (B4) deposits (B5) deposits (B5) deposits (B5) deposits (B6) detion Visible on Aerial dely Vegetated Concavervations: atter Present?  Present?  Present?  Yes depillary fringe)	Imagery (Eve Surface	Water-S   MLR/   Salt Cru   Aquatic   Hydroge   Oxidized   Presenc   Recent   Stunted   Stunted   Other (E (B8)     Depth   No   x   Depth   Depth   Depth   Depth	A 1, 2, 44 st (B11) Invertebren Sulfide en Sulfide di Rhizospe er of Red dron Red or Stress explain in (inches) (inches)	and 4B) rates (B13) Production in Plosed Plants (Remarks)	g Living C4) owed Sc D1) ( <b>LR</b>	Roots (C3)  pils (C6)  RR A)  Wetland Hy	Water-Stained Leaves ( 4A and 4B)  Drainage Patterns (B10  Dry-Season Water Table Saturation Visible on Aeterory Geomorphic Position (D Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) Frost-Heave Hummocks  ydrology Present?  Yes	(B9) (MLRA 1, 2, b) le (C2) erial Imagery (C9) D2) D3) (LRR A) s (D7)

Project/Site:	I-5 Woodland			City/County	: Woodland/	'Cowlitz			Sam	npling Date:	Oct.8, 2	2020
Applicant/Owner:	Logan Partners LLC	;					State:	WA	Sam	npling Point:		28
Investigator(s):	KB			Section	n, Township,	, Range:	S13, T	5N, R1W				
Landform (hillslope	e, terrace, etc.):	terrace		_	elief (concave						e (%): <u>(</u>	)-3%
Subregion (LRR):	Northwest Forests a	and Coast (LRR A	) Lat:		45.921	1406779	Long:	-	122.7501	159737	Datum: _	
Soil Map Unit Nam		e sandy loam						ssification				
Are climatic / hydro	ologic conditions on the				_		No		(If no, o	explain in Re	emarks)	
Are Vegetation	, Soil	, or Hydrology		significantly	disturbed?	Are "N	Iormal C	ircumstan	ces" Pres	sent? Yes	X_N	<u></u>
Are Vegetation	, Soil	, or Hydrology		naturally pr	oblematic?	(If nee	eded, exp	olain any a	ınswers i	n Remarks.)		
SUMMARY OF	FINDINGS - Att	ach site map s	showing	sampling	point loca	ations, 1	transec	cts, imp	ortant f	eatures, e	etc.	
Hydrophytic Veget	ation Present?	Yes x No	1									
Hydric Soil Presen		Yes No			ampled Area	a	Yes		No	x		
Wetland Hydrolog		·	x x	within	a Wetland?		•				-	
VEGETATION												
			Absolute	Dominant	Indicator	Domina	nce Tes	t worksh	eet:			
Tree Stratum (U	se scientific names.)		% Cover	Species?	Status?			nant Spec				
1						i nat Are	e OBL, F	ACW, or I	-AC:	3	(	(A)
2								Dominan	t			
3						Species	Across	All Strata:		3	(	(B)
4								nant Spec				
		Total Cover:	0			That Are	e OBL, F	ACW, or I	FAC:	100%	(	(A/B)
						D			1 4			
Shrub Stratum	#		00	V	ı∄ACW □			ex Works	neet:	NA. dela bis b		
<ol> <li>Spiraea dougle</li> <li>2.</li> </ol>	asii		60	Y	TACVI	-	tal % Co			Multiply b	iy:	
3.				· <del></del>	· ———	OBL sp						
4						FAC sp						
5.						•						
		Total Cover:	60		-	UPL spe			x5 =			
Herb Stratum							Totals:	0	(A)		(	(B)
1. Phalaris arund	dinacea		30	Υ	FACW □			dex = B/A				
2. Lotus cornicul	atus		15									
3. Agrostis stolor	nifera		25	Y	IFAC□	Hydrop	hytic Ve	getation I	ndicator	s:		
4							1 - Rap	id Test fo	r Hydroph	nytic Vegeta	tion	
5						X	2 - Don	ninance T	est is >50	)%		
6							3 - Pre	valence In	dex is ≤	3.0 <sup>1</sup>		
7							4 - Mor	phologica	Adaptat	ion1 (Provid	e suppor	ting
8										eparate she	et)	
9								land Non-				
							Probler	natic Hydi	ophytic \	egetation (	(Explain)	
11					·							
		Total Cover:	70			1						
Woody Vine S	tratum_							dric soil ar ss disturbe		d hydrology	must	
1.				-		ne hies	orit, urile	<u>งจ นเจเนเมีย</u>	sa oi pioi	DICITIALIC.		
2		Tatal Cavar			. ———	Hydrop	•					
0/ D-	ro Ground in Llash Ot	Total Cover:	Cover of B	iotio Crust	0	Vegetat Present			Vac	v M-		
	re Ground in Herb Str	atuiii <u>30</u> %	Cover of B	ouc Crust		rresen	ıſ		Yes	X No		
Remarks:												

SOIL								Samp	ling Point:		28
Profile Desc	ription: (Describe	e to the dept	h needed to	document t	he indicate	or or con	firm the abse	nce of indic	ators.)		
Depth	 Matrix	•		Redox Fea					•		
_	Color (moist)	%	Color (moi		Type <sup>1</sup>	Loc <sup>2</sup>	- Texture		Por	narks	
(inches)	10YR3/3		Coloi (IIIol	51) 70	Туре	LUC	SiSL		Kei	IIdIKS	
0-10	10113/3	100				-	SISE				
							<u> </u>				
<sup>1</sup> Type: C=Cc	ncentration, D=De	nletion RM=	Reduced Ma	atrix CS=Cov	ered or Co	ated San	d Grains <sup>2</sup> Lo	cation: DI =E	Pore Lining M-	Matrix	
						alca Gari					
	ndicators: (Appli	cable to all I					Indicators		atic Hydric So	ils³:	
Histoso				andy Redox (S			-		uck (A10)		
Histic E	pipedon (A2)		St	ripped Matrix	(S6)		-	Red Pa	ent Material (T	F2)	
Black H	istic (A3)		Lo	amy Mucky N	/lineral (F1)	(except	MLRA 1)	Other (E	Explain in Rema	arks)	
Hydroge	en Sulfide (A4)		Lo	amy Gleyed I	Matrix (F2)						
Deplete	d Below Dark Surf	ace (A11)	De	epleted Matrix	(F3)						
Thick D	ark Surface (A12)			edox Dark Su	rface (F6)		<sup>3</sup> Indic	ators of hydro	phytic vegetati	on and	
Sandy N	Muck Mineral (S1)		De	epleted Dark	Surface (F7	)	wei	land hydrolog	y must be pres	sent,	
	leyed Matrix (S4)			edox Depress	-	,			ed or problema		
	ayer (if present):			<u>'</u>	( - /						
Type:											
Depth (inches	3):					H <sub>1</sub>	dric Soil Pre	sent?	Yes	N	No x
emarks:	·-		<u></u>						· ·		
YDROLOGY Wetland Hyd	Irology Indicators	<u> </u>									
-	ators (any one indi		cient)					Seconda	ry Indicators (2	or more re	equired)
	Water (A1)	oator lo oame		ater-Stained I	eaves (R9)	(excent	·		Stained Leaves		
	ater Table (A2)		<u> </u>	MLRA 1, 2, 4		(CXCCPI	· -		nd 4B)	(BS) (INILI)	, <u>-</u> ,
Saturati			0,	alt Crust (B11			-		•	0)	
	` ,			` .	,	`	-	_	e Patterns (B1		
	Marks (B1)			quatic Inverteb			-		son Water Tal		(CO)
	nt Deposits (B2)			drogen Sulfic	-		- D t - (O2)		on Visible on A	_	ery (C9)
	posits (B3)			kidized Rhizos	•		Roots (C3)		phic Position (	D2)	
	at or Crust (B4)			esence of Re		` '	-		Aquitard (D3)		
	posits (B5)			ecent Iron Red			` ′		utral Test (D5)		
	Soil Cracks (B6)			unted or Stres	ssed Plants	(D1) ( <b>LR</b>	RR A)	Raised	Ant Mounds (D	6) ( <b>LRR A</b>	.)
Inundati	on Visible on Aeria	al Imagery (B	7) <u> </u>	her (Explain i	n Remarks)	)	-	Frost-H	eave Hummocl	ks (D7)	
Sparsel	y Vegetated Conca	ave Surface (	B8)								
Field Observ											
Surface Water				Depth (inches							
Water table F Saturation Pr				Depth (inchest Depth (inchest			Wetland Hy	drology Pre	sent? Yes	e N	No x
(includes cap			<u> </u>	Doput (mone)			Wedana ny	urology i ic	sciit: ic.	·——'`	
	ded Data (stream	gauge, monit	oring well, a	erial photos, p	orevious ins	pections	), if available:				
	•										
temarks:						<del></del>			<u></u>		

Project/Site:	I-5 Woodland			City/County:	Woodland	/Cowlitz		_ Sampling [	Date: Oct.8,	2020
Applicant/Owner:	Logan Partners LLC					St	tate: WA	_ Sampling F	Point:	29
Investigator(s):	KB			Section	n, Township	, Range: S	13, T5N, R1W			
Landform (hillslope	e, terrace, etc.):	terrace		_ Local re	elief (concav	e, convex, no	one): none		Slope (%):	0-3%
Subregion (LRR):	Northwest Forests an	id Coast (LRR A)	Lat:		45.92	1314507 L	_ong:1	22.749592612	_ Datum:	
Soil Map Unit Nam						NW	VI Classification:	-		
Are climatic / hydro	ologic conditions on the				Yes_	X	No	_(If no, explain		
Are Vegetation	, Soil						mal Circumstand			_No
Are Vegetation	, Soil	, or Hydrology		naturally pro	oblematic?	(If needed	d, explain any a	nswers in Rem	arks.)	
SUMMARY OF	FINDINGS – Atta	ch site map s	howing	sampling	point loca	ations, tra	nsects, impo	rtant featur	es, etc.	
Hydrophytic Veget	ation Present?	Yes x No		la tha Ca						
Hydric Soil Presen	it?	YesNo	Х		ampled Are a Wetland?		Yes	No x		
Wetland Hydrology	y Present?	YesNo	Х	Within	a wedana.					
VEGETATION			Absolute	Deminorat	Indicator	Dominano	e Test workshe	ot:		
Tree Stratum (Us	se scientific names.)		Absolute % Cover	Dominant Species?	Status?	Number of	Dominant Spec BL, FACW, or F	ies	2	_(A)
2							per of Dominant			
3						Species Ac	cross All Strata:		2	_(B)
4							Dominant Speci			
		Total Cover:	0			That Are O	BL, FACW, or F	AC: <u>1</u>	00%	_(A/B)
Shrub Stratum  1. Spiraea dougla  2.	asii		40	Y	FACW□	Total 9		x1 = Mul	tiply by:	-
3 4.					· ——	FACW specie	cies	_x2 = x3 =	0	-
+ 5.						FACU specie		_x3 = x4 =	0	-
J		Total Cover:	40		· ——	UPL specie		x5 =	0	-
Herb Stratum						Column To		(A)	0	(B)
1. Phalaris arund	dinacea		60	Υ			ce Index = B/A =	-` ′		_(-/
2.										-
3.						Hydrophyt	ic Vegetation I	ndicators:		
						1	- Rapid Test for	Hydrophytic Ve	egetation	
5.						X 2	- Dominance Te	st is >50%		
6						3	- Prevalence Ind	dex is ≤3.0 <sup>1</sup>		
7						4	- Morphological	Adaptation1 (F	rovide supp	orting
3						l ———	ata in Remarks o		,	
9						5	- Wetland Non-	/ascular Plants	s <sup>1</sup>	
10						Pr	roblematic Hydro	ophytic Vegetat	tion¹ (Explair	1)
11										
		Total Cover:	60							
Woody Vine S 1.	<u>Stratum</u>						of hydric soil an , unless disturbe			
2.						Hydrophyt	ic			
		Total Cover:				Vegetation				
% Ba	re Ground in Herb Stra	tum <u>30</u> %	Cover of B	otic Crust	0			Yes x	No	
Remarks:										

	• •						firm the abse			
Depth	Matrix		Red	ox Feat	ures		-			
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-6	10YR3/3	100					SiSL			
6-16	10YR3/2	85	7.5YR3/3	5	С	M	S			
			10YR4/3	10	<u>D</u>	M	S			
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, C	S=Cove	ered or Coa	ted Sand	d Grains. <sup>2</sup> Lo	ocation: PL=P	ore Lining, M=Matrix	
lydric Soil	Indicators: (Applic	able to all	LRRs, unless othe	erwise ı	noted.)		Indicators	for Problema	atic Hydric Soils <sup>3</sup> :	
Histos	ol (A1)		Sandy R	edox (S	55)			2 cm Mu	ıck (A10)	
Histic I	Epipedon (A2)		Stripped	Matrix (	(S6)			Red Par	ent Material (TF2)	
Black I	Histic (A3)		Loamy N	lucky M	lineral (F1)	(except	MLRA 1)	Other (E	xplain in Remarks)	
Hydrog	gen Sulfide (A4)		Loamy C	Sleyed M	/latrix (F2)					
Deplet	ed Below Dark Surfac	ce (A11)	Depleted							
	Dark Surface (A12)				face (F6)			=	phytic vegetation and	b
	Muck Mineral (S1)				Surface (F7				y must be present,	
	gleyed Matrix (S4)		Redox D	epressi	ons (F8)		u	nless disturbe	d or problematic.	
Restrictive	Layer (if present):									
уре:										
ype: Depth (inche marks:	es):					Ну	dric Soil Pre	sent?	Yes	No x
Depth (inche						Ну	/dric Soil Pre	sent?	Yes	No x
Depth (inche marks: DROLOGY						Ну	/dric Soil Pre	sent?	Yes	No x
Depth (inche marks: DROLOGY Vetland Hy	,	ator is suffi	cient)			Ну	/dric Soil Pre		Yesy Indicators (2 or mo	
Depth (inche marks: DROLOGY Vetland Hy Primary Indi	, rdrology Indicators:	ator is suffi		tained L	eaves (B9)			Secondar		re required)
Depth (inche marks:  DROLOGY Vetland Hy Primary Indi Surfac	rdrology Indicators: cators (any one indica	ator is suffi	Water-S		.eaves (B9) <b>A and 4B</b> )			Secondar Water-S	y Indicators (2 or mo	re required)
DROLOGY Vetland Hy Primary Indi Surfac High W	rdrology Indicators: cators (any one indicate e Water (A1)	ator is suffi	Water-S MLRA Salt Crus	<b>1, 2, 4</b> st (B11)	A and 4B)	(except		Secondar Water-S 4A ar Drainage	y Indicators (2 or mo tained Leaves (B9) ( nd 4B) e Patterns (B10)	re required)
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water	rdrology Indicators: cators (any one indicate e Water (A1) Vater Table (A2) tion (A3) Marks (B1)	ator is suffic	Water-S MLRA Salt Crus Aquatic	<b>1, 2, 4</b> st (B11) Inverteb	A and 4B)	(except		Secondar Water-S 4A ar Drainage Dry-Sea	y Indicators (2 or mo tained Leaves (B9) ( nd 4B) e Patterns (B10) son Water Table (C2	re required) MLRA 1, 2,
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water Sedime	rdrology Indicators: cators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)	ator is suffi	Water-S MLRA Salt Crue Aquatic Hydroge	<b>1, 2, 4</b> st (B11) nverteb n Sulfide	A and 4B) orates (B13) e Odor (C1	(except		Secondar Water-S 4A ar Drainage Dry-Sea	y Indicators (2 or mo tained Leaves (B9) ( nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial In	re required) MLRA 1, 2,
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water Sedime Drift De	rdrology Indicators: cators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	ator is suffic	Water-S MLRA Salt Crus Aquatic Hydroge Oxidized	a 1, 2, 4, st (B11) Inverteb In Sulfide	A and 4B)  rates (B13) e Odor (C1) pheres alor	( <b>except</b>		Secondar Water-S 4A ar Drainage Dry-Sea Saturatic Geomor	y Indicators (2 or mo tained Leaves (B9) ( nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2)	re required) MLRA 1, 2,
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water Sedim Drift Do	rdrology Indicators: cators (any one indicate Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4)	ator is suffi	Water-S MLRA Salt Crus Aquatic Hydroge Oxidized Presence	a 1, 2, 4, ast (B11) Inverteb In Sulfider Rhizos e of Rec	A and 4B)  rates (B13) e Odor (C1) pheres alo	(except	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatic Geomory Shallow	y Indicators (2 or mo tained Leaves (B9) ( nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2) Aquitard (D3)	re required) MLRA 1, 2,
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water Sedime Drift De Algal M	rdrology Indicators: cators (any one indicate e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5)	ator is suffi	Water-S  MLRA  Salt Crus  Aquatic I  Hydroge  Oxidized  Presenc  Recent I	a 1, 2, 4, ast (B11) Invertebin Sulfide Rhizose of Record Red	A and 4B)  rates (B13) e Odor (C1) pheres alouduced Iron luction in P	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea Saturatic Geomor Shallow FAC-Ne	y Indicators (2 or motained Leaves (B9) (and 4B) e Patterns (B10) son Water Table (C2) on Visible on Aerial Interphic Position (D2) Aquitard (D3) utral Test (D5)	re required) MLRA 1, 2, 2) magery (C9)
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water Sedime Drift De Algal M Iron De Surfac	rdrology Indicators: cators (any one indicate Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6)		Water-S  MLRA  Salt Crue  Aquatic  Hydroge  Oxidized  Presenc  Recent I  Stunted	a 1, 2, 4, at (B11) Invertebin Sulfide Rhizos e of Record Record Stress	A and 4B)  rates (B13) e Odor (C1) pheres alouduced Iron fuction in Pased Plants	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatic Geomor Shallow FAC-Net Raised A	y Indicators (2 or mo tained Leaves (B9) ( nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2) Aquitard (D3) utral Test (D5)	re required) MLRA 1, 2, 2) magery (C9)
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water Sedime Drift De Algal N Iron De Surfac Inunda	rdrology Indicators: cators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) tition Visible on Aerial	Imagery (B	Water-S  MLRA  Salt Crus  Aquatic  Hydroge  Oxidized  Presenc  Recent I  Stunted  Other (E	a 1, 2, 4, at (B11) Invertebin Sulfide Rhizos e of Record Record Stress	A and 4B)  rates (B13) e Odor (C1) pheres alouduced Iron luction in P	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatic Geomor Shallow FAC-Net Raised A	y Indicators (2 or motained Leaves (B9) (and 4B) e Patterns (B10) son Water Table (C2) on Visible on Aerial Interphic Position (D2) Aquitard (D3) utral Test (D5)	re required) MLRA 1, 2, 2) magery (C9)
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water Sedim Drift D Algal M Iron De Surfac Inunda Sparse	rdrology Indicators: cators (any one indicate e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) ation Visible on Aerial ely Vegetated Concav	Imagery (B	Water-S  MLRA  Salt Crus  Aquatic  Hydroge  Oxidized  Presenc  Recent I  Stunted  Other (E	a 1, 2, 4, at (B11) Invertebin Sulfide Rhizos e of Record Record Stress	A and 4B)  rates (B13) e Odor (C1) pheres alouduced Iron fuction in Pased Plants	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatic Geomor Shallow FAC-Net Raised A	y Indicators (2 or mo tained Leaves (B9) ( nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2) Aquitard (D3) utral Test (D5)	re required) MLRA 1, 2, 2) magery (C9)
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water Sedime Drift De Algal M Iron De Surfac Inunda Sparse	rdrology Indicators: cators (any one indicators) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) ation Visible on Aerial ely Vegetated Concavervations:	Imagery (B e Surface (	Water-S  MLRA  Salt Crus  Aquatic I  Hydroge  Oxidized  Presenc  Recent I  Stunted  Other (E	A 1, 2, 4, at (B11) inverteb in Sulfido Rhizos e of Recorn Redoor Stres xplain in	A and 4B)  prates (B13) e Odor (C1 pheres alouduced Iron fluction in Pused Plants in Remarks)	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatic Geomor Shallow FAC-Net Raised A	y Indicators (2 or mo tained Leaves (B9) ( nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2) Aquitard (D3) utral Test (D5)	re required) MLRA 1, 2, 2) magery (C9)
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water Sedime Drift De Algal M Iron De Surfac Inunda Sparse	rdrology Indicators: cators (any one indicate e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) ation Visible on Aerial ely Vegetated Concavervations: ter Present?	Imagery (B e Surface (	Water-S   MLRA	A 1, 2, 4, at (B11) inverteb in Sulfidi Rhizos e of Rectorn Redtor Stress xplain in (inches	A and 4B)  prates (B13) e Odor (C1 pheres alor duced Iron fuction in P ased Plants n Remarks)	(except ) ng Living C4) owed So	Roots (C3)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatic Geomor Shallow FAC-Net Raised A	y Indicators (2 or mo tained Leaves (B9) ( nd 4B) e Patterns (B10) son Water Table (C2 on Visible on Aerial In phic Position (D2) Aquitard (D3) utral Test (D5)	re required) MLRA 1, 2, 2) magery (C9)
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water Sedime Drift De Algal M Iron De Surfac Inunda Sparse Gurface Wa	rdrology Indicators: cators (any one indicate Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) ation Visible on Aerial ely Vegetated Concavervations: ter Present? Yes Present?	Imagery (B e Surface (	Water-S   MLRA	A 1, 2, 4, at (B11) inverteb in Sulfido Rhizos e of Recorn Redoor Stres xplain in	A and 4B)  prates (B13) e Odor (C1 pheres alor duced Iron fuction in P ased Plants in Remarks)  ):	(except ) ng Living C4) owed So	Roots (C3) pils (C6) RR A)	Secondar Water-S 4A ar Drainage Dry-Sea: Saturatic Geomor Shallow FAC-Net Raised A	y Indicators (2 or motained Leaves (B9) (and 4B) e Patterns (B10) son Water Table (C2) on Visible on Aerial In the phic Position (D2) Aquitard (D3) autral Test (D5) Ant Mounds (D6) (LR) eave Hummocks (D7)	re required) MLRA 1, 2, 2) magery (C9)
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water Sedime Drift De Algal M Iron De Surface Inunda Sparse Gield Obsel Surface Wa Vater table Saturation F includes ca	rdrology Indicators: cators (any one indicate Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) ation Visible on Aerial ely Vegetated Concavervations: ter Present? Present? Present? Yes Present? Yes pillary fringe)	Imagery (B e Surface (	Water-S   MLRA	A 1, 2, 4, 4, st (B11) inverteb in Sulfido Rhizos e of Recoron Redor Stres xplain ir (inches (inches (inches to the stress to th	A and 4B)  prates (B13) e Odor (C1 pheres alor duced Iron luction in P used Plants n Remarks)  ):	(except ) ng Living C4) owed So (D1) (LR	Roots (C3) pils (C6) RR A)  Wetland Hy	Secondar Water-S 4A ar Drainage Dry-Sear Saturatic Geomor Shallow FAC-Ner Raised A	y Indicators (2 or motained Leaves (B9) (and 4B) e Patterns (B10) son Water Table (C2) on Visible on Aerial In the phic Position (D2) Aquitard (D3) autral Test (D5) Ant Mounds (D6) (LR) eave Hummocks (D7)	mre required) MLRA 1, 2, magery (C9)
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water Sedime Drift De Algal M Iron De Surface Inunda Sparse Gield Obsel Surface Wa Vater table Saturation F includes ca	rdrology Indicators: cators (any one indicate Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) ation Visible on Aerial ely Vegetated Concavervations: ter Present? Present? Yes Present? Yes	Imagery (B e Surface (	Water-S   MLRA	A 1, 2, 4, 4, st (B11) inverteb in Sulfido Rhizos e of Recoron Redor Stres xplain ir (inches (inches (inches to the stress to th	A and 4B)  prates (B13) e Odor (C1 pheres alor duced Iron luction in P used Plants n Remarks)  ):	(except ) ng Living C4) owed So (D1) (LR	Roots (C3) pils (C6) RR A)  Wetland Hy	Secondar Water-S 4A ar Drainage Dry-Sear Saturatic Geomor Shallow FAC-Ner Raised A	y Indicators (2 or motained Leaves (B9) (and 4B) e Patterns (B10) son Water Table (C2) on Visible on Aerial In the phic Position (D2) Aquitard (D3) autral Test (D5) Ant Mounds (D6) (LR) eave Hummocks (D7)	mre required) MLRA 1, 2, magery (C9)
DROLOGY Vetland Hy Primary Indi Surfac High W Satura Water Sedime Drift De Algal M Iron De Surface Inunda Sparse Gield Obsel Surface Wa Vater table Saturation F includes ca	rdrology Indicators: cators (any one indicate Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) ation Visible on Aerial ely Vegetated Concavervations: ter Present? Present? Present? Yes Present? Yes pillary fringe)	Imagery (B e Surface (	Water-S   MLRA	A 1, 2, 4, 4, st (B11) inverteb in Sulfido Rhizos e of Recoron Redor Stres xplain ir (inches (inches (inches to the stress to th	A and 4B)  prates (B13) e Odor (C1 pheres alor duced Iron luction in P used Plants n Remarks)  ):	(except ) ng Living C4) owed So (D1) (LR	Roots (C3) pils (C6) RR A)  Wetland Hy	Secondar Water-S 4A ar Drainage Dry-Sear Saturatic Geomor Shallow FAC-Ner Raised A	y Indicators (2 or motained Leaves (B9) (and 4B) e Patterns (B10) son Water Table (C2) on Visible on Aerial In the phic Position (D2) Aquitard (D3) autral Test (D5) Ant Mounds (D6) (LR) eave Hummocks (D7)	mre required) MLRA 1, 2, magery (C9)

Project/Site:	I-5 Woodland			City/County:	Woodland	/Cowlitz		Sampling I	Date: Oct.8,	2020
Applicant/Owner:	Logan Partners LLC						State: WA	Sampling I	Point:	30
Investigator(s):	KB			Section	n, Township	, Range:	S13, T5N, R1W			
Landform (hillslope	e, terrace, etc.):	terrace		_ Local re	elief (concav	e, convex,	none): none		_Slope (%):	0-3%
Subregion (LRR):	Northwest Forests ar	าd Coast (LRR A)	Lat:		45.92	1021350	Long:	-122.750243089	Datum:	
Soil Map Unit Nam						N	IWI Classificatio	-		
Are climatic / hydro	ologic conditions on the				Yes_	X	No	<u> </u>		
Are Vegetation	, Soil							nces" Present?		_No
Are Vegetation	, Soil	, or Hydrology		naturally pro	oblematic?	(If need	led, explain any	answers in Rem	arks.)	
SUMMARY OF	FINDINGS - Atta	ch site map s	howing	sampling	point loca	ations, tr	ansects, imp	ortant featur	es, etc.	
Hydrophytic Vegeta	ation Present?	Yes x No								
Hydric Soil Present	t?	Yes No	Х		ampled Are a Wetland?		Yes	No x		
Wetland Hydrology		Yes No		Within	a vvetianu:					
VEGETATION										
Tree Stratum (Us	se scientific names.)		Absolute % Cover	Dominant Species?	Indicator Status?	Number of	nce Test workslof Dominant Spe OBL, FACW, or	ecies	2	(A)
2.						Total Nur	mber of Domina			_(/ //
3.							Across All Strata		2	(B)
4.						Percent c	of Dominant Spe	-cies		- ` '
		Total Cover:	0				OBL, FACW, or		100%	_(A/B)
Shrub Stratum						Prevalen	ce Index Works	sheet:		
Spiraea dougla	asii		50	Υ	JFACW □		al % Cover of:		Itiply by:	
2.						OBL spec	cies	x1 =	0	<u>-</u>
3.						FACW sp	pecies	x2 =	0	<u>-</u>
4				·		FAC spec	cies	x3 =	0	_
5						FACU spe	ecies	x4 =	0	_
		Total Cover:	50			UPL spec	cies	x5 =	0	=
Herb Stratum						Column T	Totals: 0	(A)	0	_(B)
1. Phalaris arund	inacea		50	Y	FACW □	Prevale	ence Index = B/A	\ =		-
2										
				-			ytic Vegetation			
							•	or Hydrophytic V	egetation	
				-			2 - Dominance			
				· <del></del>			3 - Prevalence I			
					· <del></del>			al Adaptation1 (F		orting
•				-				s or on a separat	,	
								n-Vascular Plants		- \
							Problematic Hyd	drophytic Vegeta	tion (Explair	1)
11		Total Cover:	<u></u>							
Woody Vine S		•						and wetland hydr bed or problemat		
2.					-			<u> </u>		
		Total Cover:				Hydrophy Vegetation	•			
% Bai	re Ground in Herb Stra			iotic Crust	0			Yes x	No	
Remarks:				<u> </u>	-			·		
. to.namo.										

SOIL								Samp	oling Point:		3
Profile Des	scription: (Descr	ibe to the dep	oth needed to doc	ıment tl	he indicato	r or co	nfirm the abs	ence of indic	ators.)		
Depth	Matrix	(	Red	lox Feat			_				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	<u> </u>	Rema	ırks	
0-10	10YR3/2	100					SiSL				
10-16	10YR3/2	95	10YR3/3	5	C	M	<u>S</u>				
	· -						_				
							_				
							_				
<sup>1</sup> Type: C=0	Concentration, D=I	Depletion, RM	=Reduced Matrix, C	S=Cove	ered or Coa	ted Sar	nd Grains. <sup>2</sup> Lo	ocation: PL=I	Pore Lining, M=M	atrix.	
										3	
		plicable to all	LRRs, unless oth				Indicators		natic Hydric Soils	<b>5</b> °:	
	sol (A1)		Sandy R						uck (A10)	0)	
	Epipedon (A2)		Stripped			/	MIDA 4		rent Material (TF2	-	
	Histic (A3) ogen Sulfide (A4)			-	lineral (F1)	(except	( WILKA 1)	Other (	Explain in Remark	(S)	
	eted Below Dark Su	urfo.co (A11)	Loanly C	-	Matrix (F2)						
	Dark Surface (A12				face (F6)		<sup>3</sup> India	satore of hydr	ophytic vegetation	n and	
	y Muck Mineral (S1				Surface (F7)	1		-	gy must be presei		
	y gleyed Matrix (S4				ons (F8)	'		-	ed or problematic		
	E Layer (if present	-		- ор. осо.	(. 0)					·	
Type:		,									
Depth (inch	nes):					Ιн	lydric Soil Pre	esent?	Yes	No	х
									-		
YDROLOG		· · ·									
	lydrology Indicato dicators (any one ir		ficient)					Seconda	ary Indicators (2 or	r more reau	ired)
	ce Water (A1)	iuicator is suri		tainad I	eaves (B9)	(ovcon	<u></u>		Stained Leaves (E		
	Water Table (A2)				.eaves (B9) <b>A and 4B</b> )	(excep			and 4B)	)) (INLIXA	·, <del>_</del> ,
	ation (A3)		Salt Cru						ge Patterns (B10)		
	r Marks (B1)			` ,	rates (B13)				ason Water Table		
	nent Deposits (B2)				e Odor (C1				ion Visible on Aer	. ,	(C9)
	Deposits (B3)				•		g Roots (C3)		rphic Position (D2	• •	()
	Mat or Crust (B4)				· duced Iron (	-	3 ()		v Aquitard (D3)	,	
	Deposits (B5)				luction in Pl		oils (C6)		eutral Test (D5)		
	ce Soil Cracks (B6	i)			sed Plants				Ant Mounds (D6)	(LRR A)	
	ation Visible on Ae	•			n Remarks)				leave Hummocks		
Spars	sely Vegetated Cor	ncave Surface	(B8)								
Field Obse	ervations:										
		Yes		(inches							
Water table		Yes		(inches			Wetlend H	rdrology Dro	oont? Voo	No	.,
Saturation (includes ca	apillary fringe)	Yes	No x Depth	(inches	)		wettand n	drology Pre	esent? Yes_	No _	Х
•		m gauge, mor	nitoring well, aerial p	hotos, p	revious ins	pections	s), if available:				
emarks:											

Project/Site:	I-5 Woodland			City/County:	Woodland	/Cowlitz			Samp	ling Date: Oc	t.8, 2020
Applicant/Owner:	Logan Partners LLC						State: \	WA	Samp	ling Point:	31
Investigator(s):	KB			Section	n, Township	, Range:	S13, T5	N, R1W			
, ,	· · · · · -	terrace		_			_			Slope (%	6): <u>0-3%</u>
Subregion (LRR):	Northwest Forests an	d Coast (LRR A)	Lat:				-			7346 Datu	ım:
Soil Map Unit Nam								ssification:			
	ologic conditions on the				_		_			cplain in Rema	
Are Vegetation	, Soil										X_No
Are Vegetation	, Soil	, or Hydrology		naturally pro	oblematic?	(If nee	eded, exp	lain any ai	nswers in	Remarks.)	
SUMMARY OF	FINDINGS - Atta	ch site map s	showing	sampling	point loca	ations,	transec	ts, impo	rtant fe	atures, etc.	
Hydrophytic Veget	ation Present?	Yes x No									
Hydric Soil Presen		Yes x No			ampled Area a Wetland?	a	Yes	x	No		
Wetland Hydrology	y Present?	Yes x No		WILLIIII	a welland:		_				
V-0											
VEGETATION											
			Absolute	Dominant	Indicator			workshe			
Tree Stratum (U:	se scientific names.)		% Cover	Species?	Status?			nant Speci ACW, or F			
1						mat An	ODL, FA	ACVV, OI F	AC	1	(A)
				-				Dominant			
3						Species	Across A	MI Strata:		1	(B)
4		Total Cover:	0					ant Speci ACW, or F		100%	(A/B)
Shrub Stratum								x Worksh	eet:		
1.							tal % Cov			Multiply by:	
2 3.				-		OBL sp	_		_x1 =	0	
1		-				FAC sp			_x2 = x3 =		
5.						FACU s	_				
·		Total Cover:	0			UPL spe			 x5 =		
Herb Stratum		10101 00701.					Totals:	0	(A)		(B)
Phalaris arund	linacea		100	Υ	JFACW □		_			<u> </u>	(-/
2.		,									<del></del>
2						Hydrop	hytic Veg	getation Ir	ndicators	:	
1		<u> </u>					1 - Rapi	d Test for	Hydrophy	tic Vegetation	
5.						Х	2 - Dom	inance Te	st is >50%	6	
6.							3 - Prev	alence Ind	lex is ≤3.	0 <sup>1</sup>	
7							4 - Morp	hological	Adaptatio	n1 (Provide su	pporting
8							data in f	Remarks	or on a se	parate sheet)	
9							5 - Wetl	and Non-\	/ascular F	Plants <sup>1</sup>	
10							Problem	natic Hydro	ophytic Ve	egetation <sup>1</sup> (Exp	lain)
11											
		Total Cover:	100								
Woody Vine S	tratum_									hydrology mus	st
1.						ne prese	ziit, uriies	s disturbe	a or probl	emauc.	
2		Total C				Hydrop	-				
0/ 5	vo Ovovond in Unit Of	Total Cover:			_	Vegetat			Vas	N	
	re Ground in Herb Stra	tum <u>0</u> %	Cover of Bi	ouc Crust	0	Present			Yes	<u>x No</u>	
Remarks:											

)IL	oorintion. (Decerit-	4a 4b a -l	oth pooded to d	umant ti-	n in all 1 -		firm the at-		Sampling Point:		
	scription: (Describe	to the dep				or con	urm the abs	sence of	indicators.)		
epth	Matrix	0/		dox Featu		Loc <sup>2</sup>	Taratra		D.		
nches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc	Textur	<u>e</u>	Re	emarks	
0-4	10YR3/2	100	40VP2/4			- 14	SiL				
4-16	10YR3/2	95	10YR3/4	5	C	M	SiL				
ype: C=	Concentration, D=Dep	letion, RM	=Reduced Matrix, (	CS=Cover	ed or Coa	ted Sand	d Grains. <sup>2</sup> L	ocation:	PL=Pore Lining, M=	=Matrix.	
ydric Soi	il Indicators: (Applic	able to all	I LRRs, unless oth	erwise no	oted.)		Indicator	s for Pro	blematic Hydric So	oils³:	
_	sol (A1)			Redox (S5	•				cm Muck (A10)		
Histic	Epipedon (A2)		Stripped	d Matrix (S	86)			R	ed Parent Material (	TF2)	
	Histic (A3)		Loamy I	Mucky Mir	neral (F1)	(except	MLRA 1)	0	ther (Explain in Rem	narks)	
	ogen Sulfide (A4)			Gleyed Ma							
	eted Below Dark Surfa	ce (A11)		d Matrix (I	-						
	Dark Surface (A12)			Dark Surfa					hydrophytic vegeta		
_	y Muck Mineral (S1)			d Dark Su	, ,	)			drology must be pre		
_ Sandy	y gleyed Matrix (S4)		Redox [	Depression	ns (F8)			unless di	isturbed or problema	atic.	
arks:	nes):					Ну	dric Soil Pr	esent?	Yes	X No	_
narks:						Ну	vdric Soil Pr	esent?		<u> </u>	<u> </u>
DROLOG	Y					Ну	dric Soil Pr	esent?		<u> </u>	) <u> </u>
DROLOG /etland H	Y ydrology Indicators:					Ну	dric Soil Pr				
DROLOG etland H	Y lydrology Indicators: dicators (any one indic			N-:	(DO)			Sec	condary Indicators (	2 or more red	quire
PROLOG etland H rimary Inc Surfa	Y lydrology Indicators: dicators (any one indic ce Water (A1)		Water-S	Stained Le	` '			Sec	condary Indicators (: ater-Stained Leaves	2 or more red	quire
OROLOG etland H rimary Ind Surfac High V	Y lydrology Indicators: dicators (any one indic ce Water (A1) Water Table (A2)		Water-S	A 1, 2, 4A	` '			Sec W	condary Indicators (i ater-Stained Leaves 4A and 4B)	2 or more red s (B9) ( <b>MLR</b> /	quire
OROLOG etland H imary Ind Surfac High \ Satura	ydrology Indicators: dicators (any one indicators (A1) Water Table (A2) ation (A3)		Water-S MLRA Salt Cru	<b>A 1, 2, 4A</b> ust (B11)	and 4B)	(except			condary Indicators (// rater-Stained Leaves 4A and 4B) rainage Patterns (Br	2 or more red s (B9) ( <b>MLR</b> /	quire
PROLOG etland H rimary Ind Surfac High V Satura Water	y lydrology Indicators: dicators (any one indicators (A1) water Table (A2) ation (A3) r Marks (B1)		Water-S MLRA Salt Cru Aquatic	<b>A 1, 2, 4A</b> ıst (B11) Invertebra	<b>and 4B</b> )	(except		Sec	condary Indicators (2 dater-Stained Leaves 4A and 4B) rainage Patterns (B <sup>2</sup> ry-Season Water Ta	2 or more red s (B9) ( <b>MLR</b> / 10) able (C2)	quire A 1,
PROLOG  etland H rimary Inc Surfac High V Satura Watel Sedin	lydrology Indicators: dicators (any one indicators (any one indicators (A1)) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2)		Water-S MLR/ Salt Cru Aquatic Hydroge	<b>A 1, 2, 4A</b> Ist (B11) Invertebra en Sulfide	and 4B) ates (B13) Odor (C1	(except			condary Indicators (: /ater-Stained Leaves 4A and 4B) rainage Patterns (B' ry-Season Water Ta aturation Visible on A	2 or more red s (B9) ( <b>MLR</b> / 10) able (C2) Aerial Image	quire A 1,
PROLOG etland H imary Inc Surfac High \ Satura Watel Sedim Drift E	y lydrology Indicators: dicators (any one indicators (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidizer	A 1, 2, 4A ust (B11) Invertebra en Sulfide d Rhizosp	and 4B) ates (B13) Odor (C1 heres alor	(except		Sec W — Di — Di — Si _ x G	condary Indicators (a dater-Stained Leaves 4A and 4B) rainage Patterns (Bary-Season Water Ta aturation Visible on a eomorphic Position	2 or more red s (B9) ( <b>MLR</b> / 10) able (C2) Aerial Image (D2)	quire A 1,
DROLOG  Tetland H  Timary Inc  Surfac  High V  Satura  Water  Sedim  Drift E  Algal	ydrology Indicators: dicators (any one indicators (any one indicators) water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp de of Redu	and 4B) ates (B13) Odor (C1) heres alor	(except ) ng Living (C4)	Roots (C3)		condary Indicators (2 dater-Stained Leaves 4A and 4B) rainage Patterns (Bory-Season Water Ta aturation Visible on a eomorphic Position nallow Aquitard (D3)	2 or more red s (B9) ( <b>MLR</b> / 10) able (C2) Aerial Image (D2)	quire A 1,
PROLOG Petland H Firmary Inc Surfac High V Satura Water Sedim Drift E Algal Iron D	y lydrology Indicators: dicators (any one indicators (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)		Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presend Recent	A 1, 2, 4A ust (B11) Invertebra en Sulfide d Rhizosp	and 4B) ates (B13) Odor (C1 heres alor uced Iron (	(except ) ng Living (C4) owed Sc	Roots (C3)	Sec	condary Indicators (a dater-Stained Leaves 4A and 4B) rainage Patterns (Bary-Season Water Ta aturation Visible on a eomorphic Position	2 or more red s (B9) (MLR/ 10) able (C2) Aerial Image (D2)	quire A 1,
PROLOG  Tetland H  Timary Inc  Surfact  High V  Satura  Water  Sedin  Drift D  Algal  Iron D  Surfact	y dydrology Indicators: dicators (any one indicators (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	ator is suff	Water-S MLR Salt Cru Aquatic Hydroge Oxidized Presend Recent Stunted	A 1, 2, 4A ust (B11) Invertebra en Sulfide d Rhizosp ce of Redu Iron Redu	and 4B) ates (B13) Odor (C1 heres alor uced Iron oction in Pl ed Plants	(except ) ng Living (C4) owed So (D1) (LR	Roots (C3)	Sec   W   Di     Si   X   Gi     X   F/   Ri   Ri   Ri   Ri   Ri   Ri   Ri   R	condary Indicators (2 fater-Stained Leaves 4A and 4B) rainage Patterns (B' ry-Season Water Ta aturation Visible on a eomorphic Position hallow Aquitard (D3)	2 or more red s (B9) (MLR/ 10) able (C2) Aerial Image (D2) ) 5) D6) (LRR A)	quire A 1,
DROLOG /etland H rimary Ind Surfar High N Satura Water Sedin Drift D Algal Iron D Surfar Inund	y dydrology Indicators: dicators (any one indicators (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6)	ator is suff	Water-S MLR/ Salt Cru Aquatic Hydroge Oxidizer Presence Recent Stunted B7) Water-S	A 1, 2, 4A ust (B11) Invertebra en Sulfide d Rhizosp ce of Redu Iron Redu or Stress	and 4B) ates (B13) Odor (C1 heres alor uced Iron oction in Pl ed Plants	(except ) ng Living (C4) owed So (D1) (LR	Roots (C3)	Sec   W   Di     Si   X   Gi     X   F/   Ri   Ri   Ri   Ri   Ri   Ri   Ri   R	condary Indicators (; ater-Stained Leaves 4A and 4B) rainage Patterns (Bary-Season Water Taleaturation Visible on allow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (I	2 or more red s (B9) (MLR/ 10) able (C2) Aerial Image (D2) ) 5) D6) (LRR A)	quire A 1,
PROLOG  /etland H rimary Inc Surfac High V Satura Water Sedim Drift E Algal Iron E Surfac Inund Spars ield Obse v/ater table	y ydrology Indicators: dicators (any one indicators (any one indicators) ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6) dation Visible on Aerial (alter Present? eter Present? Yes eter Present?	Imagery (I	Water-S   MLR/    Salt Cru	A 1, 2, 4A ust (B11) Invertebra en Sulfide d Rhizosp ce of Redu Iron Redu or Stress	and 4B) ates (B13) Odor (C1) heres alor uced Iron ( ction in Pled Plants Remarks)	(except ) ng Living (C4) owed So (D1) (LR	Roots (C3) oils (C6)		condary Indicators (2 dater-Stained Leaves 4A and 4B) rainage Patterns (B' ry-Season Water Ta aturation Visible on a eomorphic Position hallow Aquitard (D3) AC-Neutral Test (D5 aised Ant Mounds (I	2 or more red s (B9) (MLR/ 10) able (C2) Aerial Image (D2) ) 5) D6) (LRR A)	quire A 1,
DROLOG /etland H rimary Inc Surfac High V Satura Water Sedim Drift E Algal Iron E Surfac Inund Spars ield Obse viface Water table aturation ncludes ca	y ydrology Indicators: dicators (any one indicators (any one indicators) dicators (any one indicators) dicators (any one indicators) water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) de Soil Cracks (B6) dation Visible on Aerial dely Vegetated Concaveryations: ater Present? Present? Present? Yes apillary fringe)	Imagery (I	Water-S   MLR/    Salt Cru	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp de of Redu Iron Redu or Stress Explain in in (inches): in (inches):	and 4B) ates (B13) Odor (C1) heres alor uced Iron ( ction in Pled Plants Remarks)	(except ) ng Living (C4) owed So (D1) (LR	Roots (C3) oils (C6) tR A)  Wetland F		condary Indicators (2 fater-Stained Leaves 4A and 4B) rainage Patterns (Bray-Season Water Ta aturation Visible on a eomorphic Position hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (I rost-Heave Hummor	2 or more red s (B9) (MLR/ 10) able (C2) Aerial Image (D2) ) 5) D6) (LRR A) cks (D7)	quire A 1,
PROLOG  Vetland H  rimary Inc  Surfac  High V  Satura  Water  Sedim  Drift E  Algal  Iron E  Surfac  Inund  Spars  Vater table  aturation  ncludes ca	ydrology Indicators: dicators (any one indicators (any one indicators) water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6) dation Visible on Aerial sely Vegetated Concaveryations: ater Present? Present? Yes Present?	Imagery (I	Water-S   MLR/    Salt Cru	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp de of Redu Iron Redu or Stress Explain in in (inches): in (inches):	and 4B) ates (B13) Odor (C1) heres alor uced Iron ( ction in Pled Plants Remarks)	(except ) ng Living (C4) owed So (D1) (LR	Roots (C3) oils (C6) tR A)  Wetland F		condary Indicators (2 fater-Stained Leaves 4A and 4B) rainage Patterns (Bray-Season Water Ta aturation Visible on a eomorphic Position hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (I rost-Heave Hummor	2 or more red s (B9) (MLR/ 10) able (C2) Aerial Image (D2) ) 5) D6) (LRR A) cks (D7)	quire A 1,
Surfar  Surfar  High V  Saturar  Water  Sedim  Drift E  Algal  Iron E  Surfar  Inund  Spars  ield Observation  attertable  attration  ncludes care	y ydrology Indicators: dicators (any one indicators (any one indicators) dicators (any one indicators) dicators (any one indicators) water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) de Soil Cracks (B6) dation Visible on Aerial dely Vegetated Concaveryations: ater Present? Present? Present? Yes apillary fringe)	Imagery (I	Water-S   MLR/    Salt Cru	A 1, 2, 4A ast (B11) Invertebra en Sulfide d Rhizosp de of Redu Iron Redu or Stress Explain in in (inches): in (inches):	and 4B) ates (B13) Odor (C1) heres alor uced Iron ( ction in Pled Plants Remarks)	(except ) ng Living (C4) owed So (D1) (LR	Roots (C3) oils (C6) tR A)  Wetland F		condary Indicators (2 fater-Stained Leaves 4A and 4B) rainage Patterns (Bray-Season Water Ta aturation Visible on a eomorphic Position hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (I rost-Heave Hummor	2 or more red s (B9) (MLR/ 10) able (C2) Aerial Image (D2) ) 5) D6) (LRR A) cks (D7)	quir A 1

Project/Site: <u>I-5</u>	Woodland		City/County:	Woodland	/Cowlitz	Sampling Date: Oct.8, 2020
Applicant/Owner: Log	gan Partners LLC				State: WA	Sampling Point:3
Investigator(s): KB	3		Section	n, Township	, Range: S13, T5N, R1W	
Landform (hillslope, ter	rrace, etc.): terrace		_ Local re	lief (concav	e, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR): No	orthwest Forests and Coast (LRR A)	) Lat:		45.91	9927175 Long: -1:	22.748438025 Datum:
Soil Map Unit Name:	Newberg fine sandy loam				NWI Classification:	
	ic conditions on the site typical for the			Yes_	X No	(If no, explain in Remarks)
	, Soil, or Hydrology					es" Present? Yes X No
Are Vegetation	, Soil, or Hydrology		naturally pro	oblematic?	(If needed, explain any ar	swers in Remarks.)
SUMMARY OF FIN	NDINGS – Attach site map s	showing	sampling	point loca	ations, transects, impo	rtant features, etc.
Hydrophytic Vegetatior	n Present? Yes x No	)				
Hydric Soil Present?	Yes No			ampled Are a Wetland?	YAS	No x
Wetland Hydrology Pre	·	x	Within	a wedana:		
VEGETATION						
		Absolute	Dominant	Indicator	Dominance Test workshe	et:
Tree Stratum (Use so	cientifia names \	% Cover		Status?	Number of Dominant Specie	
<u>Tree Stratum</u> (Ose st 1.	cientific names.)				That Are OBL, FACW, or FA	
1 2.			. ———		Total Number of Dominant	
3.					Species Across All Strata:	<b>3</b> (B)
5 4.					·	
†	Total Cover:	0			Percent of Dominant Specie That Are OBL, FACW, or FA	
Shrub Stratum					Prevalence Index Worksh	not.
<u>Shrub Stratum</u> 1.					Total % Cover of:	eet: Multiply by:
1. 2.					OBL species	x1 = <b>0</b>
3.						x2 = <b>0</b>
4.					FAC species	x3 = <b>0</b>
5.			. ———		FACU species	x4 = <b>0</b>
	Total Cover:	0			UPL species	x5 = <b>0</b>
Herb Stratum					Column Totals: 0	(A) <b>0</b> (B)
1. Phalaris arundinac	cea	60	Υ	JFACW □	Prevalence Index = B/A =	
2. Lotus corniculatus		30		□FAC□		
3.					Hydrophytic Vegetation In	dicators:
4. <u> </u>					1 - Rapid Test for	Hydrophytic Vegetation
5					X 2 - Dominance Tes	st is >50%
S					3 - Prevalence Ind	ex is ≤3.0 <sup>1</sup>
7						Adaptation1 (Provide supporting
						r on a separate sheet)
•						
•					Problematic Hydro	phytic Vegetation¹ (Explain)
l1						
	•	90	•			
•	<u>ım</u>	400/		TACILE.		
		40%	. <u>Y</u>	FACU_	be present, unless disturbed	a or problematic.
<u> </u>	Total Covers				Hydrophytic	
0/ Para C	•		intin Count	0	_	Vac v Na
	Tourid in Herb Stratum 0 %	Cover or B	olic Crust	0	Present?	res X NO
7.	Total Cover:	90 40%	Y		data in Remarks o  5 - Wetland Non-v  Problematic Hydro  Indicators of hydric soil and be present, unless disturbed	r on a separate sheet)  ascular Plants <sup>1</sup> aphytic Vegetation <sup>1</sup> (Explain)  d wetland hydrology must

PYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (any one indicator is sufficient)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Surface Soil Cracks (B6)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Surface Water Present?  Yes  No  X  Depth (inches):  Water-Stained Leaves (B9) (except  Water-Stained Leaves (B9) (MLR  4A and 4B)  Adand 4B)  Drainage Patterns (B10)  Surlace Soil Crust (B4)  Presence of Reduced Iron (C1)  Saturation Visible on Aerial Imagery (B7)  Surface Soil Cracks (B6)  Surface Soil Cracks (B6)  Surface Water Present?  Yes  No  X  Depth (inches):  Water table Present?  Yes  No  Zeondary Indicators (2 or more re  Water stained Leaves (B9) (MLR  4A and 4B)  Secondary Indicators (2 or more re  Water stained Leaves (B9) (MLR  4A and 4B)  Drainage Patterns (B10)  Drainage Patterns (B10)  Drainage Patterns (B10)  Saturation (C1)  Saturation Visible on Aerial (C2)  Saturation Visible on Aerial Imagery (B7)  Other (Explain in Remarks)  Frost-Heave Hummocks (D7)	Profile Description: (Describe to the depth needed to de			
(inches) Color (moist) % Color (moist) % Type Loc* Texture Remarks  0-16 10YR3/3 100 Sit	B		confirm the absence of it	ndicators.)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. **Location: PL=Pore Lining, M=Matrix.*  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. **Location: PL=Pore Lining, M=Matrix.*  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coaled Sand Grains. **Location: PL=Pore Lining, M=Matrix.**  4ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*:  Histosoi (A1) Sandy Redox (S5) Red Parent Material (Hydric Soils*:  Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2)  Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Other (Explain in Remarks)  Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)  Depleted Matrix (F2)  Depleted Matrix (F2)  Depleted Matrix (F3) Thick Dark Surface (A11) Depleted Dark Surface (F6) **  Sandy Muck Mineral (S1) Depleted Dark Surface (F6) **  Sandy Muck Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic.  Sestrictive Layer (if present):  Type:  Depth (inches): Hydric Soil Present? Yes N  MLRA 1, 2, 4A and 4B) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10)  Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation (Visible on Aerial Image Drift Deposits (B3) Qoxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2)  Mydra Marks (B1) Aquatic Invertebrates (B13) Dry-Season (B3)  Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquaticar (D3)  Forest-Heave Hummocks (D7) Spartes (B8)  Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) FAC-Neutral Test (D5)  Spartaes Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) FAC-Neutral Test (D5)  Spartaes Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) FAC-Neutral Test (D5)  Spartaes Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) FAC-Neutral Test (D5)  Spartaes Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) FAC-Neutral Test (D5)  Spartaes Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) FAC-Neutral Test (D5)  Spartaes Soil Cracks (B6) Recent Iron Reduction in Plowed Soils (C6) FAC-Neutral Test (D5)  Spartaes Soil Cracks (B6) Suntate of Shirts-Seased Plants (B1) (		%Type'Lo		Remarks
tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Sandy Redox (S5)  Jerm Muck (A10)  Histosol (A2)  Stripped Matrix (S6)  Black Histic (A3)  Loamy Mucky Mineral (F1) (except MLRA 1)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Sandy Muck Mineral (S1)  Sandy Muck Mineral (S1)  Sandy Muck Mineral (S1)  Depleted Dark Surface (F6)  Sandy Muck Mineral (S1)  Depleted Dark Surface (F7)  Wetland Hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present):  "ype:  "pepth (inches):  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Water-Stained Leaves (B9) (except  Water-Stained Leaves (B9) (male And 4B)  Saturation (A3)  Salt Crust (B11)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Availar Table (C2)  Saturation Visible on Availar Table (C2)  Shallow Aquitard (D3)  Algal Mai or Crust (B4)  Presence of Reduced iron (C4)  Shallow Aquitard (D3)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Surface Soil Cracks (B8)  Structed Water Season Water Table (C2)  Sparsely Vegetated Concave Surface (B8)  Vetland Hydrology Present?  Yes No X Depth (inches):  Wetland Hydrology Present	0-16 10YR3/3 100		<u>SiL</u>	
Indicators: (Applicable to all LRRs, unless otherwise noted.)   Indicators for Problematic Hydric Soils?:   Histosol (A1)			<del></del>	
Indicators: (Applicable to all LRRs, unless otherwise noted.)   Indicators for Problematic Hydric Soils?:   Histosol (A1)			<del></del>	
Indicators: (Applicable to all LRRs, unless otherwise noted.)   Indicators for Problematic Hydric Soils*:   Histosol (A1)			<del></del>	
tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Sandy Redox (S5)  Jerm Muck (A10)  Histosol (A2)  Stripped Matrix (S6)  Black Histic (A3)  Loamy Mucky Mineral (F1) (except MLRA 1)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Sandy Muck Mineral (S1)  Sandy Muck Mineral (S1)  Sandy Muck Mineral (S1)  Depleted Dark Surface (F6)  Sandy Muck Mineral (S1)  Depleted Dark Surface (F7)  Wetland Hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present):  "ype:  "pepth (inches):  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Borlogy  Vetland Hydrology Indicators:  "Primary Indicators (any one indicator is sufficient)  Water-Stained Leaves (B9) (except  Water-Stained Leaves (B9) (male And 4B)  Saturation (A3)  Salt Crust (B11)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Availar Table (C2)  Saturation Visible on Availar Table (C2)  Shallow Aquitard (D3)  Algal Mai or Crust (B4)  Presence of Reduced iron (C4)  Shallow Aquitard (D3)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Surface Soil Cracks (B8)  Structed Water Season Water Table (C2)  Sparsely Vegetated Concave Surface (B8)  Vetland Hydrology Present?  Yes No X Depth (inches):  Wetland Hydrology Present			<del></del>	
## Addric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Sandy Redox (S5)  Histosol (A2)  Stripped Matrix (S6)  Black Histic (A3)  Loamy Mucky Mineral (F1) (except MLRA 1)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Depleted Dark Surface (A12)  Sandy Muck Mineral (S1)  Sandy Muck Mineral (S1)  Sandy Muck Mineral (S1)  Depleted Dark Surface (F6)  Sandy Muck Mineral (S1)  Sandy Beyed Matrix (F3)  Fresh (Inches):  Primary Indicators (A11)  Water-Stained Leaves (B9) (except MLRA 1)  Water-Stained Leaves (B9) (except MLRA 1)  Hydric Soil Present?  Water-Stained Leaves (B9) (except MLRA 1)  Water-Stained Leaves (B			<del></del>	
## Addric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Sandy Redox (S5)  Histosol (A2)  Stripped Matrix (S6)  Black Histic (A3)  Loamy Mucky Mineral (F1) (except MLRA 1)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Depleted Dark Surface (A12)  Sandy Muck Mineral (S1)  Sandy Muck Mineral (S1)  Sandy Muck Mineral (S1)  Depleted Dark Surface (F6)  Sandy Muck Mineral (S1)  Sandy Beyed Matrix (F3)  Fresh (Inches):  Primary Indicators (A11)  Water-Stained Leaves (B9) (except MLRA 1)  Water-Stained Leaves (B9) (except MLRA 1)  Hydric Soil Present?  Water-Stained Leaves (B9) (except MLRA 1)  Water-Stained Leaves (B				
Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histot Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histot (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Indicators of hydrophytic vegetation and wetland hydrology must be present, and y diversity of the present of the present of the property of the present of the pres	Type: C=Concentration, D=Depletion, RM=Reduced Matrix	ς, CS=Covered or Coated	Sand Grains. <sup>2</sup> Location: F	PL=Pore Lining, M=Matrix.
Histic Epipedon (A2)  Black Histic (A3)  Loamy Mucky Mineral (F1) (except MLRA 1)  Other (Explain in Remarks)  Hydrogen Sulfide (A4)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Redox Dark Surface (F6)  Sandy Muck Mineral (S1)  Sandy Muck Mineral (S1)  Sandy Muck Mineral (S1)  Sandy Hydrogen Surface (F6)  Sandy Hydrogen Surface (F6)  Sandy Hydrogen Matrix (S4)  Redox Derressions (F8)  Redox Depressions (F8)  Redox Depressions (F8)  Redox Depressions (F8)  Restrictive Layer (if present):  Vipe:  Depth (inches):  Primary Indicators (any one indicator is sufficient)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Satt Crust (B11)  Water Marks (B1)  Aquatic Invertebrates (B13)  Darianage Patterns (B10)  Water Marks (B1)  Aquatic Invertebrates (B13)  Darianage Patterns (B10)  Darianage Patterns (B10)  Darianage Patterns (B10)  Algal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Surface Soil Cracks (B6)  Iron Deposits (B5)  Recent Iron Reduction in Plowed Soils (C6)  FAC-Neutral Test (D5)  Surface Soil Cracks (B6)  Iron Deposits (B5)  Surface Soil Cracks (B6)  Iron Deposits (B3)  Frost-Heave Hummocks (D7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Water Present? Yes No X Depth (inches):  Water Present? Yes No X Depth (inches):  Water Alatic Present? Yes No X Depth (inches):  Water applications in available:	Hydric Soil Indicators: (Applicable to all LRRs, unless o	otherwise noted.)	Indicators for Prob	olematic Hydric Soils <sup>3</sup> :
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Indicators of hydrophytic vegetation and wetland hydrology must be present, Sandy Muck 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: Depth (inches):  Wetland Hydrology Indicators:  Primary Indicators (any one indicator is sufficient) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLR High Water Table (A2) MLRA 1, 2, 4A and 4B) 4A and 4B) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Image Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Plowed Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imager (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8)  Field Observations: Surface Root Present? Yes No X Depth (inches): Water table Present? Yes No X Depth (inches): Water table Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches): Includes capillary fringe)  Scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Histosol (A1) Sand	y Redox (S5)	2 cr	m Muck (A10)
Hydrogen Sulfide (A4) Depleted Bellow Dark Surface (A11) Depleted Matrix (F2) Depleted Bellow Dark Surface (A12) Redox Dark Surface (F6) Sandy Muck Mineral (S1) Sandy Muck Mineral (S1) Depleted Dark Surface (F7) Wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if present): Type: Depth (inches): Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient)  Surface Water (A1) Water-Stained Leaves (B9) (except High Water Table (A2) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Sufface Note (B4) Presence of Reduced Iron (C4) Surface (B5) Surface Solt Cracks (B6) Surface Water (A1) Very South Hydrology Indicators (2 or more re Water-Stained Leaves (B9) (MLR 4 A and 4B)  Secondary Indicators (2 or more re Water-Stained Leaves (B9) (MLR 4 A and 4B)  Secondary Indicators (2 or more re Water-Stained Leaves (B9) (MLR 4 A and 4B)  Drainage Patterns (B10) Surface Solt (B2) Surface Water (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Plowed Soils (C6) FAC-Neutral Test (D5) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No X Depth (Inches): Water table Present? Yes No X Depth (Inches): Water table Present? Yes No X Depth (Inches): Water table Present? Yes No X Depth (Inches): Includes capillary fringe) Scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Histic Epipedon (A2) Stripp	oed Matrix (S6)	Rec	d Parent Material (TF2)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Muck Mineral (S1) Sandy Muck Mineral (S1) Depleted Dark Surface (F7) Wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if present):    Pype:	Black Histic (A3) Loam	ıy Mucky Mineral (F1) ( <b>exc</b>	cept MLRA 1) Oth	ner (Explain in Remarks)
Thick Dark Surface (A12) Redox Dark Surface (F6) SIndicators of hydrophytic vegetation and Sandy Muck Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic.  Redox Depressions (F8) (MLR 4) problematic Pression (P4) Shallow Aquitard (D3) problematic Pression (P4) Shallow Aquitard (D3) problematic Pression (P4) Pression (P4) Shallow Aquitard (D3) problematic Pression (P4)	Hydrogen Sulfide (A4) Loam	ıy Gleyed Matrix (F2)		
Sandy Muck Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, and y gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic.    Restrictive Layer (if present):	Depleted Below Dark Surface (A11) Depleted	eted Matrix (F3)		
Sandy gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic.  Restrictive Layer (if present):	Thick Dark Surface (A12) Redo	x Dark Surface (F6)	<sup>3</sup> Indicators of h	nydrophytic vegetation and
Restrictive Layer (if present):	Sandy Muck Mineral (S1) Deple	eted Dark Surface (F7)	wetland hyd	Irology must be present,
DROLOGY   Netland Hydrology Indicators:   Secondary Indicators (2 or more re Surface Water (A1)   Water-Stained Leaves (B9) (except   Water-Stained Leaves (B9) (MLR High Water Table (A2)   MLRA 1, 2, 4A and 4B)   A4 and 4B)   A5 aturation (A3)   Salt Crust (B11)   Drainage Patterns (B10)   Dray-Season Water Table (C2)   Sediment Deposits (B2)   Hydrogen Sulfide Odor (C1)   Saturation Visible on Aerial Imager Drift Deposits (B3)   Oxidized Rhizospheres along Living Roots (C3)   Geomorphic Position (D2)   Algal Mat or Crust (B4)   Presence of Reduced Iron (C4)   Shallow Aquitard (D3)   Iron Deposits (B5)   Recent Iron Reduction in Plowed Soils (C6)   FAC-Neutral Test (D5)   Surface Soil Cracks (B6)   Stunted or Stressed Plants (D1) (LRR A)   Raised Ant Mounds (D6) (LRR A)   Inundation Visible on Aerial Imagery (B7)   Other (Explain in Remarks)   Frost-Heave Hummocks (D7)   Sparsely Vegetated Concave Surface (B8)   Depth (inches):   Wetland Hydrology Present? Yes   No   X   Depth (inches):   Wetland Hydrology Present? Yes   No   X   Depth (inches):   Saturation Present? Yes   No   X   Depth (inches):   Wetland Hydrology Present? Yes   No   X   Depth (inches):   Sourface Soillary fringe)   Scribe Recorded Data (Stream gauge, monitoring well, aerial photos, previous inspections), if available:	Sandy gleyed Matrix (S4) Redo	x Depressions (F8)	unless dis	sturbed or problematic.
DROLOGY  Wetland Hydrology Indicators:  Primary Indicators (any one indicator is sufficient)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Salt Crust (B11)  Water Marks (B1)  Aquatic Invertebrates (B13)  Driniage Patterns (B10)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Oxidized Rhizospheres along Living Roots (C3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Surface Soil Cracks (B6)  Surface Soil Cracks (B6)  Surface Soil Cracks (B6)  Surface Water Present?  Sourface Water Present?  Yes  No  X  Depth (inches):  Wetland Hydrology Present?  Yes  No  X  Depth (inches):  Wetland Hydrology Present?  Yes  No  N  Water-Stained Leaves (B9) (except  Water-Stained Leaves (B9) (mLR  4A and 4B)  Drainage Patterns (B10)  Water-Stained Leaves (B9) (MLR  4A and 4B)  Drainage Patterns (B10)  Drainage Patterns (B1	Restrictive Layer (if present):			-
Depth (inches):	Type:			
Metland Hydrology Indicators:  Primary Indicators (any one indicator is sufficient)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Salt Crust (B11)  Water Marks (B1)  Aquatic Invertebrates (B13)  Dry-Season Water Table (C2)  Sediment Deposits (B2)  Hydrogen Sulfide Odor (C1)  Saturation Visible on Aerial Image Drift Deposits (B3)  Oxidized Rhizospheres along Living Roots (C3)  Geomorphic Position (D2)  Algal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Surface Soil Cracks (B6)  Surface Soil Cracks (B6)  Sunface Soil Cracks (B6)  Sunface Water Present?  Yes  No  X  Depth (inches):  Saturation Present?  Yes  No  X  Depth (inches):  Socribe Recorded Data (Stream gauge, monitoring well, aerial photos, previous inspections), if available:			Hydric Soil Present?	Yes No
Metland Hydrology Indicators:	marke:			
Wetland Hydrology Indicators:  Primary Indicators (any one indicator is sufficient)  Surface Water (A1)  Water-Stained Leaves (B9) (except  Water-Stained Leaves (B9) (MLR  High Water Table (A2)  MLRA 1, 2, 4A and 4B)  Saturation (A3)  Salt Crust (B11)  Water Marks (B1)  Aquatic Invertebrates (B13)  Dry-Season Water Table (C2)  Sediment Deposits (B2)  Hydrogen Sulfide Odor (C1)  Saturation Visible on Aerial Imager  Drift Deposits (B3)  Oxidized Rhizospheres along Living Roots (C3)  Geomorphic Position (D2)  Algal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Iron Deposits (B5)  Recent Iron Reduction in Plowed Soils (C6)  Surface Soil Cracks (B6)  Sunface Soil Cracks (B6)  Sunface Soil Cracks (B8)  Frost-Heave Hummocks (D7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Water table Present? Yes No X Depth (inches):  Wetland Hydrology Present? Yes No X Depth (inches):  Naturation Present? Yes No X Depth (inches):  Wetland Hydrology Present? Yes No X Depth (inches):  Wetland Hydrology Present? Yes No X Depth (inches):  Wetland Hydrology Present? Yes No X Depth (inches):				
Primary Indicators (any one indicator is sufficient)  Surface Water (A1)  High Water Table (A2)  MLRA 1, 2, 4A and 4B)  Saturation (A3)  Salt Crust (B11)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Surface Soil Cracks (B6)  Surface Soil Cracks (B6)  Surface Soil Cracks (B6)  Surface Soil Cracks (B6)  Surface Water Present?  Yes  No  X  Depth (inches):  Saturation Present?  Yes  No  X  Depth (inches):  Surface Scorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Surface Water (A1)			Soor	andary Indicators (2 or more require
High Water Table (A2)  Saturation (A3)  Salt Crust (B11)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B6)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  MLRA 1, 2, 4A and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Aquatic Invertebrates (B13)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imager  (C4)  Shallow Aquitard (D3)  Fac-Neutral Test (D5)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Surface Water Present?  Yes  No  X  Depth (inches):  Saturation (C4)  Saturation Present?  Yes  No  X  Depth (inches):  Saturation Frevious inspections), if available:	· · · · · · · · · · · · · · · · · · ·	r Stained Leaves (BO) (av		
Saturation (A3)  Salt Crust (B11)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Self Crust (B8)  Saturation (C4)  Presence of Reduced Iron (C4)  Shallow Aquitard (D3)  Recent Iron Reduction in Plowed Soils (C6)  Stunted or Stressed Plants (D1) (LRR A)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present?  Yes  No  X  Depth (inches):  Saturation (C1)  Saturation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Frost-Heave Hummocks (D7)  Wetland Hydrology Present?  Yes  No  X  Depth (inches):  Saturation Present?  Yes  No  X  Depth (inches):  Secribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		, , ,		
Water Marks (B1)				
Sediment Deposits (B2)	<u> </u>	` '		
Drift Deposits (B3)  Algal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Iron Deposits (B5)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present?  Ves  No  X  Depth (inches):  Saturation Present?  Yes  No  X  Depth (inches):  Saturation Present?  Yes  No  X  Depth (inches):  Secribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	<del>_</del>			
Algal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Iron Deposits (B5)  Recent Iron Reduction in Plowed Soils (C6)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present? Yes No X Depth (inches):  Water table Present? Yes No x Depth (inches):  Saturation Present? Yes No x Depth (inches)	<del>_</del> _ ·	= : :		
Iron Deposits (B5) Recent Iron Reduction in Plowed Soils (C6) FAC-Neutral Test (D5)  Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)  Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7)  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present? Yes No X Depth (inches):  Water table Present? Yes No x Depth (inches):  Saturation Present? Yes No x Depth (inches): Wetland Hydrology Present? Yes N includes capillary fringe)  Scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	<del>_</del>	· · · · · · · · · · · · · · · · · · ·	· · · · ·	
Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Field Observations: Surface Water Present?  Ves No X Depth (inches): Saturation Present? Yes No x Depth (inches): Saturation Present? Ye	<del>_</del>			, , ,
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present?	<del>_</del>			· ·
Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present? Yes No X Depth (inches):  Water table Present? Yes No x Depth (inches):  Saturation Present? Yes No x Depth (inches):  Wetland Hydrology Present? Yes No x Depth (inches):  Scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	<del></del>	` '	· · · · · · · · · · · · · · · · · · ·	
Field Observations:  Surface Water Present? Yes NoX Depth (inches):  Water table Present? Yes Nox Depth (inches):  Saturation Present? Yes Nox Depth (inches):  Simplifying the present includes capillary fringe)  Secribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	<del>_</del>	(Explain in Remarks)	FIO	st-Heave Hummocks (D7)
Surface Water Present? Yes No X Depth (inches):  Water table Present? Yes Depth (inches):  Saturation Present? Yes Depth (inches):  Society Present? Yes Depth (inches):  Society Present? Yes Depth (inches):  Wetland Hydrology Present? Yes No includes capillary fringe)  Society Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Water table Present?  Yes No x Depth (inches):  Saturation Present? Yes No x Depth (inches):  (includes capillary fringe)  Secribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		nth (in also a).		
Saturation Present? Yes No x Depth (inches): Wetland Hydrology Present? Yes N (includes capillary fringe) scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			-	
(includes capillary fringe) escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Water table Present? Yes No x Der		- Wetland Hydrology	Present? Yes No
			<del>-</del>	<del></del> -
emarks:	Saturation Present? Yes No x De (includes capillary fringe)			
andro.	Saturation Present? Yes No x De (includes capillary fringe)		tions), if available:	
	Saturation Present? Yes No x DeptionCludes capillary fringe) escribe Recorded Data (stream gauge, monitoring well, aeria		tions), if available:	

45.91 Yes_antly disturbed? y problematic?	Are "Normal Circumstances" Present? Yes X No (If needed, explain any answers in Remarks.)  Pations, transects, important features, etc.
Yes_antly disturbed? y problematic? ing point locate	NWI Classification: none  X No (If needed, explain any answers in Remarks.)  Notations, transects, important features, etc.
Yes antly disturbed? by problematic? Ing point locate Sampled Are	NWI Classification: none  X No (If no, explain in Remarks)  Are "Normal Circumstances" Present? Yes X No (If needed, explain any answers in Remarks.)  Attached to the control of the cont
Yes_antly disturbed? by problematic? by point locate and point locate by Sampled Are	NWI Classification: none  X No (If no, explain in Remarks) Are "Normal Circumstances" Present? Yes X No (If needed, explain any answers in Remarks.)  Pations, transects, important features, etc.
antly disturbed? by problematic? by point locations by Sampled Are	X No (If no, explain in Remarks)  Are "Normal Circumstances" Present? Yes X No (If needed, explain any answers in Remarks.)  Pations, transects, important features, etc.
antly disturbed? by problematic? by point locations by Sampled Are	Are "Normal Circumstances" Present? Yes X No (If needed, explain any answers in Remarks.)  Pations, transects, important features, etc.
y problematic?  ng point locate  se Sampled Are	(If needed, explain any answers in Remarks.)
ng point loc	eations, transects, important features, etc.
e Sampled Are	ea Yes y No
•	YAS Y NO
•	YAS Y NO
مملممالمما مم	Dominance Test worksheet:
s? Status?	Number of Dominant Species
	(A)
	Total Number of Dominant Species Across All Strata:  2 (B)
	(B)
	Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
	Prevalence Index Worksheet:
	Total % Cover of: Multiply by:
	OBL species x1 = <b>0</b>
	FACW species x2 = 0
	FAC species x3 = <b>0</b>
	FACU species x4 = <b>0</b>
	UPL species x5 = <b>0</b>
	Column Totals: <b>0</b> (A) <b>0</b> (B)
	Prevalence Index = B/A =
□FAC□	Hydrophytic Vegetation Indicators:
⊪ACU□	1 - Rapid Test for Hydrophytic Vegetation
	X 2 - Dominance Test is >50%
	3 - Prevalence Index is ≤3.0 <sup>1</sup>
	4 - Morphological Adaptation1 (Provide supporting
	data in Remarks or on a separate sheet)
	5 - Wetland Non-Vascular Plants <sup>1</sup>
	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	1
	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	Hydrophytic
	Vegetation
st 0	1 <u> </u>
	<u> </u>
	□FACW□□□FAC□□FAC□□

Profile Desc Depth inches) 0-3 3-7		to the den						Sampling Point:
inches) 0-3		to the dep	th needed to doc	ument th	e indicato	or or con	firm the abs	ence of indicators.)
0-3	Matrix		Re	dox Featı	ıres		<u>-</u>	
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	e Remarks
3-7	7.5YR3/2	100					SiL	
<del></del> -	10YR3/2	90	10YR3/4	10	С	M	L	
7-12	2.5Y4/3	95	10YR3/4	5	С	M	S	
<del></del> -								_
							·	
<del></del> -							. —	
Гуре: С=Сс	oncentration, D=Dep	letion, RM=	Reduced Matrix,	CS=Cove	red or Coa	ated San	d Grains. <sup>2</sup> Lo	ocation: PL=Pore Lining, M=Matrix.
lydric Soil I	ndicators: (Applic	able to all	LRRs, unless oth	erwise r	oted.)		Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol				Redox (S	-			2 cm Muck (A10)
Histic E	pipedon (A2)			d Matrix (				Red Parent Material (TF2)
Black H	istic (A3)		Loamy	Mucky Mi	neral (F1)	(except	MLRA 1)	Other (Explain in Remarks)
Hydroge	en Sulfide (A4)		Loamy	Gleyed M	atrix (F2)			
Deplete	d Below Dark Surfac	ce (A11)	Deplete	d Matrix	(F3)			
Thick D	ark Surface (A12)		x Redox I	Dark Surf	ace (F6)		<sup>3</sup> Indio	cators of hydrophytic vegetation and
Sandy N	Muck Mineral (S1)		Deplete	d Dark S	urface (F7	)		etland hydrology must be present,
Sandy g	gleyed Matrix (S4)		Redox I	Depression	ons (F8)		ι	ınless disturbed or problematic.
estrictive L	.ayer (if present):							
уре:								
epth (inches	s):					Hy	dric Soil Pre	esent? Yes <u>x</u> No_
DROLOGY								
DROLOGY	drology Indicators:							
Vetland Hyd	Irology Indicators:		cient)					Secondary Indicators (2 or more requir
Vetland Hyd Primary Indic	drology Indicators: ators (any one indicators)			Stained L	eaves (B9)	) (except		Secondary Indicators (2 or more requir Water-Stained Leaves (B9) ( <b>MLRA</b> 1
Vetland Hyd rimary Indic Surface	ators (any one indic		Water-S		eaves (B9)	) (except		
Vetland Hyd rimary Indic Surface	ators (any one indicators) Water (A1) ater Table (A2)		Water-S		` '	) (except		Water-Stained Leaves (B9) (MLRA 1
Vetland Hyd rimary Indic Surface High Wa Saturati	ators (any one indicators) Water (A1) ater Table (A2)		Water-S MLR Salt Cru	<b>A 1, 2, 4</b> / ust (B11)	` '	•		Water-Stained Leaves (B9) (MLRA 1 4A and 4B)
rimary Indic Surface High Wa Saturati Water M	ators (any one indice Water (A1) ater Table (A2) on (A3)		Water-S MLR Salt Cru Aquatic	<b>A 1, 2, 4</b> / ist (B11) Invertebi	and 4B)	)		Water-Stained Leaves (B9) (MLRA 1, 4A and 4B) Drainage Patterns (B10)
Vetland Hyd rimary Indic Surface High Wa Saturati Water M	ators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1)		Water-S MLR Salt Cru Aquatic Hydroge	<b>A 1, 2, 4<i>I</i></b> ust (B11) Invertebr en Sulfide	and 4B) rates (B13) Property Odor (C1)	)	Roots (C3)	Water-Stained Leaves (B9) (MLRA 1, 4A and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Vetland Hyd Primary Indic Surface High Wa Saturati Water M Sedime	ators (any one indicated water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)		Water-S MLR. Salt Cru Aquatic Hydrogo Oxidize	<b>A 1, 2, 4</b> <i>A</i> Ist (B11) Invertebren Sulfide d Rhizosp	and 4B) rates (B13) Property Odor (C1)	) ) ng Living		Water-Stained Leaves (B9) (MLRA 1 4A and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (
Vetland Hyd Primary Indic Surface High Wa Saturati Water M Sedime Drift De Algal Ma	ators (any one indicators (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		Water-S MLR Salt Cru Aquatic Hydroge Oxidize Presence Recent	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizospee of Red Iron Red	ates (B13) Odor (C1) Oheres alo uced Iron uction in P	) ) ng Living (C4) lowed Sc	Roots (C3)	Water-Stained Leaves (B9) (MLRA 1 4A and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery ( X Geomorphic Position (D2)  Shallow Aquitard (D3)  X FAC-Neutral Test (D5)
Vetland Hydrimary Indic Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Surface	ators (any one indicators (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	ator is suffi	Water-S MLR. Salt Cru Aquatic Hydrogo Oxidize Presend Recent Stunted	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospe de of Red Iron Red or Stress	ates (B13) Odor (C1) Oheres alo uced Iron uction in P	) ) ng Living (C4) lowed Sc (D1) ( <b>LF</b>	Roots (C3)	Water-Stained Leaves (B9) (MLRA 1 4A and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery ( X Geomorphic Position (D2)  Shallow Aquitard (D3)  X FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Vetland Hyderimary Indic Surface High Water Mater Mate	ators (any one indicators (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial	ator is suffi	Water-S MLR. Salt Cru Aquatic Hydrogo Oxidize Presend Recent Stunted Other (E	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospe de of Red Iron Red or Stress	ates (B13) Odor (C1) Oheres alo uced Iron uction in P	) ) ng Living (C4) lowed Sc (D1) ( <b>LF</b>	Roots (C3)	Water-Stained Leaves (B9) (MLRA 1 4A and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery ( X Geomorphic Position (D2)  Shallow Aquitard (D3)  X FAC-Neutral Test (D5)
Vetland Hyde Primary Indic Surface High Wa Saturati Water Magnetic Drift De Algal Magnetic Iron Dep Surface Inundati	ators (any one indicators (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concav	ator is suffi	Water-S MLR. Salt Cru Aquatic Hydrogo Oxidize Presend Recent Stunted Other (E	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospe de of Red Iron Red or Stress	ates (B13) Odor (C1) Oheres alo uced Iron uction in P	) ) ng Living (C4) lowed Sc (D1) ( <b>LF</b>	Roots (C3)	Water-Stained Leaves (B9) (MLRA 1 4A and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery ( X Geomorphic Position (D2)  Shallow Aquitard (D3)  X FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Vetland Hyderimary Indice Surface High Water Management Sediment Algal Management Surface Inundati Sparsel	ators (any one indicators (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concav vations:	lmagery (Eve Surface	Water-S MLR Salt Cru Aquatic Hydroge Oxidize Presend Recent Stunted Other (B	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizosp de of Red Iron Red or Stress Explain in	and 4B) rates (B13) rates (C1) rates (B13)	) ) ng Living (C4) lowed Sc (D1) ( <b>LF</b>	Roots (C3)	Water-Stained Leaves (B9) (MLRA 1 4A and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery ( X Geomorphic Position (D2)  Shallow Aquitard (D3)  X FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Vetland Hyderimary Indice Surface High Water Management Sediment Drift Department Surface Inundati Sparsely Surface Water Water Management Surface Water Management Surface Water Management Surface Water Surface Water Management Surface Water Management Surface Water Management Surface Water Surf	ators (any one indicators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concavorations: er Present? Yes	Imagery (E	Water-S  MLR  Salt Cru  Aquatic  Hydroge  Oxidize  Present  Recent  Stunted  37)  (B8)	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizospe of Red Iron Red or Stress Explain in	and 4B) rates (B13 rates (B13 rates (C1 pheres alo uced Iron uction in P sed Plants Remarks)	) ) ng Living (C4) lowed Sc (D1) ( <b>LF</b>	Roots (C3)	Water-Stained Leaves (B9) (MLRA 1 4A and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery ( X Geomorphic Position (D2)  Shallow Aquitard (D3)  X FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Vetland Hyderimary Indice Surface High Water Management Sediment Algal Management Surface Inundati Sparsel	ators (any one indicators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concavorations: er Present? Yes Present?	Imagery (Eve Surface	Water-S   MLR     Salt Cru     Aquatic     Hydroge     Oxidize     Present     Recent     Stunted     String     (B8)     No	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizosp de of Red Iron Red or Stress Explain in	and 4B) rates (B13 rates (B13 rates (C1 pheres alo uced Iron uction in P sed Plants Remarks)	) ) ng Living (C4) lowed Sc (D1) ( <b>LF</b>	Roots (C3) bils (C6) RR A)	Water-Stained Leaves (B9) (MLRA 1 4A and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery ( X Geomorphic Position (D2)  Shallow Aquitard (D3)  X FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Vetland Hyderimary Indice Surface High Water Management Sediment Algal Management Surface Inundatities Sparsely Field Observater table Footbatter Table Footbat	ators (any one indicators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concavorations: er Present? Present? Yes esent? Yes iillary fringe)	Imagery (Eve Surface	Water-S   MLR     Salt Cru     Aquatic     Hydroge     Oxidize     Present     Recent     Stunted     Stunted     Other (B   (B8)     Depth     Depth     Depth     Depth     Depth     Oxidize     Present     Oxidize     Oxidize     Hydroge     Oxidize     Oxidize     Hydroge     Oxidize     Oxidize	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizosp de of Red Iron Red or Stress Explain in in (inches) in (inches)	and 4B) rates (B13 rat	) ng Living (C4) lowed Sc (D1) ( <b>LF</b>	Roots (C3)  pils (C6)  RR A)  Wetland H	Water-Stained Leaves (B9) (MLRA 1 4A and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( X Geomorphic Position (D2) Shallow Aquitard (D3) X FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Vetland Hyderimary Indice Surface High Water Management Sediment Algal Management Surface Inundatities Sparsely Field Observater table Footbatter Table Footbat	ators (any one indicators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concavorations: er Present? Present? Yes esent? Yes	Imagery (Eve Surface	Water-S   MLR     Salt Cru     Aquatic     Hydroge     Oxidize     Present     Recent     Stunted     Stunted     Other (B   (B8)     Depth     Depth     Depth     Depth     Depth     Oxidize     Present     Oxidize     Oxidize     Hydroge     Oxidize     Oxidize     Hydroge     Oxidize     Oxidize	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizosp de of Red Iron Red or Stress Explain in in (inches) in (inches)	and 4B) rates (B13 rat	) ng Living (C4) lowed Sc (D1) ( <b>LF</b>	Roots (C3)  pils (C6)  RR A)  Wetland H	Water-Stained Leaves (B9) (MLRA 1 4A and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( X Geomorphic Position (D2) Shallow Aquitard (D3) X FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Vetland Hyderimary Indice Surface High Water Management Sediment Algal Management Surface Inundatities Sparsely Field Observater table Formulation Princludes capescribe Record	ators (any one indicators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concavorations: er Present? Present? Yes esent? Yes iillary fringe)	Imagery (Eve Surface	Water-S  MLR  Salt Cru  Aquatic  Hydroge  Oxidize  Present  Recent  Stunted  37)  Other (B  (B8)  No X Depth  No x Depth  No x Depth  toring well, aerial p	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizosp de of Red Iron Red or Stress Explain in in (inches) in (inches)	and 4B) rates (B13 rat	) ng Living (C4) lowed Sc (D1) ( <b>LF</b>	Roots (C3)  pils (C6)  RR A)  Wetland H	Water-Stained Leaves (B9) (MLRA 1 4A and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery ( X Geomorphic Position (D2) Shallow Aquitard (D3) X FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site:	I-5 Woodland			City/County	Woodland	/Cowlitz		Sar	npling Da	te: Oct.8,	, 2020
Applicant/Owner:	Logan Partners LLC						State: WA	Sar	npling Po	int:	34
Investigator(s):	KB			Section	n, Township	, Range:	S13, T5N, F	R1W			
Landform (hillslope	e, terrace, etc.): terr	ace		Local re	elief (concav	e, convex	, none): none	e	S	lope (%):	0-3%
Subregion (LRR):	Northwest Forests and C	Coast (LRR A	Lat:		45.91	9735996	Long:	-122.749	230161	Datum:	
Soil Map Unit Nam	e: Newberg fine sar	ndy loam					NWI Classific	ation: none			
Are climatic / hydro	ologic conditions on the sit	e typical for t	his time of	year?	Yes	X	No	(If no,	explain in	Remarks	.)
Are Vegetation	, Soil, or	Hydrology		significantly	disturbed?	Are "N	lormal Circun	nstances" Pre	sent? Y	es X	No
Are Vegetation	, Soil, or	Hydrology		naturally pr	oblematic?	(If nee	ded, explain	any answers	in Remarl	ks.)	
SUMMARY OF	FINDINGS - Attach	site map s	showing	sampling	point loca	ations, t	ransects,	important	features	s, etc.	
Hydrophytic Veget	ation Present?	s <u>x</u> No	,								
Hydric Soil Presen		S No			ampled Are		Yes	No	х		
Wetland Hydrology		SNo		within	a Wetland?						
Trolland Tryarology	711000111.										
VEGETATION			Absolute	Dominant	Indicator	Domina	nce Test wo	rksheet:			
Tree Stratum (Us	se scientific names.)		% Cover	Species?	Status?		of Dominant				
Quercus garry	ana		25	Υ	IFACU□	That Are	OBL, FACW	/, or FAC:	3	}	(A)
2. Corylus cornut	'a		5		FACU□	Total Nu	ımber of Dom	ninant			-
3.						Species	Across All S	trata:	5	i	_(B)
4						Percent	of Dominant	Species			
		Total Cover:	30	<u>.</u>		That Are	OBL, FACW	/, or FAC: _	60	%	_(A/B)
Shrub Stratum						Prevale	nce Index W	orksheet:			
1. Rubus armenia	acus		10	Y	FAC□	Tot	al % Cover o	f:	Multip	ly by:	=
2. Symphoricarpo			5	Y	FACU□	OBL spe		x1 =			_
3. Rosa pisocarp	a		5	Y	<u> </u>			x2 =		<u> </u>	
4					· ——	FAC spe		x3 =		)	
5								x4 =			-
		Total Cover:	20	•		UPL spe		x5 =			- (D)
Herb Stratum	U		00	V			Totals:	<b>0</b> (A) _		)	_(B)
1. Phalaris arund			60	Y	#ACW □	Preval	ence Index =	: B/A =			-
Holcus lanatus     Agrostis stolor			<u>10</u> 5	-	#AC□	Lludrani	hutia Vagata	tion Indicato	ro.		
4. <i>Agrostis stolor</i>	illera					пушторі	, ,	est for Hydrop		otation	
5.					· ———			nce Test is >5		etation	
6.								ice rest is >5 ice Index is ≤	4		
7.								ogical Adapta		vida sunn	orting
8.								arks or on a			orang
9.				. ———	. ———			Non-Vascula	•	silect)	
4.0				: ( <del></del>	· (			Hydrophytic		n <sup>1</sup> (Explair	n)
11.							Troblemano	riyaropriyao	vogotatio	ii (Explaii	'/
		Total Cover:	75								
Woody Vine S	<u>tratum</u>			•				soil and wetlar sturbed or pro		gy must	
2.						Hydrop	hytic				
		Total Cover:		- <del></del>		Vegetat					
% Ba	re Ground in Herb Stratun	n <u>20</u> %	Cover of B	iotic Crust	0	Present		Yes_	х	No	
Remarks: Appears	s to be an old access road	1.				•					

IL	!	4 - 41	41					411				
	scription: (Describe	to the dep	th needed			dicator	or confi	rm the abs	sence of	indicators.)		
epth	Matrix		0.1./		Features	1	. 2	<b>-</b> .				
nches)	Color (moist)		Color (mo	oist)	% T	ype <sup>1</sup>	Loc <sup>2</sup>	Textur	<u>e</u>		Remarks	
0-16	10YR3/2	100						SiL				
				<del></del>								
									·			
•	Concentration, D=De						d Sand (					<b>ζ.</b>
	I Indicators: (Appli	cable to all				d.)		Indicator		_	dric Soils <sup>3</sup> :	
_	sol (A1)			Sandy Red						m Muck (A1		
_	Epipedon (A2)			Stripped Ma						ed Parent Ma		
-	Histic (A3)			_oamy Muc	-	. , .	xcept M	LRA 1)	Ot	her (Explain	in Remarks)	
	gen Sulfide (A4)			_oamy Gley	•	(F2)						
_	ted Below Dark Surfa	ace (A11)		Depleted M	, ,			2	_			
_	Dark Surface (A12)			Redox Dark							vegetation an	d
_	/ Muck Mineral (S1)			Depleted Da		` ,			-		t be present,	
	gleyed Matrix (S4)		F	Redox Dep	ressions (	(F8)			unless di	sturbed or pr	roblematic.	
strictive	Layer (if present):											
pe: pth (inch	nes):		<u> </u>				Hyd	ric Soil Pr	esent?	,	Yes	No _
rpe: epth (inch	nes):						Hyd	ric Soil Pr	esent?	,	Yes	No _
pe: pth (inch arks:	Y						Hyd	ric Soil Pr	esent?	,	Yes	No_
pe: pth (inch arks:  ROLOG	Y ydrology Indicators		icient)				Hyd	ric Soil Pr				
pe: pth (inch arks:  ROLOG etland H mary Ind	Y ydrology Indicators licators (any one indicators			Nater-Stair	ned Leave	es (B9) (e		ric Soil Pr	Sec	ondary Indic	ators (2 or mo	ore require
pe:pth (inch arks: ROLOG etland H; mary Ind Surfac	Y ydrology Indicators licators (any one indice ce Water (A1)			Water-Stair		, , ,		ric Soil Pr	Sec	ondary Indicater-Stained	ators (2 or mo Leaves (B9) (	ore require
pth (inch arks: ROLOG etland Hy mary Ind Surfac High \	Y ydrology Indicators licators (any one indic ce Water (A1) Water Table (A2)		\	MLRA 1,	, 2, 4A an	, , ,		ric Soil Pr	Sec W:	ondary Indic ater-Stained 4A and 4B)	eators (2 or mo Leaves (B9) (	ore require
pth (inch arks: ROLOG etland Hy mary Ind Surfac High V	ydrology Indicators licators (any one indicators (A1) Water Table (A2) ation (A3)		\ \$	<b>MLRA 1,</b> Salt Crust (	<b>, 2, 4A an</b> [B11)	d 4B)		ric Soil Pr	Sec Wa	ondary Indic ater-Stained <b>4A and 4B</b> ) ainage Patte	eators (2 or mo Leaves (B9) ( erns (B10)	ore require
pth (inch arks: ROLOG etland Hy mary Ind Surfac High \ Satura Water	ydrology Indicators licators (any one indicators (A1) Water Table (A2) ation (A3)		\ \	<b>MLRA 1,</b> Salt Crust ( Aquatic Inve	, <b>2, 4A an</b> B11) ertebrates	<b>d 4B</b> )		ric Soil Pr		ondary Indic ater-Stained <b>4A and 4B</b> ) ainage Patte y-Season W	eators (2 or mo Leaves (B9) ( erns (B10) fater Table (C2	ore require (MLRA 1,
pet:pth (incher incher i	ydrology Indicators licators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2)		\ \$ #	<b>MLRA 1,</b> Salt Crust (l Aquatic Inve Hydrogen S	, <b>2, 4A an</b> B11) ertebrates Sulfide Od	d 4B) s (B13) or (C1)	except			ondary Indicater-Stained  4A and 4B) ainage Patte y-Season W turation Visil	eators (2 or mo Leaves (B9) ( erns (B10) ater Table (C2 ble on Aerial I	ore require (MLRA 1,
pet:pth (incher incher in	ydrology Indicators licators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2)		\\ \times \\	MLRA 1, Salt Crust (I Aquatic Invo Hydrogen S Oxidized Rh	, <b>2, 4A an</b> B11) ertebrates Sulfide Od hizospher	d 4B) s (B13) or (C1) es along	except Living R			condary Indicater-Stained  4A and 4B) ainage Patte y-Season W aturation Visil	eators (2 or mo Leaves (B9) ( erns (B10) eater Table (C2 ble on Aerial I osition (D2)	ore require (MLRA 1,
ROLOG etland H mary Ind Surfac High V Satura Water Sedim Drift E Algal	ydrology Indicators licators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)		\\ \text{S} \\ \text{F}	MLRA 1, Salt Crust (I Aquatic Involution Involution Salting Involution Salting Involution Involutio	, <b>2, 4A an</b> (B11) ertebrates Sulfide Od hizospher of Reduce	d 4B) s (B13) for (C1) es along d Iron (C	except Living R	coots (C3)	Sec Wa Dr. Dr. Sa Ge Sh	condary Indicater-Stained  4A and 4B) ainage Patte y-Season Waturation Visile	eators (2 or mo Leaves (B9) ( erns (B10) ater Table (C2 ble on Aerial I osition (D2) ard (D3)	ore require (MLRA 1,
pe:pth (inch arks:  ROLOG etland H mary Ind Surfac High \ Satura Water Sedim Drift C Algal I Iron D	ydrology Indicators licators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)		\\ \text{S} \\ \text{F} \\ \text{F} \\ \text{F}	MLRA 1, Salt Crust (I Aquatic Involution Hydrogen S Dxidized Rh Presence o Recent Iron	, <b>2</b> , <b>4A</b> and B11) ertebrates Sulfide Od hizospher of Reduced Reduction	d 4B) s (B13) or (C1) es along d Iron (C	except Living R 4) wed Soils	coots (C3)	Sec Wa Dr. Dr. Sa Ge Sh	condary Indicater-Stained  4A and 4B) ainage Patte y-Season Waturation Visile comorphic Potallow Aquita	eators (2 or mo Leaves (B9) ( erns (B10) ater Table (C2 ble on Aerial I osition (D2) ard (D3) est (D5)	ore require (MLRA 1, 2) magery (0
pe:pth (inch arks:  ROLOG etland H; mary Ind Surfac High \ Satura Water Sedim Drift C Algal   Iron D Surfac	ydrology Indicators licators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Deposits (B5)	cator is suff	\\ \\	MLRA 1, Salt Crust (I Aquatic Involution Hydrogen S Dxidized Rh Presence of Recent Iron Stunted or S	, <b>2</b> , <b>4A</b> and B11) ertebrates Sulfide Od hizospher of Reduced Reduction Stressed	d 4B)  s (B13) for (C1) es along d Iron (C on in Ploy	except Living R 4) wed Soils	coots (C3)	Sec Wa Dra Sa Ge Sh FA Ra	condary Indicater-Stained  4A and 4B) ainage Patte y-Season W aturation Visil comorphic Potallow Aquita a.C-Neutral Totalised Ant Mo	eators (2 or mo Leaves (B9) ( erns (B10) ater Table (C2 ble on Aerial I osition (D2) ard (D3) est (D5) unds (D6) (LF	ore require (MLRA 1, 2) magery (0
ROLOG etland Hy mary Ind Surfac Water Sedim Drift E Algal I Iron D Surfac Inunda	ydrology Indicators licators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Deposits (B5) Deposits (B6) Deposits (B6) Deposits (B6)	cator is suff	— V	MLRA 1, Salt Crust (I Aquatic Involution Hydrogen S Dxidized Rh Presence o Recent Iron	, <b>2</b> , <b>4A</b> and B11) ertebrates Sulfide Od hizospher of Reduced Reduction Stressed	d 4B)  s (B13) for (C1) es along d Iron (C on in Ploy	except Living R 4) wed Soils	coots (C3)	Sec Wa Dra Sa Ge Sh FA Ra	condary Indicater-Stained  4A and 4B) ainage Patte y-Season W aturation Visil comorphic Potallow Aquita a.C-Neutral Totalised Ant Mo	eators (2 or mo Leaves (B9) ( erns (B10) ater Table (C2 ble on Aerial I osition (D2) ard (D3) est (D5)	ore require (MLRA 1, 2) magery (0
ROLOG  ROLOG  ROLOG  RIBORIO  RIBORIO  ROLOG  RIBORIO  ROLOG  RIBORIO  Surfac  Water  Sedim  Drift D  Algal I  Iron D  Surfac  Iron D  Surfac  Inunda  Spars	ydrology Indicators licators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Ce Soil Cracks (B6) ation Visible on Aerial ely Vegetated Conca	cator is suff	— V	MLRA 1, Salt Crust (I Aquatic Involution Hydrogen S Dxidized Rh Presence of Recent Iron Stunted or S	, <b>2</b> , <b>4A</b> and B11) ertebrates Sulfide Od hizospher of Reduced Reduction Stressed	d 4B)  s (B13) for (C1) es along d Iron (C on in Ploy	except Living R 4) wed Soils	coots (C3)	Sec Wa Dra Sa Ge Sh FA Ra	condary Indicater-Stained  4A and 4B) ainage Patte y-Season W aturation Visil comorphic Potallow Aquita a.C-Neutral Totalised Ant Mo	eators (2 or mo Leaves (B9) ( erns (B10) ater Table (C2 ble on Aerial I osition (D2) ard (D3) est (D5) unds (D6) (LF	ore require (MLRA 1, 2) magery (0
ROLOG etland Hy imary Ind Surfac High \ Satura Vater Sedim Drift D Algal I Iron D Surfac Inunda Spars	ydrology Indicators licators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B6) ation Visible on Aeria	cator is suff		MLRA 1, Salt Crust (I Aquatic Invo Hydrogen S Dxidized RI Presence o Recent Iron Stunted or S Dther (Expl	, <b>2</b> , <b>4A</b> an B11) ertebrates Sulfide Od hizospher of Reduced n Reduction Stressed	d 4B)  s (B13) for (C1) es along d Iron (C on in Ploy	except Living R 4) wed Soils	coots (C3)	Sec Wa Dra Sa Ge Sh FA Ra	condary Indicater-Stained  4A and 4B) ainage Patte y-Season W aturation Visil comorphic Potallow Aquita a.C-Neutral Totalised Ant Mo	eators (2 or mo Leaves (B9) ( erns (B10) ater Table (C2 ble on Aerial I osition (D2) ard (D3) est (D5) unds (D6) (LF	ore require (MLRA 1, 2) magery (0
ROLOG etland Hy imary Ind Surfac High \ Satura Vater Sedim Iron D Surfac Inunda Spars eld Obse	ydrology Indicators licators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Ce Soil Cracks (B6) ation Visible on Aerial ely Vegetated Conca	I Imagery (Eve Surface	— V	MLRA 1, Salt Crust (I Aquatic Invo Hydrogen S Dxidized RI Presence o Recent Iron Stunted or S Dther (Expl	, 2, 4A an B11) ertebrates Sulfide Od hizospher of Reduced Reduction Stressed Lain in Rer	d 4B)  s (B13) for (C1) es along d Iron (C on in Ploy	except Living R 4) wed Soils	coots (C3)	Sec Wa Dra Sa Ge Sh FA Ra	condary Indicater-Stained  4A and 4B) ainage Patte y-Season W aturation Visil comorphic Potallow Aquita a.C-Neutral Totalised Ant Mo	eators (2 or mo Leaves (B9) ( erns (B10) ater Table (C2 ble on Aerial I osition (D2) ard (D3) est (D5) unds (D6) (LF	ore require (MLRA 1, 2) magery (0
pe:pth (inch arks:  ROLOG etland H mary Ind Surfac High \ Satura Water Sedim Iron D Surfac Inunda Spars eld Obse rface Wa ater table turation I	ydrology Indicators licators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B6) ation Visible on Aeria	I Imagery (Eve Surface		MLRA 1, Salt Crust (I Aquatic Invo Hydrogen S Dxidized RI Presence o Recent Iron Stunted or S Dther (Expl	ertebrates Sulfide Od hizospher of Reduced Reduction Stressed Jain in Rer	d 4B)  s (B13) for (C1) es along d Iron (C on in Ploy	Except  Living R 4) wed Soils 01) (LRR	200ts (C3) s (C6) A)	Sec Wa Dr. Dr. Sa Ge Sh FA Ra Fro	condary Indicater-Stained  4A and 4B) ainage Patte y-Season W aturation Visil comorphic Potallow Aquita a.C-Neutral Totalised Ant Mo	eators (2 or mo Leaves (B9) ( erns (B10) ater Table (C2 ble on Aerial I osition (D2) ard (D3) est (D5) unds (D6) (LF	ore require (MLRA 1, 2) magery (0
ROLOG etland Hy imary Ind Surfac High \ Satura Vater Sedim Iron D Surfac Inunda Spars eld Obse ater table atturation I cludes ca	ydrology Indicators licators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B6) ation Visible on Aeria ely Vegetated Conca	I Imagery (Eve Surface	No   X   N	MLRA 1, Salt Crust (I Aquatic Invo Hydrogen S Dxidized RI Presence of Recent Iron Stunted or S Dther (Expl  Depth (in Depth (in) Depth (in)	, 2, 4A an B11) ertebrates Sulfide Od hizospher of Reduced Reduction Stressed I ain in Reruches):	d 4B)  or (C1) es along d Iron (C on in Plox Plants (E marks)	Except  Living R 4) wed Soils 01) (LRR	coots (C3) s (C6) A)	Sec Wa Dr. Dr. Sa Ge Sh FA Ra Fro	condary Indicater-Stained  4A and 4B) ainage Patte y-Season Waturation Visite Pomorphic Potallow Aquita aC-Neutral Taised Ant Motost-Heave H	eators (2 or mo Leaves (B9) ( erns (B10) ater Table (C2 ble on Aerial I osition (D2) ard (D3) est (D5) unds (D6) (LF ummocks (D7	ore require (MLRA 1, 2) magery (0
PROLOGIETION OF THE PROLOG	ydrology Indicators licators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B6) ation Visible on Aeria	I Imagery (Eve Surface	No   X   N	MLRA 1, Salt Crust (I Aquatic Invo Hydrogen S Dxidized RI Presence of Recent Iron Stunted or S Dther (Expl  Depth (in Depth (in) Depth (in)	, 2, 4A an B11) ertebrates Sulfide Od hizospher of Reduced Reduction Stressed I ain in Reruches):	d 4B)  or (C1) es along d Iron (C on in Plox Plants (E marks)	Except  Living R 4) wed Soils 01) (LRR	coots (C3) s (C6) A)	Sec Wa Dr. Dr. Sa Ge Sh FA Ra Fro	condary Indicater-Stained  4A and 4B) ainage Patte y-Season Waturation Visite Pomorphic Potallow Aquita aC-Neutral Taised Ant Motost-Heave H	eators (2 or mo Leaves (B9) ( erns (B10) ater Table (C2 ble on Aerial I osition (D2) ard (D3) est (D5) unds (D6) (LF ummocks (D7	ore require (MLRA 1, 2) magery (0
Per Epth (inches arks:  PROLOGIETIAN HIGH VALUE Sedim Drift Date of Surface Water table atteration I cludes carbe Recomber 19 certain Recomber 19	ydrology Indicators licators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B6) ation Visible on Aeria ely Vegetated Conca	I Imagery (Eve Surfaces s	No   X   N	MLRA 1, Salt Crust (I Aquatic Invo Hydrogen S Dxidized RI Presence of Recent Iron Stunted or S Dther (Expl  Depth (in Depth (in) Depth (in)	, 2, 4A an B11) ertebrates Sulfide Od hizospher of Reduced Reduction Stressed I ain in Reruches):	d 4B)  or (C1) es along d Iron (C on in Plox Plants (E marks)	Except  Living R 4) wed Soils 01) (LRR	coots (C3) s (C6) A)	Sec Wa Dr. Dr. Sa Ge Sh FA Ra Fro	condary Indicater-Stained  4A and 4B) ainage Patte y-Season Waturation Visite Pomorphic Potallow Aquita aC-Neutral Taised Ant Motost-Heave H	eators (2 or mo Leaves (B9) ( erns (B10) ater Table (C2 ble on Aerial I osition (D2) ard (D3) est (D5) unds (D6) (LF ummocks (D7	ore require (MLRA 1, 2) magery (0

Project/Site:	I-5 Woodland		City/County:	Woodland	'Cowlitz			Sampling Date: Oct.8, 2020			
Applicant/Owner:	Logan Partners LLC						State: W	A	Sampli	ng Point:	35
Investigator(s):	KB			Section	n, Township	, Range:	S13, T5N,	, R1W			
Landform (hillslope	e, terrace, etc.): terra	ice		_	lief (concave						%): <u>0-3%</u>
Subregion (LRR):	Northwest Forests and Co	oast (LRR A)	Lat:		45.920	0130768	Long:	-1	22.747695	118 Date	um:
Soil Map Unit Nam							NWI Classi		-		
	ologic conditions on the site				_				_	olain in Rema	
Are Vegetation	, Soil, or						Normal Circu	umstand	es" Presen	it? Yes	XNo
Are Vegetation	, Soil, or	Hydrology		naturally pro	oblematic?	(If nee	eded, explai	in any ai	nswers in R	Remarks.)	
SUMMARY OF	FINDINGS - Attach	site map s	howing	sampling	point loca	ations, 1	transects	s, impo	rtant fea	tures, etc.	•
Hydrophytic Vegeta	ation Present? Yes	x No									
Hydric Soil Present		x No			ampled Area a Wetland?	a	Yes	x	No		
Wetland Hydrology		x No		WILIIII	i wellanu :						
VEGETATION											
VEGETATION						B			-4		
			Absolute % Cover	Dominant Species?	Indicator Status?		ince Test w				
	se scientific names.)		76 Cover	Species:	Status !		of Domina OBL, FAC				
1										3	(A)
·							umber of Do Across All				
3.						Species	ACIUSS AII	Silaia.		3	(B)
4							of Dominar			4000/	(4 (5)
		Total Cover:	0			i nat Are	e OBL, FAC	,vv, or F	AC:	100%	(A/B)
Shrub Stratum						Prevale	nce Index	Worksh	oot:		
1. Cornus alba			15	Υ	ŒACW □		tal % Cover			Multiply by:	
2.		<del></del> -	10	<u> </u>		OBL spe			x1 =		
							species				
1						FAC spe			x3 =		
5.							pecies		_		
	•	Total Cover:	15			UPL spe	ecies		x5 =	0	<u> </u>
Herb Stratum						Column	Totals:	0	(A)	0	(B)
1. Phalaris arund	linacea		90	Υ	JFACW □	Preva	lence Index	c = B/A =	=		
2. Juncus effusus	5		20	Y							
<ol><li>Lotus cornicula</li></ol>	atus		15		FAC□	Hydrop	hytic Vege				
·										c Vegetation	
5						X			st is >50%		
6									dex is ≤3.0		
7		<u> </u>					-	-	•	1 (Provide su	upporting
										arate sheet)	
9.		<del></del>							/ascular Pla	anıs jetation¹ (Exp	oloin)
10 11.							Problema	uc nyur	opriyiic veg	jetation (⊏x	Diairi)
11		Total Cover:	125								
Woody Vine S		Total Cover.	123			1Indicate	are of hydric	e coil an	d wetland h	nydrology mu	iet.
1.	<u>iratum</u>						ent, unless				151
2.		<del></del> -				•			<u> </u>		
		Total Cover:				Hydrop Vegetat	•				
% Bai	re Ground in Herb Stratum	-		otic Crust	0	Present			Yes x	No_	
Remarks:				<u> </u>							

SOIL									Sampling Point:	35
Profile Des	cription: (Describe	to the de	pth needed to docu	ment t	the indicat	or or co	onfirm the	absence	e of indicators.)	
Depth	Matrix		Red	ox Fea	tures					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc	Te	exture	Remarks	
0-4	10YR3/2	100					SiL			
4-16	10YR3/2	95	7.5YR3/4	5	C	М	SiL			
			·							
		. ——								
<sup>1</sup> Type: C=C	Concentration D=Den	letion RM	=Reduced Matrix C	:S=Cov	vered or Co	ated Sa	and Grains	<sup>2</sup> l ocati	ion: PL=Pore Lining, M=Matrix.	
турс. О-О	oncentration, b-bep	iction, rtivi	-reduced Matrix, e	-00v	refea of oo	alca oa	ina Orains	. Locati	on. Tell ore clining, Mewattix.	
Hydric Soil	Indicators: (Applic	able to al	I LRRs, unless othe	erwise	noted.)		Indica	ators for	Problematic Hydric Soils <sup>3</sup> :	
Histoso			Sandy R						2 cm Muck (A10)	
	Epipedon (A2)		Stripped		` '				Red Parent Material (TF2)	
	Histic (A3)			-	Mineral (F1)		ot MLRA 1	)	Other (Explain in Remarks)	
	gen Sulfide (A4)	(0.4.4)		-	Matrix (F2)	)				
	ed Below Dark Surfa	ce (A11)	Depleted				:	31		
	Dark Surface (A12)  Muck Mineral (S1)				rface (F6)	7\			rs of hydrophytic vegetation and dhydrology must be present,	
	gleyed Matrix (S4)				Surface (F7 sions (F8)	")			ss disturbed or problematic.	
	Layer (if present):		Nedox D	chiess	sions (i o)			unies	ss disturbed of problematic.	
	Layer (ii present).									
Type: Depth (inche	es).						Hydric So	il Presen	nt? Yes x N	o
Remarks:							,		<u> </u>	
HYDROLOGY	(									
Wetland Hy	drology Indicators:									
Primary Indi	icators (any one indic	ator is suff						•	Secondary Indicators (2 or more re	quired)
	e Water (A1)				Leaves (B9	, ,	pt		Water-Stained Leaves (B9) (MLR	A 1, 2,
	Vater Table (A2)				A and 4B)	)			4A and 4B)	
	ition (A3)		Salt Crus		-				Drainage Patterns (B10)	
	Marks (B1)				brates (B13	,			Dry-Season Water Table (C2)	(00)
	ent Deposits (B2)				de Odor (C	•	D t - //		Saturation Visible on Aerial Image	ry (C9)
<u> </u>	eposits (B3)				spheres ald	-	ng Roots (	C3) <u>x</u>	. ' '	
	Mat or Crust (B4) eposits (B5)				educed Iron	` '	Soile (C6)		Shallow Aquitard (D3)	
	eposits (B3) e Soil Cracks (B6)				duction in F ssed Plants			<u> </u>	FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)	,
	ation Visible on Aerial	Imagery (			in Remarks		LKK A)		Frost-Heave Hummocks (D7)	,
<u> </u>	ely Vegetated Conca		, <del></del>	лріанті	iii Keillaiks	?)			. Trost-freave Fluillinocks (DT)	
Field Obser		ounacc	(60)							
	iter Present? Yes	3	No X Depth	(inches	s):					
Water table	Present? Yes		No x Depth	(inches	s):					
Saturation P		·	No x Depth	(inches	s):		Wetla	nd Hydro	ology Present? Yes <u>x</u> N	°
	pillary fringe) orded Data (stream g	auge mor	nitoring well aerial n	hotos i	nrevious in	spection	ns) if avail	ahle.		
							, avair			
Remarks:										

Project/Site: I-5 Woodland		City/County:	Woodland	/Cowlitz	Sampling Date: Oct.8, 2020
Applicant/Owner: Logan Partners LLC				State: WA	Sampling Point: 36
Investigator(s): KB		Section	ո, Township	, Range: S13, T5N, R1W	
Landform (hillslope, terrace, etc.): terrace		_ Local re	lief (concav	e, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR): Northwest Forests and Coast (LRR A	<u>v)</u> Lat:		45.92	0088463 Long: -122	2.747675892 Datum:
Soil Map Unit Name: Newberg fine sandy loam				NWI Classification: n	
Are climatic / hydrologic conditions on the site typical for		•	Yes_		lf no, explain in Remarks)
Are Vegetation, Soil, or Hydrology					" Present? Yes X No
Are Vegetation, Soil, or Hydrology		naturally pro	oblematic?	(If needed, explain any ansv	vers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	sampling	point loca	ations, transects, import	ant features, etc.
Hydrophytic Vegetation Present? Yes x No	0				
Hydric Soil Present? Yes No	о х		ampled Are a Wetland?	YAS	No x
Wetland Hydrology Present? YesN	ох	Within	ı wenana:		
VEGETATION					
Tree Stratum (Use scientific names.) 1.	Absolute % Cover	Dominant Species?	Indicator Status?	Number of Dominant Species That Are OBL, FACW, or FAC	;
2.				Total Number of Dominant	
3				Species Across All Strata:	(B)
4				Percent of Dominant Species	
Total Cover	:0			That Are OBL, FACW, or FAC	C:(A/B)
Shrub Stratum  1. Rubus armeniacus  2	15	Y	FAC□	Prevalence Index Workshee           Total % Cover of:           OBL species        x           FACW species        x	Multiply by: 1 = 0 2 = 0
4				· —	3 = 0
5				· —	4 = 0
Total Cover	:15			· —	5 = 0
Herb Stratum	00	V			A) <u> </u>
1. Phalaris arundinacea	90		#ACW □	Prevalence Index = B/A =	
Lotus corniculatus	30	<u> </u>	шАС	Hydrophytic Vegetation Indi	icators:
4				1 - Rapid Test for Hy  X 2 - Dominance Test 3 - Prevalence Index 4 - Morphological Ac data in Remarks or c 5 - Wetland Non-Vas	ydrophytic Vegetation is >50% c is ≤3.0 <sup>1</sup> daptation1 (Provide supporting on a separate sheet)
11.					
Total Cover	: 120				
Woody Vine Stratum  1.				<sup>1</sup> Indicators of hydric soil and was be present, unless disturbed of	
2				Hydrophytic	
Total Cover				Vegetation	,
% Bare Ground in Herb Stratum 0 %	Cover of B	otic Crust	0	Present? Y	es <u>x</u> No
Remarks:					

SOIL									Sam	oling Point: _		
Profile Desc	cription: (Desci	ribe to the de	oth needed	to docu	ment tl	he indicat	or or c	onfirm the abse	ence of indic	ators.)		
Depth	Matri	x		Redo	ox Feat	ures						
(inches)	Color (moist		Color (m		%	Type <sup>1</sup>	Loc	Texture		F	Remarks	
0-16	10YR3/3	100	00101 (11	10131)	70	Турс		SiL			Cinano	
0 10	101110/5	100						<u> </u>				
							-					
						_	-					
						_						
<sup>1</sup> Type: C=C	oncentration D=	Depletion RM	=Reduced	Matrix C	S=Cove	ered or Co	ated S	and Grains. <sup>2</sup> Lo	cation: PI =	Pore Lining I	M=Matrix	
	Indicators: (Ap	plicable to all	LRRs, un					Indicators		atic Hydric	Soils':	
Histoso				Sandy Re				-		uck (A10)		
Histic E	Epipedon (A2)			Stripped	Matrix (	(S6)		-	Red Pa	rent Materia	l (TF2)	
Black H	Histic (A3)			Loamy M	lucky M	lineral (F1)	) (exce	pt MLRA 1)	Other (	Explain in Re	emarks)	
Hydrog	en Sulfide (A4)			Loamy G	leyed M	/latrix (F2)	)					
Deplete	ed Below Dark S	urface (A11)	<u> </u>	Depleted	Matrix	(F3)						
Thick D	Dark Surface (A1	2)		Redox D	ark Sur	face (F6)		<sup>3</sup> Indic	ators of hydr	ophytic vege	tation and	
	Muck Mineral (S	•				Surface (F	7)		-	gy must be p		
	gleyed Matrix (S			Redox D		-	,		-	ed or probler		
	Layer (if presen					(, ,						
Type:		,										
Depth (inche	76).							Hydric Soil Pre	sent?	Yes		No x
emarks:											<u> </u>	
YDROLOGY Wetland Hy	drology Indicat	ore.										
-	cators (any one i		icient)						Seconda	ary Indicators	(2 or more	required)
	e Water (A1)	nuicator is sun	icierit)	Water St	ainad I	eaves (B9	)) (ovec	nnt		Stained Leav		
						.eaves (Bs		şpι .		and 4B)	(E3 (D3) (W	LIXA 1, 2,
	/ater Table (A2)						)	-		,	D40\	
	tion (A3)			Salt Crus	,		2)	-		ge Patterns (		
	Marks (B1)					rates (B13		-		ason Water <sup>-</sup>		(22)
	ent Deposits (B2)	)		-		e Odor (C	-			ion Visible o		agery (C9)
	eposits (B3)					•	•	ing Roots (C3)		rphic Positio		
Algal M	lat or Crust (B4)			Presence	of Red	duced Iron	(C4)	-	Shallov	v Aquitard (D	3)	
Iron De	eposits (B5)			Recent Ir	on Red	luction in F	Plowed	Soils (C6)	FAC-N	eutral Test ([	D5)	
Surface	e Soil Cracks (Be	6)		Stunted of	or Stres	sed Plants	s (D1) (	LRR A)	Raised	Ant Mounds	(D6) (LRR	<b>A</b> )
Inunda	tion Visible on A	erial Imagery (I	B7)	Other (Ex	kplain ir	n Remarks	s)	_	Frost-H	leave Humm	ocks (D7)	
Sparse	ly Vegetated Co	ncave Surface	(B8)						<u>_</u>			
Field Obser	vations:											
Surface Wat	er Present?	Yes	No X	Depth	(inches	):						
Water table		Yes	No x			):		1				
Saturation P		Yes	No x	_ Depth	(inches	):		Wetland Hy	drology Pre	esent?	Yes	_Nox
(includes cap			Marada ar consti									
escribe Reco	orded Data (strea	ını gauge, mor	iitoring well	ı, aeriai pr	iotos, p	revious in	spectio	ris), ii avallable:				
emarks:												
-												

Project/Site:	I-5 Woodland			City/County:	Woodland	/Cowlitz	Sampling Date: Oct.8	3, 2020
Applicant/Owner:	Logan Partners LLC					State: WA	Sampling Point:	37
Investigator(s):	KB			Section	n, Township	, Range: <u>S13, T5N, R1W</u>	<u> </u>	
Landform (hillslope	· —	ace		Local re	lief (concav	e, convex, none): concave	Slope (%):	15-30%
Subregion (LRR):	Northwest Forests and C	Coast (LRR A)	Lat:		45.92	0250190 Long:	-122.746719831 Datum	ı:
Soil Map Unit Nam						NWI Classificatio		
	ologic conditions on the sit				Yes	X No	<del></del> ` ' '	
	, Soil, or						inces" Present? Yes X	_No
Are Vegetation	, Soil, or	Hydrology		naturally pro	oblematic?	(If needed, explain any	answers in Remarks.)	
SUMMARY OF	FINDINGS - Attach	site map s	howing	sampling	point loc	ations, transects, imp	portant features, etc.	
Hydrophytic Vegeta	ation Present? Yes	s x No		1. (1. 0.				
Hydric Soil Present	t? Yes	s <u>x</u> No			ampled Are a Wetland?		No	
Wetland Hydrology	Present? Yes	s <u>x</u> No			· · · · · · · · · · · · · · · · · · ·			
VEGETATION								
			Absolute	Dominant	Indicator	Dominance Test works	heet:	
Tree Stratum (Us	se scientific names.)		% Cover	Species?	Status?	Number of Dominant Spe That Are OBL, FACW, or		(A)
2.		<del></del> -				Total Number of Domina	nt	_` ′
3.						Species Across All Strata	a: <b>2</b>	(B)
4.						Percent of Dominant Spe	ecies	_
		Total Cover:	0			That Are OBL, FACW, or	r FAC: 100%	_(A/B)
Shrub Stratum						Prevalence Index Work	sheet:	
1.						Total % Cover of:	Multiply by:	
2.						OBL species	x1 = <b>0</b>	_
3.						FACW species	x2 = <b>0</b>	<u></u>
4						FAC species	x3 = <b>0</b>	
5						FACU species	x4 = <b>0</b>	_
		Total Cover:	0			UPL species	x5 = <b>0</b>	_
Herb Stratum						Column Totals: 0	(A) <b>0</b>	_(B)
1. Phalaris arund			80	<u>Y</u>	#ACW	Prevalence Index = B/A	A =	_
2. Juncus effusus			20	Y	IFACW□	H. Lee J. C. Wee deller	I. P. A.	
3. Lotus cornicula	atus		15			Hydrophytic Vegetation		
4 5.		<del></del> .				X 2 - Dominance	or Hydrophytic Vegetation	
						3 - Prevalence I		
7							al Adaptation1 (Provide supp	oorting
							s or on a separate sheet)	,
							n-Vascular Plants <sup>1</sup>	
						Problematic Hyd	drophytic Vegetation <sup>1</sup> (Explai	in)
		Total Cover:	115					
Woody Vine St	<u>tratum</u>					<sup>1</sup> Indicators of hydric soil a be present, unless disturb	and wetland hydrology must bed or problematic.	
0						Hydrophytic		
		Total Cover:				Vegetation		
% Bai	re Ground in Herb Stratum	n <u>0</u> % (	Cover of Bi	otic Crust	0	Present?	Yes x No	
Remarks:								

epth	Matrix		Re	dox Featı			-			
nches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textur	<u> </u>	Remarks	
0-16	10YR3/2	90	7.5YR3/4	10	C	M	<u>L</u>			
ype: C=	Concentration, D=Dep	letion, RM	=Reduced Matrix,	CS=Cove	ered or Coa	ited San	d Grains. <sup>2</sup> L	ocation: PL	=Pore Lining, M=Matrix.	
ydric Soi	I Indicators: (Applic	able to all	LRRs, unless oth	nerwise n	oted.)		Indicator	s for Proble	ematic Hydric Soils <sup>3</sup> :	
Histos	sol (A1)		Sandy I	Redox (S	5)			2 cm	Muck (A10)	
Histic	Epipedon (A2)		Strippe	d Matrix (	S6)			Red F	Parent Material (TF2)	
Hydro	Histic (A3) gen Sulfide (A4)	(044)	Loamy	Gleyed M	neral (F1) latrix (F2)	(except	MLRA 1)	Other	r (Explain in Remarks)	
	ted Below Dark Surfa Dark Surface (A12)	ce (ATT)		ed Matrix (			<sup>3</sup> Indi	ootors of by	drophytic vegetation and	
	/ Muck Mineral (S1)		x Redox		ace (F0) urface (F7			-	ology must be present,	
	/ gleyed Matrix (S4)			Depression	•	,		-	rbed or problematic.	
	Layer (if present):		Nedox	Depressio	) iis (i 0)			ui iiess uistu	Thed of problematic.	
	Layer (ii present).									
	nes):					l Hv	vdric Soil Pr	esent?	Yes x	No
epth (inch	nes):					Ну	ydric Soil Pr	esent?	Yes x	No _
epth (inch						Ну	ydric Soil Pr	esent?	Yes x	No
epth (inch narks:	Y					Ну	ydric Soil Pr	esent?	Yes x	No _
epth (inch narks: DROLOG etland H	Y ydrology Indicators:		icient)			Ну	ydric Soil Pr			
PROLOG etland H	Y			Stained Lo	eaves (B9)			Second	dary Indicators (2 or mor	e require
PROLOG etland H imary Inc	Y ydrology Indicators: licators (any one indic		Water-S		` '			Second Wate		e require
PROLOG etland H imary Inc Surfa	Y ydrology Indicators: licators (any one indic ce Water (A1)		Water-S MLR		eaves (B9) <b>A and 4B</b> )			Second Wate	dary Indicators (2 or morestrations) (No. 100)	e require
PROLOG etland H imary Inc Surfa High V	Y ydrology Indicators: licators (any one indic ce Water (A1) Water Table (A2)		Water-S MLR Salt Cru	<b>A 1, 2, 4</b> <i>A</i> ust (B11)	` '	(except		Second Wate 4A Drain	dary Indicators (2 or morest-Stained Leaves (B9) (Na A and 4B)	e require
PROLOG etland H imary Inc Surfa High Satura Wate	Y ydrology Indicators: licators (any one indicators (A1) Water Table (A2) ation (A3)		Water-S MLR Salt Cru Aquatic	<b>A 1, 2, 4</b> ust (B11) Invertebr	A and 4B)	(except		Second Wate 44 Drain Dry-S	dary Indicators (2 or more r-Stained Leaves (B9) ( <b>N</b> <b>A and 4B</b> ) lage Patterns (B10)	e require
PROLOG Petland H Pimary Inc Surfa High Satura Water Sedin	ydrology Indicators: dicators (any one indicators (A1) Water Table (A2) ation (A3)		Water-S MLR Salt Cru Aquatic Hydrog	<b>A 1, 2, 4</b> <i>A</i> ust (B11) Invertebren Sulfide	A and 4B) rates (B13) e Odor (C1	(except		Second Wate 4A Drain Dry-S	dary Indicators (2 or more or-Stained Leaves (B9) ( <b>N</b> A and 4B) hage Patterns (B10) Season Water Table (C2)	e require
PROLOG etland H imary Inc Surfa High Satura Wate Sedin Drift [	ydrology Indicators: dicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2)		Water-S MLR Salt Cru Aquatic Hydrog Oxidize	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizosp	A and 4B) rates (B13) e Odor (C1	(except	1	Second Wate 4A Drain Dry-S Satur x Geom	dary Indicators (2 or morest-Stained Leaves (B9) (Na A and 4B) lage Patterns (B10) Season Water Table (C2)	e require
PROLOG etland H imary Inc Surfa High V Satur Sedin Drift E Algal	ydrology Indicators: dicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2)		Water-S MLR Salt Cru Aquatic Hydrog Oxidize Presen	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizospice of Red	A and 4B) rates (B13) e Odor (C1 pheres alor	(except ) ng Living (C4)	Roots (C3)	Second Wate 4A Drain Dry-S Satur X Geom	dary Indicators (2 or more r-Stained Leaves (B9) (Na and 4B) age Patterns (B10) Season Water Table (C2) ration Visible on Aerial Improphic Position (D2)	e require
PROLOG Petland H Pimary Inc Surfa High V Satura Watel Sedin Drift E Algal Iron E	ydrology Indicators: licators (any one indicators (any one indicators (A1)) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)		Water-S  MLR  Salt Cru  Aquatic  Hydrog  Oxidize  Present  Recent	A 1, 2, 44 ust (B11) Invertebren Sulfided d Rhizospice of Red Iron Red	rates (B13) e Odor (C1 oheres alou	(except ) ng Living (C4) owed So	t Roots (C3)	Second Wate 4A Drain Dry-S Satur X Geom Shalld X FAC-	dary Indicators (2 or more r-Stained Leaves (B9) (Na and 4B) lage Patterns (B10) Season Water Table (C2) ration Visible on Aerial Im- norphic Position (D2) low Aquitard (D3)	e require
PROLOG etland H imary Inc Surfa High Satura Vate Sedin Drift [ Algal Iron [ Surfa	ydrology Indicators: licators (any one indicators (Any one indicators) Water Table (A2) ation (A3) Marks (B1) Ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	ator is suff	Water-S MLR Salt Cru Aquatic Hydrog Oxidize Present Recent Stunted	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red	A and 4B) rates (B13) Prates (B	(except ) ng Living (C4) owed Sc (D1) (LF	t Roots (C3)	Second Wate  4A Drain Dry-S Satur  X Geom Shalld X FAC- Raise	dary Indicators (2 or more of the control of the co	e require
PROLOG Petland H rimary Inc Surfa High Satura Wate Sedin Drift [ Algal Iron [ Surfa Inund	ydrology Indicators: dicators (any one indicators (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Ce Soil Cracks (B6)	ator is suff	Water-S  MLR  Salt Cru  Aquatic  Hydrog  Oxidize  Present  Recent  Stunted  B7)  Other (I	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red	rates (B13) e Odor (C1 oheres alol uced Iron uction in Pl sed Plants	(except ) ng Living (C4) owed Sc (D1) (LF	t Roots (C3)	Second Wate  4A Drain Dry-S Satur  X Geom Shalld X FAC- Raise	dary Indicators (2 or more r-Stained Leaves (B9) (No. 1) A and 4B) age Patterns (B10) Season Water Table (C2) action Visible on Aerial Imporphic Position (D2) ow Aquitard (D3) Neutral Test (D5) and Ant Mounds (D6) (LRF)	e require
PROLOG Petland H rimary Inc Surfa High V Sedin Drift E Algal Iron E Surfae Inund Spars	y ydrology Indicators: licators (any one indicators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) Deposits (B3) Mat or Crust (B4) Deposits (B5) Deposits (B5) Deposits (B5) Deposits (B6)	ator is suff	Water-S  MLR  Salt Cru  Aquatic  Hydrog  Oxidize  Present  Recent  Stunted  B7)  (B8)	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospece of Red Iron Red or Stress Explain in	rates (B13) e Odor (C1 oheres alor luced Iron uction in Pl sed Plants Remarks)	(except ) ng Living (C4) owed Sc (D1) (LF	t Roots (C3)	Second Wate  4A Drain Dry-S Satur  X Geom Shalld X FAC- Raise	dary Indicators (2 or more r-Stained Leaves (B9) (No. 1) A and 4B) age Patterns (B10) Season Water Table (C2) action Visible on Aerial Imporphic Position (D2) ow Aquitard (D3) Neutral Test (D5) and Ant Mounds (D6) (LRF)	e require
DROLOG Vetland H rimary Inc Surfa High V Satura Watel Sedin Drift E Algal Iron E Surfa Inund Spars ield Obse	y ydrology Indicators: licators (any one indicators (any one indicators) water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6) ation Visible on Aerial hely Vegetated Concavervations: ater Present? Yes	ator is suff	Water-S  MLR  Salt Cru  Aquatic  Hydrog  Oxidize  Present  Recent  Stunted  B7)  (B8)  No X Depti	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red or Stress Explain in	rates (B13) Prates (B13) Prates (B13) Prates alor Color (C1) Color	(except ) ng Living (C4) owed Sc (D1) (LF	t Roots (C3)	Second Wate  4A Drain Dry-S Satur  X Geom Shalld X FAC- Raise	dary Indicators (2 or more r-Stained Leaves (B9) (No. 1) A and 4B) age Patterns (B10) Season Water Table (C2) action Visible on Aerial Imporphic Position (D2) ow Aquitard (D3) Neutral Test (D5) and Ant Mounds (D6) (LRF)	e require
DROLOG Vetland H rimary Inc Surfa High V Sedin Drift E Algal Iron E Surfae Inund Spars ield Obse	ydrology Indicators: licators (any one indicators (any one indicat	Imagery (l	Water-S   MLR	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red I or Stress Explain in (inches)	rates (B13) Prates (B13) Prates (B13) Prates alor Red Iron Red Plants Remarks)	(except ) ng Living (C4) owed Sc (D1) (LF	Roots (C3) pils (C6) RR A)	Second Wate  4A Drain Dry-S Satur X Geom Shalld X FAC- Raise Frost-	dary Indicators (2 or more r-Stained Leaves (B9) (Na A and 4B) lage Patterns (B10) Season Water Table (C2) lation Visible on Aerial Imporphic Position (D2) low Aquitard (D3) Neutral Test (D5) led Ant Mounds (D6) (LRF-Heave Hummocks (D7)	e require
DROLOG Vetland H rimary Inc Surfa High V Sedin Drift E Algal Iron E Surfac Inund Spars Vater table aturation	ydrology Indicators: licators (any one indicators (any one indicat	Imagery (l	Water-S   MLR	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red or Stress Explain in	rates (B13) Prates (B13) Prates (B13) Prates alor Red Iron Red Plants Remarks)	(except ) ng Living (C4) owed Sc (D1) (LF	Roots (C3) pils (C6) RR A)	Second Wate  4A Drain Dry-S Satur  X Geom Shalld X FAC- Raise	dary Indicators (2 or more r-Stained Leaves (B9) (Na A and 4B) lage Patterns (B10) Season Water Table (C2) lation Visible on Aerial Imporphic Position (D2) low Aquitard (D3) Neutral Test (D5) led Ant Mounds (D6) (LRF-Heave Hummocks (D7)	e require
DROLOG Vetland H rimary Inc Surfar High V Satura Water Sedin Drift E Algal Iron E Surfac Inund Spars ield Obse urface Water table aturation ncludes c	y ydrology Indicators: licators (any one indicators (any one indicators) water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ce Soil Cracks (B6) ation Visible on Aerial hely Vegetated Concavervations: ater Present? Present? Yes Present?	Imagery (I	Water-S   MLR   Salt Cru   Aquation     Hydrog     Oxidize     Present     Recent     Stunted     Stunted     Hydrog     Oxidize     Present     Recent     Country     Coun	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red I or Stress Explain in in (inches) in (inches)	rates (B13) e Odor (C1 cheres alor luced Iron luction in Pl sed Plants Remarks)	(except ) ng Living (C4) lowed So (D1) (LF	Roots (C3) pils (C6) RR A)  Wetland H	Second Wate  4A Drain Dry-S Satur X Geom Shalld X FAC- Raise Frost-	dary Indicators (2 or more r-Stained Leaves (B9) (Na A and 4B) lage Patterns (B10) Season Water Table (C2) lation Visible on Aerial Imporphic Position (D2) low Aquitard (D3) Neutral Test (D5) led Ant Mounds (D6) (LRF-Heave Hummocks (D7)	e require
Surfar Saturar Water Sedin Drift E Algal Iron E Surfar Inund Spars ield Obser urface Water table aturation ncludes c	ydrology Indicators: licators (any one indicators (any one indicators)  Marks (B1)  Marks (B1)  Marks (B1)  Mart or Crust (B2)  Deposits (B3)  Mat or Crust (B4)  Deposits (B5)  Ce Soil Cracks (B6)  Aution Visible on Aerial  Mely Vegetated Concators  Mervations:  Marks (B1)  Mart or Crust (B4)  Mat or Crust (B4)  Mat or Crust (B4)  Merosits (B5)  Mat or Crust (B4)  Merosits (B5)  Merosits (B6)  Merosits	Imagery (I	Water-S   MLR   Salt Cru   Aquation     Hydrog     Oxidize     Present     Recent     Stunted     Stunted     Hydrog     Oxidize     Present     Recent     Country     Coun	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red I or Stress Explain in in (inches) in (inches)	rates (B13) e Odor (C1 cheres alor luced Iron luction in Pl sed Plants Remarks)	(except ) ng Living (C4) lowed So (D1) (LF	Roots (C3) pils (C6) RR A)  Wetland H	Second Wate  4A Drain Dry-S Satur X Geom Shalld X FAC- Raise Frost-	dary Indicators (2 or more r-Stained Leaves (B9) (Na A and 4B) lage Patterns (B10) Season Water Table (C2) lation Visible on Aerial Imporphic Position (D2) low Aquitard (D3) Neutral Test (D5) led Ant Mounds (D6) (LRF-Heave Hummocks (D7)	e require

Project/Site:	I-5 Woodland		City/County	: Woodland	/Cowlitz	Sampling Date: Oct.8, 2020
Applicant/Owner:	Logan Partners LLC				State: WA	Sampling Point: 3
Investigator(s):	KB		Section	n, Township	o, Range: S13, T5N, R1W	
Landform (hillslope			Local re	elief (concav	re, convex, none): none	Slope (%): 15-30%
Subregion (LRR):	Northwest Forests and Coast (LRR A	<u>v)</u> Lat:		45.92	0240669 Long:	-122.746780223 Datum:
Soil Map Unit Nam					NWI Classification	
	ologic conditions on the site typical for			Yes	X No	<u> </u>
Are Vegetation	, Soil, or Hydrology					nces" Present? Yes X No
Are Vegetation	, Soil, or Hydrology		naturally pr	oblematic?	(If needed, explain any	answers in Remarks.)
SUMMARY OF	FINDINGS - Attach site map	showing	sampling	point loc	ations, transects, imp	ortant features, etc.
Hydrophytic Veget	ation Present? Yes x N	0				
Hydric Soil Presen	t? YesN	о х		ampled Are a Wetland?	749	No x
Wetland Hydrology		о х		a Wetland:		<del>-</del>
VECETATION						
VEGETATION					<u> </u>	
		Absolute % Cover	Dominant Species?	Indicator	Dominance Test worksh	
`	se scientific names.)	76 COVEI	Species:	Status?	Number of Dominant Spe That Are OBL, FACW, or	FΔC·
1						(A)
2				• •——	Total Number of Dominan Species Across All Strata:	
3.	_		-	·	-	(5)
4	 Total Cover	: 0			Percent of Dominant Spec That Are OBL, FACW, or	
	Total Cover		-		That Ale Obl., FACW, of	(A/B)
Shrub Stratum					Prevalence Index Works	sheet:
Rubus armenia	acus	40	Υ	ŒAC□	Total % Cover of:	Multiply by:
2.					OBL species	x1 = <b>0</b>
3.					FACW species	x2 = <b>0</b>
4				- ·	FAC species	x3 =
5					FACU species	x4 = <b>0</b>
	Total Cover	: 40	_		UPL species	x5 = <b>0</b>
Herb Stratum					Column Totals: 0	(A)(B)
1. Phalaris arund		50	Y	FACW =	Prevalence Index = B/A	\ =
2. Lotus cornicula	atus	30	Y	FAC□		
3.				· <del></del>	Hydrophytic Vegetation	
_	_		-	·	<del></del>	or Hydrophytic Vegetation
			-		2 - Dominance T 3 - Prevalence Ir	
7			-	• •		al Adaptation1 (Provide supporting
0			-	·		s or on a separate sheet)
		-				n-Vascular Plants <sup>1</sup>
-			-	• •——		drophytic Vegetation <sup>1</sup> (Explain)
			-	·	i robioinatio riya	mophlytic vogetation (Explain)
	Total Cover	: 80	-			
Woody Vine S			_		<sup>1</sup> Indicators of hydric soil a	and wetland hydrology must
Rubus laciniat	us	15%	Υ		be present, unless disturb	
2.					Hydrophytic	
	Total Cover	: 15			Vegetation	
% Ba	re Ground in Herb Stratum 0 %	Cover of B	iotic Crust	0	Present?	Yes x No
Remarks:	<del>-</del>				<u> </u>	

SOIL									Samı	oling Point:		
Profile Desc	ription: (Descri	be to the dep	th neede	d to doci	ument t	he indicat	tor or c	onfirm the abse	ence of indic	ators.)		
Depth		•			lox Feat					,		
_	Color (moist)	%	Color (ı		%	Type <sup>1</sup>	Loc	Texture		_	Remarks	
(inches)	10YR3/2		Coloi (I	moist)	70	Type		SiL		Г	Kemarks	
0-10	10113/2	100						<u>SIL</u>				
						- ——						
<sup>1</sup> Type: C=Ce	oncentration, D=D	Appletion PM:	-Poducoc	Matrix (		ered or Co	natad S	and Grains <sup>2</sup> Lo	cation: DI –	Poro Lining I	M_Matrix	
							alcu O					
	ndicators: (App	licable to all	LRRs, ui					Indicators		atic Hydric	Soils <sup>3</sup> :	
Histoso				Sandy F				-		uck (A10)		
Histic E	pipedon (A2)			Stripped	Matrix	(S6)		-	Red Pa	rent Material	l (TF2)	
Black H	listic (A3)			Loamy N	/lucky M	lineral (F1)	) (exce	pt MLRA 1)	Other (	Explain in Re	emarks)	
Hydroge	en Sulfide (A4)			Loamy (	Gleyed N	/latrix (F2)	)					
 Deplete	d Below Dark Su	rface (A11)		Deplete	d Matrix	(F3)						
	ark Surface (A12					face (F6)		<sup>3</sup> Indic	ators of hydr	ophytic vege	tation and	
	Muck Mineral (S1	•				Surface (F	7)		-	gy must be p		
	gleyed Matrix (S4)					ons (F8)	- /		-	ed or probler		
	ayer (if present)				. ор. оос.	(. 0)	T					
Type:												
Depth (inches	s)·							Hydric Soil Pre	sent?	Yes		No x
emarks:	· •									-	•	
YDROLOGY Wetland Hyd	drology Indicato	rs:										
-	ators (any one in		icient)						Seconda	ary Indicators	(2 or more	required)
	Water (A1)	aloator lo carr	1010111	Water-S	tained I	eaves (B9	a) (exce	ent .		Stained Leav		
	ater Table (A2)					A and 4B)		,p:		and 4B)	CO (DO) (III	
Saturati				Salt Cru			,	-		,	D10\	
	` '				, ,		2)	-		ge Patterns (I		
	Marks (B1)					rates (B13		-		ason Water l		
	nt Deposits (B2)					e Odor (C	-			ion Visible or		agery (C9
	posits (B3)					•	•	ing Roots (C3)		rphic Position		
	at or Crust (B4)					duced Iron	` '	-		v Aquitard (D		
	posits (B5)							Soils (C6)		eutral Test (D	-	
Surface	Soil Cracks (B6)			Stunted	or Stres	sed Plants	s (D1) (	LRR A)	Raised	Ant Mounds	(D6) ( <b>LRR</b>	<b>A</b> )
Inundati	ion Visible on Aeı	rial Imagery (E	37)	Other (E	xplain ir	n Remarks	s)	-	Frost-H	leave Humm	ocks (D7)	
Sparsel	y Vegetated Con	cave Surface	(B8)									
Field Observ												
Surface Water			No <u>X</u>		(inches							
Water table F			No x			s):		Watland Us	dralamı Dra		Vaa	Na v
Saturation Pr (includes cap		/es	No x	_ Deptil	(inches			Wetland Hy	urology Fre	Sent?	Yes	No x
	rded Data (strean	n daude mon	itorina we	ll aerial n	hotos n	revious in	spectio	ns) if available:				
2301100 110001	. 254 Data (birban	. gaago, 111011		, aoriai p	, p	5 1.000 111	Spoolio	,,				
temarks:												

Project/Site: <u>I-5 Woodland</u>			City/County:	Woodland	
Applicant/Owner: Logan Partners LLC					State: WA Sampling Point:
Investigator(s): KB			_		, Range: <u>S13, T5N, R1W</u>
	errace		_	,	e, convex, none): none Slope (%): 0-3%
Subregion (LRR): Northwest Forests and	d Coast (LRR A	Lat:		45.91	9336971 Long: -122.749775144 Datum:
Soil Map Unit Name: Newberg fine s					NWI Classification: PEM1A
Are climatic / hydrologic conditions on the			•	Yes_	X No (If no, explain in Remarks)
Are Vegetation, Soil,					
Are Vegetation, Soil,	or Hydrology		naturally pro	oblematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attac	ch site map s	showing	sampling	point loca	ations, transects, important features, etc.
Hydrophytic Vegetation Present?	∕es x No	)	1.41.0		
Hydric Soil Present?	res No	) X		ampled Are a Wetland?	YAS NO Y
Wetland Hydrology Present?	/es No	<u> </u>		a Wonana.	
VEGETATION					
		Absolute	Dominant	Indicator	Dominance Test worksheet:
From Chrotium (Han aciontific names)		% Cover	Species?	Status?	Number of Dominant Species
Free Stratum (Use scientific names.)  I.			-		That Are OBL, FACW, or FAC:
ι <u>Σ</u> .					Total Number of Dominant
3.				· ———	Species Across All Strata: 2 (B)
					,` ` '
	Total Cover:	0			Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Shrub Stratum  1 2 3 4 5 Herb Stratum  1. Phalaris arundinacea			Y	#FACW	Total % Cover of:         Multiply by:           OBL species         x1 =         0           FACW species         x2 =         0           FAC species         x3 =         0           FACU species         x4 =         0           UPL species         x5 =         0           Column Totals:         0         (A)         0         (B)           Prevalence Index = B/A =
2. Lotus corniculatus		20	Y	FAC□	1 revalence mack = B/A =
3. Cirsium arvense		15		ı∉AC □	Hydrophytic Vegetation Indicators:
F. Galium aparine		5		□FACU□	1 - Rapid Test for Hydrophytic Vegetation
j					X 2 - Dominance Test is >50%
S					3 - Prevalence Index is ≤3.0 <sup>1</sup>
·					4 - Morphological Adaptation1 (Provide supporting
3.					data in Remarks or on a separate sheet)
)					5 - Wetland Non-Vascular Plants <sup>1</sup>
0					Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1					
	Total Cover:	100			
Woody Vine Stratum					<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				-	'
1. 2.	Total Cover:				Hydrophytic Vegetation
<del></del>				0	Vegetation Present? Yes x No

SOIL									Sam	pling Point:			39
Profile Desc	cription: (Des	cribe to the de	pth neede	d to docu	ıment tl	he indicat	tor or c	onfirm the abse	ence of indi	cators.)			
Depth	 Mat		•		ox Feat					,			
(inches)	Color (mois		Color (ı		%	Type <sup>1</sup>	Loc	 2 Texture			Remarks		
0-16	7.5YR3/2		COIOI (I	iloist)	/0	Туре	LUC	, rexture	<u> </u>		Nemains		
0-10	7.5113/2												
			-					<u> </u>					
						- ——							
			-				-						
<sup>1</sup> Type: C=C	oncentration D	=Depletion RM	1=Reduced	Matrix C	S=C0/4	ered or Co	nated S	and Grains. <sup>2</sup> Lo	ocation: PI -	Pore Lining	M-Matriy		
							alcu O						
Hydric Soil	Indicators: (A	pplicable to a	II LRRs, ui	nless othe	erwise i	noted.)		Indicators	for Probler	natic Hydric	: Soils <sup>3</sup> :		
Histoso				Sandy R						/luck (A10)			
Histic E	Epipedon (A2)			Stripped	Matrix (	(S6)			Red Pa	arent Materia	al (TF2)		
Black H	Histic (A3)			Loamy M	lucky M	lineral (F1	) (exce	pt MLRA 1)	Other	(Explain in R	temarks)		
Hydrog	en Sulfide (A4)			Loamy G	Sleyed N	/latrix (F2	)						
Deplete	ed Below Dark	Surface (A11)		Depleted	l Matrix	(F3)							
	Dark Surface (A			Redox D	ark Sur	face (F6)		<sup>3</sup> Indic	ators of hyd	rophytic vege	etation and		
	Muck Mineral (	,				Surface (F	7)		-	ogy must be			
	gleyed Matrix (			Redox D		-	. ,		-	ped or proble			
	Layer (if prese				ор. осо.	(. 0)							
Type:		,											
Depth (inche	76).							Hydric Soil Pre	sent?	Yes		No	Y
emarks:			•										
YDROLOGY Wetland Hy	drology Indica	itors:											
-	cators (any one		fficient)						Second	ary Indicator	s (2 or more	require	ed)
	e Water (A1)	indicator is su	incient)	Mator S	tainad I	eaves (B9	)) (ovec			Stained Lea			
						A and 4B)		spr .		and 4B)	Wes (D3) (W	LIXA I,	۷,
	/ater Table (A2)	)					)	•		,	(D40)		
	tion (A3)			Salt Crus	, ,		٥)			ge Patterns			
	Marks (B1)	_,				rates (B13		•		ason Water			
	ent Deposits (B	2)				e Odor (C				tion Visible o		agery (C	<i>J</i> 9)
	eposits (B3)					•	-	ing Roots (C3)		orphic Position			
Algal M	lat or Crust (B4	.)				duced Iron	` '		Shallo	w Aquitard ([	D3)		
	eposits (B5)			Recent I	ron Red	luction in F	Plowed	Soils (C6)	FAC-N	leutral Test (	(D5)		
Surface	e Soil Cracks (E	36)		Stunted	or Stres	sed Plant	s (D1) (	(LRR A)	Raised	Ant Mounds	s (D6) ( <b>LRR</b>	<b>(A</b> )	
Inunda	tion Visible on A	Aerial Imagery	(B7)	Other (E	xplain ir	n Remarks	s)		Frost-l	Heave Humn	nocks (D7)		
Sparse	ly Vegetated C	oncave Surface	e (B8)										
Field Obser	vations:												
Surface Wat	er Present?	Yes	No X	Depth	(inches	s):							
Water table		Yes	No x			;):							
Saturation P		Yes	No x	Depth	(inches	s):		Wetland Hy	drology Pr	esent?	Yes	_No	Х
(includes ca		om goligo mo	nitoring wo	II. porial p	hotoc n	rovious in	cnoctio	ns), if available:					
escribe ivecc	nueu Dala (Sile	am gauge, mo	illoring we	ii, aciiai pi	notos, p	nevious iii	specilo	iris), ii avaliable.					
emarks:													

Project/Site: <u>I-5 Woodland</u>			Oity/ Courty.	Woodland/	OOWIIIZ	Sampling Date: Oct.	0, 2020
Applicant/Owner: Logan Partners LL	.C				State: WA	Sampling Point:	4
nvestigator(s): KB			Section	n, Township,	, Range: <u>S13, T5N, R1W</u>		
_andform (hillslope, terrace, etc.):	terrace		_ Local re		e, convex, none): none	Slope (%)	): <u>0-3%</u>
Subregion (LRR): Northwest Forests	and Coast (LRR A)	) Lat:		45.919	9894994 Long: -12	22.749978337 Datum	n:
· — — — — — — — — — — — — — — — — — — —	ne sandy loam				NWI Classification:		
Are climatic / hydrologic conditions on				Yes_		(If no, explain in Remark	
Are Vegetation, Soil							No
Are Vegetation, Soil	, or Hydrology		naturally pro	oblematic?	(If needed, explain any an	swers in Remarks.)	
SUMMARY OF FINDINGS – At	tach site map s	showing	sampling	point loca	ations, transects, impor	rtant features, etc.	
Hydrophytic Vegetation Present?	Yes x No	)					
Hydric Soil Present?	Yes No	<u> </u>		ampled Area a Wetland?	a Yes	No x	
Wetland Hydrology Present?	Yes No	<u> </u>	Within	a weathing.			
Plot taken in small patch of PHAR			1				
VEGETATION							
		Absolute	Dominant	Indicator	Dominance Test workshee	∍t:	
Tree Stratum (Use scientific names.)	)	% Cover	Species?	Status?	Number of Dominant Specie		
1					That Are OBL, FACW, or FA	AC:1	(A)
2					Total Number of Dominant		
3					Species Across All Strata:	1	(B)
4					Percent of Dominant Specie		
	Total Cover:	0			That Are OBL, FACW, or FA	AC: 100%	(A/B)
Shrub Stratum				-	Prevalence Index Workshe	eet:	
1.					Total % Cover of:	Multiply by:	
2.			-		OBL species	x1 = <b>0</b>	_
3.					FACW species	x2 = <b>0</b>	<u></u>
1					FAC species	x3 = <b>0</b>	
5					FACU species	x4 = <b>0</b>	
	Total Cover:	0			UPL species	x5 = <b>0</b>	_
Herb Stratum					Column Totals: 0	(A) <b>0</b>	(B)
Phalaris arundinacea		100	Y	FACW□	Prevalence Index = B/A =		_
2							
3.					Hydrophytic Vegetation Inc		
ł						Hydrophytic Vegetation	
5			-		X 2 - Dominance Tes 3 - Prevalence Inde		
). ,							
			-			Adaptation1 (Provide sup r on a separate sheet)	porting
3. ).					5 - Wetland Non-V	. ,	
						phytic Vegetation <sup>1</sup> (Expla	ain)
0. 1.	<del></del>					priyato v ogetation (Expla	~··· <i>)</i>
	Total Cover:	100					
Woody Vine Stratum					<sup>1</sup> Indicators of hydric soil and be present, unless disturbed		1
2.					Hydrophytic		-
	Total Cover:				Vegetation		
				_	•	V	
% Bare Ground in Herb S	tratum 0 %	Cover of B	otic Crust	0	Present?	Yes x No	

SOIL							Sampling Poi	nt:	40		
Profile Desc	ription: (Describ	e to the de	oth needed to doc	ument the indic	cator or co	onfirm the abse	ence of indicators.)				
Depth	Matrix		Re	dox Features							
(inches)	Color (moist)	%	Color (moist)	% Type	e <sup>1</sup> Loc <sup>2</sup>	<sup>2</sup> Texture		Remarks			
0-14	10YR3/2	100				_ L					
						_					
						_					
<u> </u>						_					
¹Type: C=Co	oncentration, D=De	epletion, RM	=Reduced Matrix,	CS=Covered or	Coated Sa	and Grains. <sup>2</sup> Lo	cation: PL=Pore Lini	ng, M=Matrix.			
Hydric Soil I	Indicators: (Appl	icable to all	I LRRs, unless oth	nerwise noted.)		Indicators	for Problematic Hyd	dric Soils³:			
Histoso	l (A1)		Sandy I	Redox (S5)		<u>-</u>	2 cm Muck (A10	0)			
Histic E	pipedon (A2)		Strippe	Stripped Matrix (S6) Red Parent Material (TF2)							
Black H	listic (A3)		Loamy	Mucky Mineral (I	F1) (excep	ot MLRA 1)	Other (Explain i	n Remarks)			
Hydroge	en Sulfide (A4)			Gleyed Matrix (I	F2)						
	ed Below Dark Surf	face (A11)		ed Matrix (F3)							
	ark Surface (A12)			Dark Surface (F6	-		ators of hydrophytic v	-			
	Muck Mineral (S1)			ed Dark Surface			tland hydrology must	-			
	gleyed Matrix (S4)		Redox	Depressions (F8	5)	uı	nless disturbed or pro	oblematic.			
Restrictive L	_ayer (if present):										
Type:					_			_			
Depth (inche	s):					Hydric Soil Pre	sent? Y	es	No x		
HADBOI OCA											
Wotland Hye	drology Indicators	e.									
_	cators (any one ind		ficient)				Secondary Indica	ators (2 or more	required)		
-	Water (A1)	icator is suri	· · · · · · · · · · · · · · · · · · ·	Stained Leaves (	(RQ) (AYCA	nt .	Water-Stained I				
	ater Table (A2)			A 1, 2, 4A and 4	`	<u>-</u>	4A and 4B)		, _,		
Saturati				ust (B11)	/	_	Drainage Patter	ns (B10)			
	Marks (B1)			Invertebrates (E	313)	-	Dry-Season Wa				
	ent Deposits (B2)			en Sulfide Odor	,	<del>-</del>	Saturation Visib		agery (C9)		
Drift De	posits (B3)		Oxidize	d Rhizospheres	along Livir	ng Roots (C3)	Geomorphic Po	sition (D2)			
Algal M	at or Crust (B4)		Presen	ce of Reduced Ir	on (C4)	_	Shallow Aquitar	d (D3)			
Iron De	posits (B5)		Recent	Iron Reduction i	n Plowed S	Soils (C6)	FAC-Neutral Te	est (D5)			
Surface	Soil Cracks (B6)		Stunted	l or Stressed Pla	nts (D1) ( <b>I</b>	LRR A)	Raised Ant Mou	ınds (D6) ( <b>LRR</b>	( <b>A</b> )		
Inundat	ion Visible on Aeri	al Imagery (I	B7) Other (I	Explain in Rema	rks)	_	Frost-Heave Hu	ımmocks (D7)			
Sparsel	ly Vegetated Conc	ave Surface	(B8)								
Field Observ											
Surface Water		es es		n (inches):							
Water table F Saturation Pr		es es		n (inches): n (inches):		Wetland Hy	drology Present?	Yes	No x		
(includes cap				,							
Describe Reco	rded Data (stream	gauge, mor	nitoring well, aerial p	ohotos, previous	inspection	ns), if available:					
Remarks:											
Remarks:											
Remarks:											

Project/Site: I-5 Woodland		City/County	: Woodland	/Cowlitz	Sampling Date: Oct.8, 2020
Applicant/Owner: Logan Partners LLC				State: WA	Sampling Point: 41
Investigator(s): KB		Section	n, Township	o, Range: S13, T5N, R1W	
Landform (hillslope, terrace, etc.): terrace		Local re	elief (concav	re, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR): Northwest Forests and Coast (LRR A	<u>)</u> Lat:		45.92	0323048 Long: -122	2.749547728 Datum:
Soil Map Unit Name: Newberg fine sandy loam				NWI Classification: F	
Are climatic / hydrologic conditions on the site typical for t		•	Yes_		(If no, explain in Remarks)
Are Vegetation, Soil, or Hydrology					s" Present? Yes X No
Are Vegetation, Soil, or Hydrology		naturally pr	oblematic?	(If needed, explain any ans	wers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	sampling	point loca	ations, transects, import	ant features, etc.
Hydrophytic Vegetation Present? Yes x No	)	1			
Hydric Soil Present? Yes No			ampled Are a Wetland?	YAS	No x
Wetland Hydrology Present? YesNo	) х	_ within	a Welland:		
VEGETATION					
Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status?	Dominance Test worksheet Number of Dominant Species	
Populus balsamifera	20	Y		That Are OBL, FACW, or FA	C: <b>4</b> (A)
2.				Total Number of Dominant	(, ,
3.				Species Across All Strata:	<b>4</b> (B)
4.		•		Percent of Dominant Species	
Total Cover:	20			That Are OBL, FACW, or FAC	
Shrub Stratum  1. Populus balsamifera	<u> </u>	Y Y	FAC	Prevalence Index Workshee Total % Cover of:	Multiply by:
2. Rubus armeniacus 3.	5	· <u> </u>		OBL species>	x1 = <u>0</u> x2 = <b>0</b>
4.					K2 = <b>0</b> K3 = <b>0</b>
5.			- ——	· —	K4 = <b>0</b>
Total Cover:	10		- ——	· —	x5 = <b>0</b>
Herb Stratum	-	-			(A) <b>0</b> (B)
1. Phalaris arundinacea	93	Υ	JFACW □	Prevalence Index = B/A =	• •
2. Lotus corniculatus	5		IFAC□	_	
3. Cirsium arvense	2			Hydrophytic Vegetation Ind	icators:
4				1 - Rapid Test for H	ydrophytic Vegetation
5				X 2 - Dominance Test	
6				3 - Prevalence Inde	
7			- ——		daptation1 (Provide supporting
8					on a separate sheet)
9.				5 - Wetland Non-Va	
10				Problematic Hydrop	hytic Vegetation <sup>1</sup> (Explain)
11	400				
Total Cover:	100	-		1	
Woody Vine Stratum  1.				<sup>1</sup> Indicators of hydric soil and be present, unless disturbed	
2.	-		-	, ,	
Total Cover:	:			Hydrophytic Vegetation	
% Bare Ground in Herb Stratum 0 %		iotic Crust	0	_	res x No
Remarks:				<u> </u>	

SUIL								San	ipiing Poini	i		41
Profile Desc	ription: (Describe	to the depth	needed to doo	ument th	ne indicat	tor or co	onfirm the abs	ence of indi	cators.)			
Depth	Matrix		Re	dox Featı	ures							
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textur	e		Remarks		
0-14	10YR2/2	100			: //		SL					
					-		_					
		<del></del>				-						
-												
1		I-ti DM-D	)l   N4 - 4i	00.0		-410-			Dana Linia	- NA NA-4-6-		
Type. C=CC	oncentration, D=Dep	nelion, Rivi-R	teduced Matrix,	CS-COVE	ered or Co	aleu Sa	ind Grains. L	ocalion. PL=	:Pore Linin	g, ivi=iviatrix.		
Hydric Soil I	ndicators: (Applic	able to all Li	RRs, unless otl	nerwise r	noted.)		Indicators	for Proble	natic Hydi	ric Soils <sup>3</sup> :		
Histoso	I (A1)		Sandy	Redox (S	5)			2 cm N	Muck (A10)	)		
Histic E	pipedon (A2)			d Matrix (					arent Mate			
	istic (A3)					) (excen	ot MLRA 1)		(Explain in			
	en Sulfide (A4)			-	latrix (F2)				(Explain iii	rtomanto,		
	d Below Dark Surfa	ce (A11)		ed Matrix		,						
		Ce (ATT)		Dark Surf	-		<sup>3</sup> Indi	actors of bud	Irophytia ve	egetation and		
	ark Surface (A12)					<b>7</b> \		-		-		
	Muck Mineral (S1)				urface (F7	<i>(</i> )		etland hydrol		-		
	gleyed Matrix (S4)		Redox	Depression	ons (F8)	T		unless distur	sea or prod	piematic.		
Restrictive L	ayer (if present):											
Type:												
Depth (inche	s):						Hydric Soil Pr	esent?	Ye	es	No	Χ
IYDROLOGY												
=	drology Indicators:											
	ators (any one indic	ator is sufficie		_						ors (2 or mor		
Surface	Water (A1)		Water-	Stained L	eaves (B9	exce	pt			eaves (B9) (I	MLRA 1,	2,
High W	ater Table (A2)				A and 4B)	)		4A	and 4B)			
Saturati	` '		Salt Cr	ust (B11)				Draina	age Pattern	ıs (B10)		
Water N	/larks (B1)		Aquatio	Inverteb	rates (B13	3)		Dry-Se	eason Wate	er Table (C2	)	
Sedime	nt Deposits (B2)		Hydrog	en Sulfide	e Odor (C	1)		Satura	ition Visible	e on Aerial In	nagery (C	(9)
Drift De	posits (B3)		Oxidize	d Rhizos	pheres ald	ong Livir	ng Roots (C3)	Geom	orphic Pos	ition (D2)		
Algal M	at or Crust (B4)		Presen	ce of Red	luced Iron	(C4)		Shallo	w Aquitard	(D3)		
Iron De	posits (B5)		Recent	Iron Red	uction in F	Plowed S	Soils (C6)	FAC-N	leutral Tes	t (D5)		
Surface	Soil Cracks (B6)		Stunted	or Stres	sed Plants	s (D1) ( <b>L</b>	_RR A)	Raise	d Ant Mour	nds (D6) ( <b>LR</b>	<b>R A</b> )	
Inundat	ion Visible on Aerial	Imagery (B7)	Other (	Explain in	Remarks	s)		Frost-	Heave Hun	nmocks (D7)		
Sparsel	y Vegetated Concav	ve Surface (B	8)									
Field Observ	/ations:											
Surface Water	er Present? Yes	s No	X Dept	n (inches)	):							
Water table F				n (inches)								
Saturation Pr		s No	Dept	h (inches)	):		Wetland H	ydrology Pr	esent?	Yes	_ No	Х
(includes cap	rded Data (stream g	auge monito	ring well perial	nhotos n	revious in	enection	ns) if available	ı.				
			ig woii, aciiai	μποιοσ, μ	. ovious III	opoolioi	, ii avallable.	<u> </u>				
Remarks:												

Project/Site:	I-5 Woodland		City/County:	Woodland	/Cowlitz	Sampling Date: Oct.15, 2020
Applicant/Owner:	Logan Partners LLC				State: WA	Sampling Point: 42
Investigator(s):	KB		Section	n, Township	o, Range: S13, T5N, R1W	
Landform (hillslope	e, terrace, etc.): terrace		_ Local re	elief (concav	re, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR):	Northwest Forests and Coast (LRR A	<u>A)</u> Lat:		45.92	2083933 Long: -1	22.748927343 Datum:
Soil Map Unit Nam	ne: Newberg fine sandy loam				NWI Classification:	PEM1A
Are climatic / hydro	ologic conditions on the site typical for			Yes	X No	(If no, explain in Remarks)
Are Vegetation	, Soil, or Hydrology					es" Present? Yes X No
Are Vegetation	, Soil, or Hydrology	-	naturally pro	oblematic?	(If needed, explain any ar	nswers in Remarks.)
SUMMARY OF	FINDINGS – Attach site map	showing	sampling	point loc	ations, transects, impo	rtant features, etc.
Hydrophytic Veget	ation Present? Yes x N	0	1.41.0			
Hydric Soil Presen	t? Yes x N	0		ampled Are a Wetland?	Y 29 Y	No
Wetland Hydrology	y Present? Yes <u>x</u> N	0	_	a rronana.		
VEGETATION						
Tree Stratum (IIIs	se scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status?	Dominance Test workshe Number of Dominant Speci	
1. Populus balsa	•	100	Y		That Are OBL, FACW, or F.	
2.			·		Total Number of Dominant	
3.		-			Species Across All Strata:	<b>3</b> (B)
4.					Percent of Dominant Specie	
	Total Cover	: 100	_		That Are OBL, FACW, or F.	
Shrub Stratum  1. Cornus serices 2. 3. 4. 5. Herb Stratum  1. Phalaris aruno 2. 3	Total Cover	20 20 20 100	YYY	FACW	Prevalence Index Worksh Total % Cover of:  OBL species FACW species FAC species FACU species UPL species Column Totals:  O Prevalence Index = B/A =	Multiply by:  x1 = 0  x2 = 0  x3 = 0  x4 = 0  x5 = 0  (A) 0 (B)
4						ndicators: Hydrophytic Vegetation
_			. ———		X 2 - Dominance Te	• • •
					3 - Prevalence Ind	
					4 - Morphological	Adaptation1 (Provide supporting
0						or on a separate sheet)
_					5 - Wetland Non-\	/ascular Plants <sup>1</sup>
					Problematic Hydro	ophytic Vegetation <sup>1</sup> (Explain)
	Total Cover	: 100	-			
Woody Vine S  1.	<u>tratum</u>				<sup>1</sup> Indicators of hydric soil and be present, unless disturbed	
0					Hydrophytic	
	Total Cover	_	-		Vegetation	
% Ba	re Ground in Herb Stratum 0 %	Cover of B	iotic Crust	0	Present?	Yes x No
Remarks:						

SOIL								Sampli	ng Point:	42
Profile Des	scription: (Describe	to the dep	th needed to doc	ument t	he indicato	or or co	nfirm the abs	sence of indica	tors.)	
Depth	Matrix	•		dox Feat					•	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	– Textur	e	Remarks	
0-6	10YR3/2	100	<u> </u>				L			
6-10	10YR3/2	95	7.5YR3/4	5		М	LS			
10-16	10YR4/2	95	7.5YR3/4	5	C	М	S			
							_			
'Type: C=0	Concentration, D=De	pletion, RM:	=Reduced Matrix, (	CS=Cov	ered or Coa	ated San	nd Grains. <sup>2</sup> L	ocation: PL=Po	re Lining, M=Matrix.	
Hydric Soi	I Indicators: (Appli	cable to all	LRRs, unless oth	erwise	noted.)		Indicators	s for Problema	tic Hydric Soils <sup>3</sup> :	
Histos	sol (A1)		x Sandy F	Redox (S	S5)			2 cm Mud	ck (A10)	
Histic	Epipedon (A2)		Stripped	l Matrix	(S6)			Red Pare	ent Material (TF2)	
Black	Histic (A3)		Loamy I	Mucky M	lineral (F1)	(except	MLRA 1)	Other (Ex	rplain in Remarks)	
Hydro	gen Sulfide (A4)		Loamy (	Gleyed N	Matrix (F2)					
Deple	ted Below Dark Surfa	ace (A11)	Deplete	d Matrix	(F3)					
Thick	Dark Surface (A12)		Redox [	Dark Sur	rface (F6)		<sup>3</sup> Indi	cators of hydrop	phytic vegetation and	
Sandy	y Muck Mineral (S1)		Deplete	d Dark S	Surface (F7	)	We	etland hydrology	must be present,	
Sandy	y gleyed Matrix (S4)		Redox [	Depressi	ions (F8)		I	unless disturbed	d or problematic.	
Restrictive	Layer (if present):									
Type:										
Depth (inch	nes):					Н	ydric Soil Pr	esent?	Yes x	No
Remarks:						•				
HYDROLOG										
	ydrology Indicators									
_	dicators (any one indi	cator is suffi			(5.0)				/ Indicators (2 or more	
	ce Water (A1)				Leaves (B9)	(excep	t		ained Leaves (B9) (M	LRA 1, 2,
	Water Table (A2)				A and 4B)			4A an		
	ation (A3)		Salt Cru	, ,					Patterns (B10)	
	r Marks (B1)				orates (B13)				son Water Table (C2)	(00)
	nent Deposits (B2)				le Odor (C1	-	Dt - (O2)		n Visible on Aerial Ima	agery (C9)
	Deposits (B3) Mat or Crust (B4)				•	•	g Roots (C3)		hic Position (D2)	
	` '				duced Iron		oile (C6)		Aquitard (D3)	
	Deposits (B5)				duction in P				itral Test (D5)	) A\
	ce Soil Cracks (B6)	l Imaganı (F			ssed Plants		KK A)		nt Mounds (D6) (LRR	. <b>A</b> )
	ation Visible on Aeria ely Vegetated Conca		'	-хріаін іі	n Remarks)	)		FIOSI-FIE	ave Hummocks (D7)	
		ive ourrace	(50)				1			
Field Obse	ater Present? Ye	ıs.	No X Depth	(inches	s):					
Water table				(inches						
Saturation		s	No x Depth	(inches	s):		Wetland H	ydrology Prese	ent? Yes <u>x</u>	_No
	apillary fringe)				<del> </del>		\ '' \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
Describe Rec	corded Data (stream	gauge, mon	itoring well, aerial p	notos, p	previous ins	pections	s), if available:			
Remarks:										
1										

Project/Site: <u>I-5 Woodland</u>		_City/County	: Woodland	/Cowlitz	Sampling Date: Oct.15, 2020
Applicant/Owner: Logan Partners LLC				State: WA	Sampling Point: 43
nvestigator(s): KB		Section	n, Township	, Range: S13, T5N, R1W	
Landform (hillslope, terrace, etc.): terrace		Local re	elief (concav	e, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR): Northwest Forests and Coast (LRR A	<u>)</u> Lat:		45.92	2058545 Long: -122	2.748855941 Datum:
Soil Map Unit Name: Newberg fine sandy loam				NWI Classification: I	PSSC
Are climatic / hydrologic conditions on the site typical for t	his time of	year?	Yes	X No(	(If no, explain in Remarks)
Are Vegetation, Soil, or Hydrology					s" Present? Yes X No
Are Vegetation, Soil, or Hydrology		naturally pr	oblematic?	(If needed, explain any ans	wers in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	showing	sampling	point loc	ations, transects, import	tant features, etc.
Hydrophytic Vegetation Present? Yes No	) X	1.4.0			
Hydric Soil Present? YesNo	X		ampled Are a Wetland?	YAS	No x
Wetland Hydrology Present? YesNo	X	_			
VEGETATION					
Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status?	Dominance Test worksheet Number of Dominant Species	
1. Populus balsamifera	80	Y	FAC□	That Are OBL, FACW, or FA	C: <b>2</b> (A)
2.				Total Number of Dominant	<u></u>
3				Species Across All Strata:	(B)
4				Percent of Dominant Species	
Total Cover:	80	_		That Are OBL, FACW, or FA	.C:(A/B)
Charle Chrodina				Dravalance Index Werksho	
Shrub Stratum 1. Corylus cornuta	60	Υ	ŒACU□	Prevalence Index Workshee Total % Cover of:	et: Multiply by:
2. Rubus armeniacus	20	- <del>'</del> Y			x1 = <b>0</b>
3.		-			x2 = <b>0</b>
4.					x3 = <b>0</b>
5.					x4 = <b>0</b>
Total Cover:	80	_		UPL species	x5 = <b>0</b>
Herb Stratum				Column Totals:0	(A)(B)
1				Prevalence Index = B/A = _	
2					<u>.                                    </u>
3.				Hydrophytic Vegetation Ind	
4			·		lydrophytic Vegetation
5. 6.			. ———	2 - Dominance Test 3 - Prevalence Inde	
7			·		daptation1 (Provide supporting
		-	. ———		on a separate sheet)
9.			-	5 - Wetland Non-Va	. ,
10.					phytic Vegetation¹ (Explain)
11.					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Total Cover:	0				
Woody Vine Stratum		_		<sup>1</sup> Indicators of hydric soil and	
1. Hedera helix	80%	Y		be present, unless disturbed	or problematic.
2				Hydrophytic	
Total Cover:		<u>-</u>		Vegetation	
% Bare Ground in Herb Stratum 20 %	Cover of B	liotic Crust	0	Present?	Yes Nox
Remarks:					

SOIL			Sampling Point: 43
Profile Description: (Describe to the	depth needed to document the indicator	or confirm the absen	ce of indicators.)
Depth Matrix	Redox Features		
(inches) Color (moist) %		Loc <sup>2</sup> Texture	Remarks
0-12 10YR3/2 100			
		<u> </u>	
			_
			_
		<del></del>	_
		<del></del>	
			<del>_</del>
<sup>1</sup> Type: C=Concentration D=Depletion F	RM=Reduced Matrix, CS=Covered or Coate	d Sand Grains <sup>2</sup> Loca	ation: PL=Pore Lining M=Matrix
Type. C Concentiation, E Depletion, 1	The reduced Manny, Go Governou or Goule	a carra Gramo. 2000	Alon: 1 2-1 oro Elimig, M-Matix.
Hydric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)	Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
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) (ex	xcept MLRA 1)	Other (Explain in Remarks)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		
Depleted Below Dark Surface (A11	) Depleted Matrix (F3)		
Thick Dark Surface (A12)	Redox Dark Surface (F6)	<sup>3</sup> Indicat	ors of hydrophytic vegetation and
Sandy Muck Mineral (S1)	Depleted Dark Surface (F7)		and hydrology must be present,
Sandy gleyed Matrix (S4)	Redox Depressions (F8)		ess disturbed or problematic.
Restrictive Layer (if present):			<u> </u>
Type: Roots Depth (inches): 12		Hydric Soil Prese	ent? Yes No x
Remarks:		,	
HYDROLOGY			
Wetland Hydrology Indicators:			
Primary Indicators (any one indicator is s			Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (e	except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A and 4B)	_	4A and 4B)
Saturation (A3)	Salt Crust (B11)	_	_ Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	_	_ Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)		_ Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along	Living Roots (C3)	Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C-	<u> </u>	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Plov	ved Soils (C6)	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D	1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imager	y (B7) Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surfa	ace (B8)		
Field Observations:			
Surface Water Present? Yes	No X Depth (inches):	_	
Water table Present? Yes	No x Depth (inches):	_ Watland Hed	volomy Drocomt? Von No v
Saturation Present? Yes (includes capillary fringe)	No x Depth (inches):	_   Wettand Hyd	rology Present? Yes No x
	nonitoring well, aerial photos, previous inspe	ctions), if available:	
		,	
Remarks:			

Project/Site:	t/Site: I-5 Woodland City/County: Wo							Sampling Date: Oct.15, 2020		
Applicant/Owner:	Logan Partners LLC					State: WA Sampling Point:				
Investigator(s):	KB			Section	n, Township,	, Range:	S13, T5N, R1W			
Landform (hillslop	e, terrace, etc.):	ditch		Local re	lief (concave	e, convex	, none): none		Slope (%	6): <u>0-3%</u>
Subregion (LRR):	Northwest Forests an	d Coast (LRR A)	Lat:		45.922	2088094	Long:	122.7487027	745 Datu	ım:
Soil Map Unit Nan	ne: Newberg fine	sandy loam					NWI Classification	: PEM1C		
Are climatic / hydr	ologic conditions on the	site typical for th	nis time of	year?	Yes	Χ	No	(If no, exp	lain in Rema	rks)
Are Vegetation	, Soil,	or Hydrology		significantly	disturbed?	Are "N	Iormal Circumstar	ces" Present	t? Yes>	<_No
Are Vegetation	, Soil,	or Hydrology		naturally pro	oblematic?	(If nee	eded, explain any a	answers in R	emarks.)	
SUMMARY OF	FINDINGS – Atta	ch site map s	howing	sampling	point loca	ations, t	transects, imp	ortant feat	tures, etc.	
Hydrophytic Vege	tation Present?	Yes No	x	la tha Co		_				
Hydric Soil Preser	nt?	YesNo	Х		ampled Area a Wetland?	а	Yes	No	x	
Wetland Hydrolog		Yes No		Within	a vvetiana:					
Plot located in bo	ttom of uypland ditch									
VEGETATION										_
VEGETATION			A book its	Dominant	Indicator	Domina	nce Test worksh	oot:		
			Absolute % Cover	Dominant Species?	Status?		of Dominant Spe			
,	se scientific names.)			-			e OBL, FACW, or		_	(4)
1									0	(A)
2.							umber of Dominan Across All Strata:		2	(D)
3.								-	2	(B)
4		Total Cover:	0				of Dominant Spece OBL, FACW, or		0%	(A/B)
		Total Cover.	- 0			I IIat Ait	GODE, I ACVV, OI		0 76	(A/B)
Shrub Stratum						Prevale	nce Index Works	heet:		
1.							tal % Cover of:		Multiply by:	
2.						OBL spe		x1 =		
0						-	species			_
1		<u> </u>		-		FAC spe		x3 =		_
5.						FACU s	pecies	x4 =	0	
		Total Cover:	0			UPL spe	ecies	x5 =		<u> </u>
Herb Stratum						Column	Totals: 0	(A)	0	(B)
1						Preva	lence Index = B/A	=		
2.										
3						Hydrop	hytic Vegetation			
4							1 - Rapid Test fo		vegetation Vegetation	
5							2 - Dominance T			
6							3 - Prevalence Ir			
7							4 - Morphologica			pporting
8.							data in Remarks			
9.							5 - Wetland Non			
10							Problematic Hyd	rophytic Vege	etation' (Exp	lain)
11		T-4-1 O								
Mandy Mina C	Name de com	Total Cover:	0			1, ,, ,				
Woody Vine S	<u>stratum</u>		E0/	V	ŒACU□		ors of hydric soil a ent, unless disturb			ı
Hedera helix     Rubus ursinur			<u>5%</u> 5	<u>Y</u>	#ACU□	•		ca or probler	natio.	
2. Rubus ursinus	S	Total Cover:	10			Hydrop	•			
% <b>D</b> a	are Ground in Herb Stra		Cover of B	otic Crust	0	Vegetat Present		Yes	No	X
Remarks:	are oround in ricib ond		00101 01 0	Ollo Oldot		1100011	••			
rtemarks.										

SUIL								Samp	ling Point:			44
Profile Des	scription: (Describe	to the dept	h needed to doo	ument th	ne indicat	or or co	onfirm the abs	ence of indic	ators.)			
Depth	Matrix		Re	dox Featı	ures							
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture	9		Remarks		
0-8	10YR2/2	100	()				SL					
8-16	10YR4/2	100		-			LS					
	-	- <del></del> -										
	-	- <del></del> -										
					-	-						
<sup>1</sup> Type: C=C	Concentration, D=Dep	oletion, RM=I	Reduced Matrix,	CS=Cove	ered or Co	ated Sa	and Grains. <sup>2</sup> L	ocation: PL=P	ore Lining	, M=Matrix.		
Hydric Soil	I Indicators: (Applic	able to all L	RRs, unless otl	nerwise r	noted.)		Indicators	for Problem	-	c Soils <sup>3</sup> :		
	sol (A1)			Redox (S					ıck (A10)			
Histic	Epipedon (A2)		Strippe	d Matrix (	S6)			Red Par	ent Materi	ial (TF2)		
Black	Histic (A3)			-			ot MLRA 1)	Other (E	xplain in F	Remarks)		
Hydro	gen Sulfide (A4)		Loamy	Gleyed M	latrix (F2)	)						
Deple	ted Below Dark Surfa	ce (A11)	Deplete	ed Matrix	(F3)							
Thick	Dark Surface (A12)		Redox	Dark Surf	face (F6)			cators of hydro				
Sandy	Muck Mineral (S1)		Deplete	ed Dark S	urface (F	7)	We	etland hydrolog	y must be	present,		
Sandy	gleyed Matrix (S4)		Redox	Depression	ons (F8)		ι	unless disturbe	d or probl	ematic.		
Restrictive	Layer (if present):											
Type:												
Depth (inch	es):						Hydric Soil Pro	esent?	Yes	s	No	Х
LIVEROL OC												
HYDROLOG' Wetland Hy	r ydrology Indicators:											
_	icators (any one indic		ient)					Seconda	v Indicato	rs (2 or moi	e require	ed)
	ce Water (A1)	ator io odino		Stained L	eaves (B9	a) (exce	nt			aves (B9) ( <b>I</b>		
	Vater Table (A2)				A and 4B)	, ,	ρι		nd 4B)	aves (Bs) (I	<u>.</u>	_,
<u> </u>	ation (A3)			ust (B11)	Tuna 45)	,			e Patterns	(B10)		
	Marks (B1)				rates (B13	3)				r Table (C2	١	
	ent Deposits (B2)				e Odor (C					on Aerial In		C9)
	Peposits (B3)					•	ng Roots (C3)		phic Posit		lagoly (c	50)
	Mat or Crust (B4)				luced Iron	•	g (00)		Aquitard (	` '		
	eposits (B5)					,	Soils (C6)		utral Test	` '		
	ce Soil Cracks (B6)				sed Plants					ds (D6) ( <b>LR</b> I	RA)	
	ation Visible on Aeria	Imagery (B7			Remarks	. , ,				mocks (D7)		
	ely Vegetated Conca		· — `	<u> Е</u> хріант пі	ritorname	-,			7G 7 7 7G 7 7	moono (B1)		
Field Obse	, ,	70 Gariago (1					<u> </u>					
	ater Present? Ye	s N	lo X Dept	n (inches)	):							
Water table			lo x Dept	h (inches)	):							
Saturation I		s N	lo x Dept	n (inches)	):		Wetland H	ydrology Pres	sent?	Yes	_ No	Χ
•	apillary fringe)			-1			) '#! - -					
Describe Rec	orded Data (stream o	jauge, monito	oring well, aerial	pnotos, p	revious in	spection	is), it available:					
Remarks:												
ı												

Project/Site:	I-5 Woodland		City/County	: Woodland	/Cowlitz			Sar	npling Date	: Oct.1	5, 2020
Applicant/Owner:	Logan Partners LLC					State:	WA	Sar	npling Point	i:	45
Investigator(s):	KB		Sectio	n, Township	, Range:	S13, T	5N, R1W				
Landform (hillslope	· —		_ Local re	elief (concav	e, convex	none):	none		Slo	pe (%):	0-3%
Subregion (LRR):	Northwest Forests and Coast (L	RR A) Lat:		45.920	0895834	Long:		122.749	443613	Datum:	:
Soil Map Unit Nam	ne: Newberg fine sandy loar	m				NWI Cla	ssification	n: <u>PEM1</u>	A		
Are climatic / hydro	ologic conditions on the site typica	al for this time of	year?	Yes	X	No		(If no,	explain in F	≀emarks	3)
Are Vegetation	, Soil, or Hydrol	ogy	significantly	/ disturbed?	Are "N	ormal C	ircumstar	ices" Pre	sent? Yes	s <u>X</u>	No
Are Vegetation	, Soil, or Hydrol	ogy	naturally pr	oblematic?	(If nee	ded, exp	olain any a	answers	in Remarks	.)	
SUMMARY OF	FINDINGS – Attach site r	map showing	sampling	point loca	ations, t	ransed	cts, imp	ortant t	features,	etc.	
Hydrophytic Veget	ation Present? Yes x	No									
Hydric Soil Presen				ampled Are		Yes	х	No			
Wetland Hydrolog			- within	a Wetland?						_	
VEGETATION					1						
		Absolute	Dominant	Indicator			st worksh				
Tree Stratum (U	se scientific names.)	% Cover	Species?	Status?			inant Spe				
1. Populus balsa	mifera	100	Y		I nat Are	OBL, F	ACW, or	FAC:	5		(A)
2							Dominan				
3					Species	Across	All Strata:		5		_(B)
4					Percent	of Domi	nant Spec	cies			
	Total (	Cover: 100	<u>-</u>		That Are	OBL, F	ACW, or	FAC: _	100%	D	_(A/B)
					<u> </u>						
Shrub Stratum  1. Cornus serice	2	20	Υ	FACW		n <b>ce Ind</b> al % Co	ex Works	neet:	Multiply	bv.	
Salix sitchens		10	Y	#ACW □	OBL spe		vei oi.	 x1 =	Multiply 0	by.	_
3.			· <del>'</del>								_
4.			· <del></del>	· ——	FAC spe	•			0		_
5.				- ———					0		=
o	Total (				UPL spe			^- x5 =	0		_
Herb Stratum	. 512		-		Column		0	(A)	0		_ (B)
1. Phalaris arund	dinacea	20	Υ	JFACW □			dex = B/A	— ` <i>′</i> —			_(-/
2. Carex obnupta		80	Y	©BL□						-	-
3.					Hydropi	vtic Ve	getation	Indicato	rs:		
4.		_				-	-		hytic Vegeta	ation	
5.				· ———	X		ninance T		-		
6.		<u> </u>				3 - Pre	valence Ir	ndex is ≤	3.0 <sup>1</sup>		
7.		<u> </u>				4 - Mor	phologica	l Adapta	tion1 (Provi	de supp	orting
8.		<u> </u>				data in	Remarks	or on a s	separate sh	eet)	-
9.							tland Non			,	
						Probler	matic Hyd	rophytic '	Vegetation <sup>1</sup>	(Explain	n)
11.											
	Total (	Cover: 100									
Woody Vine S	<u>Stratum</u>		•						nd hydrolog	y must	
1					be prese	nt, unle	ss disturb	ed or pro	blematic.		
2					Hydropl	nytic					
		Cover:			Vegetat	on					
% Ba	re Ground in Herb Stratum 0	% Cover of B	iotic Crust	0	Present	?		Yes_	<u>x</u> N	٥	
Remarks:						_					

SUIL								3	sampling Point:		
Profile Des	cription: (Describ	e to the dept	h needed to doo	ument tl	he indicat	or or con	firm the abs	sence of i	ndicators.)		
Depth	Matrix		Re	dox Feat	tures						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textur	е		Remarks	
0-2	10YR3/2	100	, , , , , , , , , , , , , , , , , , ,				LS				
2-8	10YR3/2	80	7.5YR4/6	5	С	M	LS				
			10YR4/2	15	D	М					
¹Type: C=C	oncentration, D=De	epletion, RM=	Reduced Matrix,	CS=Cove	ered or Co	ated San	d Grains. <sup>∠</sup> L	.ocation: I	<sup>2</sup> L=Pore Lining	, M=Matrix.	
Hydric Soil	Indicators: (Appl	icable to all I	LRRs, unless oth	nerwise i	noted.)		Indicators	s for Prok	olematic Hydri	c Soils <sup>3</sup> :	
Histoso				Redox (S	-				m Muck (A10)		
Histic I	Epipedon (A2)			d Matrix (					d Parent Materi	al (TF2)	
	Histic (A3)				lineral (F1)	(except	MLRA 1)		ner (Explain in F		
Hydrog	gen Sulfide (A4)		Loamy	Gleyed N	∕atrix (F2)						
Deplet	ed Below Dark Sur	face (A11)	Deplete	d Matrix	(F3)						
Thick [	Dark Surface (A12)		Redox	Dark Sur	face (F6)		<sup>3</sup> Indi	cators of I	hydrophytic veg	etation and	
Sandy	Muck Mineral (S1)		Deplete	d Dark S	Surface (F7	<b>'</b> )	W	etland hyd	rology must be	present,	
Sandy	gleyed Matrix (S4)		Redox	Depressi	ions (F8)			unless dis	turbed or proble	ematic.	
Restrictive	Layer (if present):										
Type:	Refusa	al									
Depth (inche	es):	8				Hy	ydric Soil Pr	esent?	Yes	<u> </u>	No
HYDROLOGY											
_	drology Indicator									<b>10</b>	
	cators (any one ind	licator is suffic		S	(50	\			ondary Indicator		
	e Water (A1)				_eaves (B9				ater-Stained Lea	₃ves (B9) (M	LRA 1, 2,
	Vater Table (A2)				A and 4B)				4A and 4B)	(D40)	
	tion (A3) Marks (B1)			ıst (B11)	rates (B13				ainage Patterns /-Season Wateı		
	ent Deposits (B2)				e Odor (C				turation Visible		ageny (CQ)
	eposits (B3)				=	-	Roots (C3)		omorphic Positi		agery (OO)
	Mat or Crust (B4)				duced Iron		110010 (00)		allow Aquitard (		
	eposits (B5)				duction in F	` '	oils (C6)		C-Neutral Test	. ,	
	e Soil Cracks (B6)				sed Plants				ised Ant Mound	` '	( <b>A</b> )
	tion Visible on Aeri	al Imagery (B			n Remarks		,		st-Heave Humi		,
	ely Vegetated Conc		, <u>—</u>	·		,				, ,	
Field Obser	vations:										
Surface Wa	ter Present? Y	es N		n (inches	<i></i>						
Water table Saturation P				n (inches	· <del></del>		Wetland H	ludrologu	Procent?	Voc v	No
	pillary fringe)	es N	No <u>x</u> Depti	n (inches	·)		vveilanu n	iyarology	riesein!	Yes <u>x</u>	_NO
,	orded Data (stream	gauge, monit	oring well, aerial	ohotos, p	revious ins	spections	), if available	:			
Remarks:											

Project/Site: I-5 Woodland		City/County:	Woodland	/Cowlitz	Sampling Date: Oct.15, 2020
Applicant/Owner: Logan Partners LLC				State: WA	Sampling Point: 46
Investigator(s): KB		Section	n, Township	o, Range: S13, T5N, R1W	
Landform (hillslope, terrace, etc.): terrace		_ Local re	lief (concav	re, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR): Northwest Forests and Coast (LRR	RA) Lat:		45.92	0893394 Long: -12	2.749463652 Datum:
Soil Map Unit Name: Newberg fine sandy loam				NWI Classification:	
Are climatic / hydrologic conditions on the site typical for		•	Yes		(If no, explain in Remarks)
Are Vegetation, Soil, or Hydrology					s" Present? Yes X No
Are Vegetation, Soil, or Hydrology		naturally pro	oblematic?	(If needed, explain any ans	wers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	p showing	sampling	point loc	ations, transects, impor	tant features, etc.
Hydrophytic Vegetation Present? Yes x	No				
Hydric Soil Present? Yes			ampled Are a Wetland?	244	No x
	No x	WILLIIII	a wellanu:		
VEGETATION					
123217(1131)	A l l 4 -	Daminant	la dia atau	Dominance Test workshee	<u>.</u>
	Absolute % Cover	Dominant Species?	Indicator Status?	Number of Dominant Specie	
<u>Tree Stratum</u> (Use scientific names.)		-		That Are OBL, FACW, or FA	C·
1					O(A)
2 3.				Total Number of Dominant Species Across All Strata:	1 (B)
4.					
Total Cov	er: 0			Percent of Dominant Species That Are OBL, FACW, or FA	
Shrub Stratum				Prevalence Index Workshe	
1.				Total % Cover of:	Multiply by:
2.				OBL species	
3.	-		. ———	FACW species	
4.					x3 = <b>0</b>
5.				FACU species	x4 = <b>0</b>
Total Cov	er: 0			UPL species	x5 = <b>0</b>
<u>Herb Stratum</u>				Column Totals:0	(A)(B)
Phalaris arundinacea	100	<u> </u>	FACW□	Prevalence Index = B/A =	
2					
3				Hydrophytic Vegetation Inc	
4					lydrophytic Vegetation
5		-		X 2 - Dominance Tes	
6		-		3 - Prevalence Inde	
7					daptation1 (Provide supporting on a separate sheet)
8 9.		-	. ———	5 - Wetland Non-Va	
40					phytic Vegetation <sup>1</sup> (Explain)
11.				1 Toblematic Hydrop	Trytic Vegetation (Explain)
	er: 100	· <del></del>	. ———		
Woody Vine Stratum  1.				<sup>1</sup> Indicators of hydric soil and be present, unless disturbed	
2.				Hydronby#ic	
Total Cov	er:			Hydrophytic Vegetation	
% Bare Ground in Herb Stratum0		iotic Crust	0		Yesx No
Remarks:				l	

SUIL								Sam	pling Point	·		40
Profile Desc	ription: (Describe	to the depth	needed to doo	ument the	e indicat	or or co	nfirm the abs	ence of indi	cators.)			_
Depth	Matrix	•		dox Featu					,			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<del>-</del> Texture	۵		Remarks		
0-16	10YR3/2	100	Color (Molot)		Турс		SL	<u> </u>		rtomanto		_
0 10	1011(0/2	100										_
							_					_
												_
						-						_
		. —— —				-						_
		<del></del>				-		<del></del>				_
		- — —										_
<sup>1</sup> Type: C=Cc	oncentration, D=Dep	letion RM=R	educed Matrix	CS=Cove	ed or Co	ated Sai	nd Grains <sup>2</sup> L	ocation: PI =	Pore Linin	n M-Matrix		_
1,700. 0 00	moonadan, b bop	// / / / / / / / / / / / / / / / / / /	oddood Matin,	00 0010.	04 01 00	atou ou.	na Oramo. L	000000111 1 2	. 0.0 =	y, m-manna		
Hydric Soil I	ndicators: (Applic	able to all LF	RRs, unless oth	nerwise n	oted.)		Indicators	for Problen	natic Hydr	ic Soils³:		
Histoso	l (A1)		Sandy I	Redox (S5	5)			2 cm N	luck (A10)			
Histic E	pipedon (A2)		Strippe	d Matrix (S	86)			Red Pa	arent Mate	rial (TF2)		
Black H	istic (A3)		Loamy	Mucky Mir	neral (F1)	(excep	t MLRA 1)	Other	Explain in	Remarks)		
	en Sulfide (A4)			Gleyed Ma						•		
	d Below Dark Surfa	ce (A11)		ed Matrix (								
	ark Surface (A12)	,		Dark Surfa			<sup>3</sup> Indi	cators of hyd	ophytic ve	getation and		
	Muck Mineral (S1)			ed Dark Su		7)		etland hydrolo		-		
	gleyed Matrix (S4)			Depressio		,		unless disturb		-		
	ayer (if present):			'	( - /							_
	ayor ( proconty.											
Type: Depth (inche	6).		_				lydric Soil Pr	esent?	Ye	e	No x	
Remarks:			_				Tyune con i i		10	<u> </u>		_
HYDROLOGY												_
-	drology Indicators:											
	ators (any one indic	ator is sufficie								ors (2 or mor		
Surface	Water (A1)		Water-	Stained Le	aves (B9	) (excep	ot			aves (B9) (N	/ILRA 1, 2,	
High W	ater Table (A2)			A 1, 2, 4A	and 4B)				and 4B)			
	on (A3)			ust (B11)					ge Pattern	` '		
Water N	Marks (B1)			Invertebra				Dry-Se	ason Wate	er Table (C2)	)	
Sedime	nt Deposits (B2)		Hydrog	en Sulfide	Odor (C	1)		Satura	tion Visible	on Aerial Im	nagery (C9)	
Drift De	posits (B3)		Oxidize	d Rhizosp	heres ald	ng Livin	g Roots (C3)	Geomo	orphic Posi	tion (D2)		
Algal M	at or Crust (B4)		Presen	ce of Redu	uced Iron	(C4)		Shallov	w Aquitard	(D3)		
Iron De	posits (B5)		Recent	Iron Redu	iction in F	Plowed S	Soils (C6)	FAC-N	eutral Tes	t (D5)		
Surface	Soil Cracks (B6)		Stunted	or Stress	ed Plants	s (D1) ( <b>L</b>	.RR A)	Raised	Ant Moun	ds (D6) ( <b>LRI</b>	R A)	
Inundat	ion Visible on Aerial	Imagery (B7)	Other (	Explain in	Remarks	)		Frost-l	leave Hum	nmocks (D7)		
Sparsel	y Vegetated Concav	ve Surface (B	8)									
Field Observ	vations:											_
Surface Water	er Present? Yes	s No		n (inches):								
Water table F				n (inches):						v		
Saturation Pr (includes cap		s No	x Depti	n (inches):			wetiand H	ydrology Pro	esent?	Yes	Nox_	_
· ·	rded Data (stream g	auge, monitor	ring well, aerial	ohotos, pre	evious ins	spection	s), if available:					_
	. a o a o a a a a a a a a a a a a a a a	aago,oo.	ge, ae.i.a. j	po.co, p		<b>.</b>	o), a a aa	'				
Remarks:			<u> </u>				<u> </u>					

Project/Site:	I-5 Woodland		City/County	: Woodland	/Cowlitz	Sampling Date: Oct.15, 2020
Applicant/Owner:	Logan Partners LLC				State: WA	Sampling Point: 47
Investigator(s):	KB		Section	n, Township	o, Range: S13, T5N, R1W	
Landform (hillslope	e, terrace, etc.): terrace		_ Local re	elief (concav	re, convex, none): concave	Slope (%): <u>0-3%</u>
Subregion (LRR):	Northwest Forests and Coast (LRR A	<u>)</u> Lat:		45.91	9694571 Long: -1:	22.748988438 Datum:
Soil Map Unit Nam	e: Newberg fine sandy loam				NWI Classification:	none
	ologic conditions on the site typical for t			Yes	X No	(If no, explain in Remarks)
	, Soil, or Hydrology					es" Present? Yes X No
Are Vegetation	, Soil, or Hydrology		naturally pr	oblematic?	(If needed, explain any ar	swers in Remarks.)
SUMMARY OF	FINDINGS - Attach site map	showing	sampling	point loca	ations, transects, impo	rtant features, etc.
Hydrophytic Vegeta	ation Present? Yes x No	0				
Hydric Soil Present	t? Yes x No	0		ampled Are a Wetland?		No
Wetland Hydrology				a Welland.		
Ditched portion of	Wetland 5					
VEGETATION						
Tree Stratum (Us	se scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status?	Dominance Test workshee Number of Dominant Species	
Populus balsai	,	100	Υ		That Are OBL, FACW, or F	AC: <b>3</b> (A)
2.					Total Number of Dominant	
3.					Species Across All Strata:	(B)
4					Percent of Dominant Specie	es
	Total Cover:	100	-		That Are OBL, FACW, or FA	AC:(A/B)
Shrub Stratum  1. Crataegus moi 2.	nogyna	30	Y	<u> FAC</u>	Prevalence Index Worksh Total % Cover of: OBL species	eet:Multiply by: x1 = 0
<u> </u>		-				x2 = <b>0</b>
4.					FAC species	x3 = <b>0</b>
5.					FACU species	x4 = <b>0</b>
	Total Cover:	30	_		UPL species	_x5 =
Herb Stratum					Column Totals: 0	_(A)(B)
1. Ranunculus re	pens	10	Y	FAC□	Prevalence Index = B/A =	
					Hydrophytic Vegetation In	
_	_		·	·		Hydrophytic Vegetation
		-	·	. ———	2 - Dominance Tes 3 - Prevalence Ind	
7				·		Adaptation1 (Provide supporting
0		-	-	. ———		or on a separate sheet)
			· ———	· ———	5 - Wetland Non-V	' '
-				. ———		ophytic Vegetation <sup>1</sup> (Explain)
						, , , , ,
	Total Cover:	10				
Woody Vine S	<u>tratum</u>	-	-		<sup>1</sup> Indicators of hydric soil and	d wetland hydrology must
1. Rubus ursinus	:	15%	Υ		be present, unless disturbed	d or problematic.
2.					Hydrophytic	
	Total Cover:		≣.		Vegetation	
% Bai	re Ground in Herb Stratum <u>80</u> %	Cover of B	iotic Crust	0	Present?	Yes x No
Remarks:						

SOIL								Sampling	g Point:	4
Profile Des	cription: (Descr	ibe to the dep	oth needed to do	cument t	he indica	tor or co	onfirm the abse	ence of indicato	ors.)	
Depth	Matri	×	R	edox Fea	tures					
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<del>-</del> Texture		Remarks	
0-5	10YR3/3	100	00.0. (0.0.)	,,,	.,,,,,		LS			
5-16	10YR4/2	95	10YR4/4	5		M	LS			
0 10	101111/12		1011(1)							
							_			
					_		_			
							_			
				_						
<sup>1</sup> Type: C=C	Concentration, D=	Depletion, RM	=Reduced Matrix	, CS=Cov	ered or Co	oated Sar	nd Grains. <sup>2</sup> Lo	cation: PL=Por	e Lining, M=Matrix.	
Hydric Soil	Indicators: (Ap	plicable to all	LRRs, unless o	therwise	noted.)		Indicators	for Problemati	c Hydric Soils³:	
	ol (A1)		<u>x</u> Sandy	/ Redox (S	S5)		-	2 cm Muck		
Histic	Epipedon (A2)		Stripp	ed Matrix	(S6)		-	Red Paren	nt Material (TF2)	
Black	Histic (A3)		Loam	y Mucky N	/lineral (F1	l) (excep	t MLRA 1)	Other (Exp	olain in Remarks)	
Hydro	gen Sulfide (A4)		Loam	y Gleyed I	Matrix (F2	<u>2</u> )				
Deplet	ted Below Dark S	urface (A11)	Deple	ted Matrix	(F3)					
Thick	Dark Surface (A1	2)	Redox	x Dark Su	rface (F6)		<sup>3</sup> Indic	ators of hydroph	nytic vegetation and	
Sandy	Muck Mineral (S	1)	Deple	ted Dark S	Surface (F	7)	wet	tland hydrology i	must be present,	
Sandy	gleyed Matrix (S	4)	Redox	x Depress	ions (F8)		u	nless disturbed	or problematic.	
Restrictive	Layer (if presen	t):								
Type:										
Depth (inch	es):					H	lydric Soil Pre	sent?	Yes x	No
Remarks:										
HYDROLOGY										
-	drology Indicate									
	icators (any one in	ndicator is suff							Indicators (2 or more	
	ce Water (A1)				Leaves (B		ot _		ined Leaves (B9) (N	MLRA 1, 2,
	Vater Table (A2)				A and 4B	3)	-	4A and	,	
	ation (A3)			rust (B11)	,		-		Patterns (B10)	
	Marks (B1)				orates (B1		-		on Water Table (C2)	
Sedim	ent Deposits (B2)			•	de Odor (C	•	-		Visible on Aerial Im	nagery (C9)
Drift D	eposits (B3)				•	•	g Roots (C3)	Geomorph	ic Position (D2)	
Algal I	Mat or Crust (B4)		Prese	nce of Re	duced Iror	n (C4)	-	Shallow Ad	quitard (D3)	
	eposits (B5)				duction in		· · · · · ·		ral Test (D5)	
Surfac	ce Soil Cracks (B6	5)	Stunte	ed or Stres	ssed Plant	ts (D1) ( <b>L</b>	.RR A)	Raised An	t Mounds (D6) ( <b>LRF</b>	<b>R A</b> )
Inunda	ation Visible on Ae	erial Imagery (I	37) Other	(Explain i	n Remarks	s)	-	Frost-Heav	ve Hummocks (D7)	
Sparse	ely Vegetated Cor	ncave Surface	(B8)							
Field Obse										
	ater Present?	Yes		oth (inches	,					
Water table Saturation F		Yes Yes		oth (inches	s):		Wetland Hy	drology Presei	nt? Yes x	No
	apillary fringe)	100	<u> </u>	7011 (II10110C			Wellanding	arology i reser	100 <u>x</u>	
	orded Data (strea	m gauge, mon	itoring well, aeria	l photos, p	previous in	nspection	s), if available:		·	
Domorlic:										
Remarks:										

Project/Site: I-5 Woodland		City/County:	: Woodland	/Cowlitz	Sampling Date: Oct.15, 2020
Applicant/Owner: Logan Partners LLC				State: WA	Sampling Point:
nvestigator(s): KB		Section	n, Township	o, Range: S13, T5N, R1W	
andform (hillslope, terrace, etc.): terrace		_ Local re	elief (concav	re, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR): Northwest Forests and Coast (LF	RR A) Lat:		45.91	9718065 Long: -	122.748941343 Datum:
Soil Map Unit Name: Newberg fine sandy loam				NWI Classification	
are climatic / hydrologic conditions on the site typical		•	Yes_	X No	(If no, explain in Remarks)
are Vegetation, Soil, or Hydrolog					ces" Present? Yes X No
are Vegetation, Soil, or Hydrolog	gy	naturally pr	oblematic?	(If needed, explain any a	inswers in Remarks.)
SUMMARY OF FINDINGS – Attach site m	ap showing	sampling	point loca	ations, transects, impo	ortant features, etc.
Hydrophytic Vegetation Present? Yes x	No	la tha O		_	
Hydric Soil Present? Yes	No <u>x</u>		ampled Are a Wetland?	YAS	No x
Vetland Hydrology Present? Yes	No <u>x</u>	_			
/EGETATION					
Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status?	Dominance Test workshown Number of Dominant Special Control of the	cies
. Populus balsamifera	50	Y	IFAC□	That Are OBL, FACW, or I	FAC: <b>4</b> (A)
				Total Number of Dominan	t
B	_			Species Across All Strata:	<b>5</b> (B)
l	_			Percent of Dominant Spec	ies
Total Co	over: 50	-		That Are OBL, FACW, or I	FAC: <b>80%</b> (A/B)
Shrub Stratum	20	V	ŒAC□	Prevalence Index Works	
. Rubus armeniacus . Amelanchier alnifolia		Y Y	#ACU	Total % Cover of: OBL species	Multiply by: x1 = <b>0</b>
3.		·'	<u> </u>	· -	x2 = <b>0</b>
·			· ———	FAC species	x3 = <b>0</b>
i.				FACU species	x4 = <b>0</b>
Total Co	over: 50			UPL species	x5 = <b>0</b>
<u>lerb Stratum</u>		_		Column Totals: 0	(A) <b>0</b> (B)
. Phalaris arundinacea	50	Υ	JFACW □	Prevalence Index = B/A	=
. Ranunculus repens	20	Υ	ı∉AC□		
3				Hydrophytic Vegetation I	ndicators:
					r Hydrophytic Vegetation
i	_			X 2 - Dominance To	
j				3 - Prevalence In	
·					Adaptation1 (Provide supporting
J					or on a separate sheet)
)				5 - Wetland Non-	
0 1.				Problematic Hydi	rophytic Vegetation <sup>1</sup> (Explain)
1Total Co					
Woody Vine Stratum	70	=		<sup>1</sup> Indicators of hydric soil ar	nd wetland hydrology must
				be present, unless disturbe	
		•		Hydrophytic	
	·		_		
2Total Co	over:	_		Vegetation	

SUIL								San	ipiing Poini			48
Profile Desc	ription: (Describe	to the depth	n needed to doo	ument th	e indicat	or or co	onfirm the abs	ence of indi	cators.)			
Depth	Matrix		Re	dox Featu	ıres							
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	 Textur	Α.		Remarks		
0-12	10YR3/3	100	Color (molor)	70	. , , p c		SL			rtomanto		
	101110/0											
							_					
		· —— —				· ——						
-		· —— —				· ——						
<sup>1</sup> Type: C=Cc	oncentration, D=Dep	letion RM=F	Reduced Matrix	CS=Cove	red or Co	ated Sa	nd Grains <sup>2</sup> I	ocation: PI =	Pore Linin	g M=Matrix		
1,500. 0 00	oriconardaeri, D. Bop	1011011, 11111	toddood Matrix,	00 0010	.04 0. 00	atou ou	na Gramo.	00001011. 1 2-	-1 010 2	g, m-main.		
Hydric Soil I	ndicators: (Applic	able to all L	RRs, unless ot	nerwise n	oted.)		Indicators	s for Proble	natic Hydr	ric Soils³:		
Histoso	I (A1)		Sandy	Redox (S	5)			2 cm l	/luck (A10)			
Histic E	pipedon (A2)		Strippe	d Matrix (	S6)			Red P	arent Mate	rial (TF2)		
Black H	listic (A3)		Loamy	Mucky Mi	neral (F1)	) (excep	t MLRA 1)	Other	(Explain in	Remarks)		
	en Sulfide (A4)			Gleyed M			,			,		
	d Below Dark Surfa	ce (A11)		ed Matrix (		,						
	ark Surface (A12)	, ,		Dark Surf			<sup>3</sup> Indi	cators of hyd	rophytic ve	getation and		
	Muck Mineral (S1)			ed Dark S		7)		etland hydrol		_		
	gleyed Matrix (S4)			Depression	-	,		unless distur		-		
	_ayer (if present):			'	( - /							
Type: Depth (inche:	Refusal s): 1	2				١,	Hydric Soil Pr	esent?	Ye	e	No x	,
Remarks:	<u></u>						194110 001111					<u>`</u>
HYDROLOGY												
=	drology Indicators:											
	ators (any one indic	ator is suffici								ors (2 or mor		
Surface	Water (A1)		Water-	Stained Le	eaves (B9	excep) (excep	ot	Water	-Stained Le	eaves (B9) (N	/ILRA 1, 2,	,
High W	ater Table (A2)		MLR	A 1, 2, 4A	and 4B)	)		4A	and 4B)			
Saturati	` '		Salt Cr	ust (B11)				Draina	ige Pattern	s (B10)		
Water N	Marks (B1)		Aquatio	Invertebr	ates (B13	3)		Dry-Se	eason Wate	er Table (C2)	)	
Sedime	nt Deposits (B2)		Hydrog	en Sulfide	Odor (C	1)		Satura	tion Visible	on Aerial Im	nagery (C9)	)
Drift De	posits (B3)		Oxidize	d Rhizosp	heres ald	ong Livin	ng Roots (C3)	Geom	orphic Pos	ition (D2)		
Algal M	at or Crust (B4)		Presen	ce of Red	uced Iron	(C4)		Shallo	w Aquitard	(D3)		
Iron De	posits (B5)		Recent	Iron Redu	uction in F	Plowed S	Soils (C6)	FAC-N	leutral Tes	t (D5)		
Surface	Soil Cracks (B6)		Stunted	d or Stress	sed Plants	s (D1) ( <b>L</b>	RR A)	Raise	d Ant Moun	ds (D6) ( <b>LRI</b>	R <b>A</b> )	
Inundat	ion Visible on Aerial	Imagery (B7	') Other (	Explain in	Remarks	s)		Frost-	Heave Hun	nmocks (D7)		
Sparsel	y Vegetated Concav	/e Surface (E	38)									
Field Observ	vations:											
Surface Water	er Present? Yes	s N	o X Dept	h (inches)	: <u></u>							
Water table F				h (inches)								
Saturation Pr		N	o <u>x</u> Dept	h (inches)	:		Wetland H	ydrology Pr	esent?	Yes	Nox	(
(includes cap	rded Data (stream g	auge monito	oring well aerial	nhotos pr	evious in	spection	s) if available					
_ 5557155 116601	Data (ottodili 9		g .ron, aonai	F.1.0100, PI	51.505 III	-p-0011011	.c <sub>/</sub> , ii avallable.					
Remarks:											-	

Project/Site: I-5 Woodland		City/County	: Woodland	/Cowlitz	Sampling Date: Oct.15, 2020
Applicant/Owner: Logan Partners LLC				State: WA	Sampling Point: 49
Investigator(s): KB		Sectio	n, Township	, Range: <u>S13, T5N, R1W</u>	
Landform (hillslope, terrace, etc.): terrace		_ Local re	elief (concav	e, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR): Northwest Forests and Coast (LRR A	<u>)</u> Lat:		45.919	9786469 Long: -122.7	748650025 Datum:
Soil Map Unit Name: Newberg fine sandy loam				NWI Classification: no	
Are climatic / hydrologic conditions on the site typical for t		•	Yes_		no, explain in Remarks)
Are Vegetation, Soil, or Hydrology				Are "Normal Circumstances"	
Are Vegetation, Soil, or Hydrology		naturally pr	oblematic?	(If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	showing	sampling	point loca	ations, transects, importa	nt features, etc.
Hydrophytic Vegetation Present? Yes x No	)				
Hydric Soil Present? Yes No			ampled Area	a Yes N	o x
Wetland Hydrology Present? YesNo		- within	a wetiano?		
VEGETATION					
VEGETATION	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Use scientific names.)	% Cover	Species?	Status?	Number of Dominant Species	
Crataegus monogyna	40	Y	IFAC□	That Are OBL, FACW, or FAC:	(A)
2			. ———	Total Number of Dominant	
3.				Species Across All Strata:	(B)
4				Percent of Dominant Species	44 (D)
Total Cover:	40	=		That Are OBL, FACW, or FAC:	(A/B)
Shrub Stratum				Prevalence Index Worksheet:	
Rubus armeniacus	40	Υ	ı∄AC□	Total % Cover of:	Multiply by:
2.		· <u> </u>	- —	OBL species x1	
3.			. ——	FACW speciesx2	
4.			•	FAC species x3	
5.			,	FACU species x4	= 0
Total Cover:	40	_		UPL speciesx5	=0
Herb Stratum				Column Totals: (A)	<b>0</b> (B)
1. Phalaris arundinacea	50	Y	FACW□	Prevalence Index = B/A =	
2			-		
3				Hydrophytic Vegetation Indic	
4				1 - Rapid Test for Hyd	
5				X 2 - Dominance Test is	
6				3 - Prevalence Index i	
7					ptation1 (Provide supporting
8				data in Remarks or or	. /
9			- ——— I	5 - Wetland Non-Vaso	
10		·		Problematic Hydrophy	tic Vegetation <sup>1</sup> (Explain)
11Total Cover:	50				
Woody Vine Stratum		-		<sup>1</sup> Indicators of hydric soil and we	etland hydrology must
Rubus laciniatus	40%	Υ	ı∉ACU□	be present, unless disturbed or	
Rubus ursinus	20	Y	FACU□	Hadranbadla	-
Total Cover:		· <u> </u>	. ———	Hydrophytic Vegetation	
		iotic Crust	0	Present? Ye	s x No
Remarks:				<u> </u>	

SOIL			Sampling Point: 49
Profile Description: (Describe to the dep	th needed to document the indicator or	confirm the abser	nce of indicators.)
Depth Matrix	Redox Features		
(inches) Color (moist) %		oc <sup>2</sup> Texture	Remarks
0-16 10YR3/3 100		SL SL	
101116,0			_
			<u> </u>
<del></del>			<u> </u>
			_
			<del>-</del>
			_
<sup>1</sup> Type: C=Concentration, D=Depletion, RM:	-Paducad Matrix CS-Covered or Coated S	Sand Grains 21 oc	eation: BL_Para Lining M_Matrix
Type: O-Concentration, D-Depletion, Nov.	-reduced Matrix, CO-Covered of Coated C	Sand Grains. Loc	ation. The Limity, Wi-Wattix.
Hydric Soil Indicators: (Applicable to all	LRRs, unless otherwise noted.)	Indicators f	or Problematic Hydric Soils <sup>3</sup> :
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) (exc	ept MLRA 1)	Other (Explain in Remarks)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	, _	
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		
Thick Dark Surface (A12)	Redox Dark Surface (F6)	<sup>3</sup> Indica	itors of hydrophytic vegetation and
Sandy Muck Mineral (S1)	Depleted Dark Surface (F7)		and hydrology must be present,
Sandy gleyed Matrix (S4)	Redox Depressions (F8)		lless disturbed or problematic.
Restrictive Layer (if present):	readx papressions (i d)		nece distarbed of presiding in
Type:		Undeia Cail Deaa	vanto Van Na v
Depth (inches):		Hydric Soil Pres	ent? Yes No x
HYDROLOGY			
Wetland Hydrology Indicators:			
Primary Indicators (any one indicator is suff			Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (exc	cept	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A and 4B)	_	4A and 4B)
Saturation (A3)	Salt Crust (B11)	_	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	_	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	<u>-</u>	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Liv	ving Roots (C3)	Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	_	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Plowed	d Soils (C6)	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1)	(LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (E	Other (Explain in Remarks)	_	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface	(B8)		
Field Observations:			
	No X Depth (inches):		
	No x Depth (inches):	Wetlered Use	dualant Bussent Van Na v
Saturation Present? Yes (includes capillary fringe)	No x Depth (inches):	wetiand Hyd	drology Present? Yes No X
Describe Recorded Data (stream gauge, mon	itoring well, aerial photos, previous inspecti	ions), if available:	
		,,	
Remarks:			·

Project/Site: I-5 Woodland		City/County:	: Woodland	/Cowlitz Sampling Date: Oct.15, 2020
Applicant/Owner: Logan Partners LLC				State: WA Sampling Point: 50
Investigator(s): KB		Section	n, Township	, Range: S13, T5N, R1W
Landform (hillslope, terrace, etc.): terrace		Local re	elief (concav	e, convex, none): concave Slope (%): 0-3%
Subregion (LRR): Northwest Forests and Coast (LRR A	<u>)</u> Lat:		45.91	9866483 Long: -122.748169779 Datum:
Soil Map Unit Name: Newberg fine sandy loam				NWI Classification: none
Are climatic / hydrologic conditions on the site typical for t	this time of	year?	Yes	X No (If no, explain in Remarks)
Are Vegetation, Soil, or Hydrology		significantly	disturbed?	Are "Normal Circumstances" Present? Yes X No
Are Vegetation, Soil, or Hydrology		naturally pro	oblematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	sampling	point loca	ations, transects, important features, etc.
Lindranhatia Variation Presenta Van V. No.				
Hydrophytic Vegetation Present? Yes x No Hydric Soil Present? Yes x No		Is the Sa	ampled Are	a Yes x No
Hydric Soil Present? Yes x No Wetland Hydrology Present? Yes x No		within a	a Wetland?	103 <u>X</u> NO
wettand riyurology riesent:	<u> </u>			
VEGETATION				
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Use scientific names.)	% Cover	Species?	Status?	Number of Dominant Species
1				That Are OBL, FACW, or FAC:
2.			· ·	Total Number of Dominant
3.				Species Across All Strata: 2 (B)
4.			·	Percent of Dominant Species
Total Cover:	: 0			That Are OBL, FACW, or FAC:(A/B)
Shrub Stratum				Prevalence Index Worksheet:
1. Salix sitchensis	80	Y	FACW □	Total % Cover of: Multiply by:
2. Corylus cornuta	10	: (	FACU□	OBL speciesx1 =
3				FACW speciesx2 =0
4		<del></del>		FAC speciesx3 =
5			<del></del>	FACU speciesx4 =0
Total Cover	: 90			UPL speciesx5 =(D)
Herb Stratum	00	V	ı∉AC□	Column Totals: 0 (A) 0 (B)
Agrostis stolonifera     Juncus effusus	<u>90</u> 5	Y	#ACW	Prevalence Index = B/A =
	-			Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
				X 2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0¹
7.		· <del></del>		4 - Morphological Adaptation1 (Provide supporting
8.		· <del></del>		data in Remarks or on a separate sheet)
9.	<u> </u>			5 - Wetland Non-Vascular Plants <sup>1</sup>
10.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
11				
Total Cover:	: 95			
Woody Vine Stratum		•		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1				be present, unless disturbed or problematic.
2				Hydrophytic
Total Cover:		iotio Cmr-t	•	Vegetation
% Bare Ground in Herb Stratum5%	Cover of B	IOUC Crust	0	Present?
Remarks:				

SOIL								Samp	ling Point:	50
Profile Des	cription: (Desc	ribe to the dep	th needed to docu	ıment t	he indicate	or or con	firm the abs	ence of indic	ators.)	
Depth	Matı	-		lox Feat					,	
(inches)	Color (mois		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	- Texture	2	Remarks	
0-6	10YR3/3	100	Color (molot)	70	Туро		LS	<u> </u>	Romano	
6-10	10YR3/2	95	7.5YR4/4	5	С	M	LS			
10-16	10YR4/2		10YR3/4	15		M				
			7.5YR4/4	10	C	M				
			·		<u> </u>	-				
					<u> </u>		•			
<sup>1</sup> Type: C=C	oncentration, D	=Depletion, RM	=Reduced Matrix, C	S=Cove	ered or Co	ated San	d Grains. <sup>2</sup> Lo	ocation: PL=F	ore Lining, M=Matrix.	
Hydric Soil	Indicators: (A)	nnlicable to all	LRRs, unless oth	orwiso	noted )		Indicators	for Problem	atic Hydric Soils <sup>3</sup> :	
	ol (A1)	pplicable to all	x Sandy R				mulcators		uck (A10)	
	Epipedon (A2)		Stripped						rent Material (TF2)	
	Histic (A3)				(00) lineral (F1)	(excent	MIRA 1)		Explain in Remarks)	
	gen Sulfide (A4)			-	ллегаг (г. т <i>)</i> Лatrix (F2)	-	III LIVA I		explain in Romano)	
	ted Below Dark S	Surface (A11)	Deplete	-		•				
	Dark Surface (A				face (F6)		<sup>3</sup> India	eators of hydro	phytic vegetation and	
	Muck Mineral (S	•			Surface (F7	7)		=	gy must be present,	
	gleyed Matrix (S				ions (F8)	,			ed or problematic.	
	Layer (if prese			<b>г</b> оргосог	10110 (1 0)			diness distarbe	or problematic.	
	Layer (ii preser	,.								
Type: Depth (inch	es).					l Hv	ydric Soil Pre	sent?	Yes x	No
Remarks:							,			
HYDROLOGY		1								
_	/drology Indica		• • • •					0 1	L II ( (0	. 1
<u> </u>	icators (any one	indicator is suff		4-1	(DO	\			ry Indicators (2 or mor	
	ce Water (A1)				Leaves (B9		•		Stained Leaves (B9) (N	ILKA 1, 2,
· · · · · · · · · · · · · · · · · · ·	Vater Table (A2)				A and 4B)				nd 4B)	
	tion (A3)		Salt Cru			<b>)</b> \			e Patterns (B10) Ison Water Table (C2)	
	Marks (B1) ent Deposits (B2	D)			orates (B13 le Odor (C1				on Visible on Aerial Im	
	eposits (B3)	<del>-</del> )				•	Roots (C3)		phic Position (D2)	iagery (C3)
	Mat or Crust (B4)	١			duced Iron	-	110013 (00)		Aquitard (D3)	
	eposits (B5)	,			duction in F	` '	nile (C6)		eutral Test (D5)	
	ce Soil Cracks (B	16)			sed Plants				Ant Mounds (D6) ( <b>LRI</b>	2 Δ)
	ation Visible on A	•			n Remarks	, , ,	XIX A)		eave Hummocks (D7)	( A)
	ely Vegetated Co			.хріант п	TREMAINS	')			eave Hummocks (D7)	
Field Obse		Dicave Surface	(DO)							
	iter Present?	Yes	No X Depth	(inches	:):					
Water table				(inches	·					
Saturation F		Yes	No x Depth	(inches	s):		Wetland H	ydrology Pre	sent? Yes x	No
	apillary fringe)									
Describe Rec	oraea Data (stre	am gauge, mon	itoring well, aerial p	notos, p	previous ins	spections	), if available:			
Remarks:										

Applicant/Owner: Logan Partners LLC  Investigator(s): KB  Landform (hillslope, terrace, etc.): terrace  Subregion (LRR): Northwest Forests and Coast (LRI			n, Township	State: WA , Range: S13, T5N, R1W	Sampling Point:		
Landform (hillslope, terrace, etc.): terrace			n, Township	, Range: S13, T5N, R1W			
Subragion (LDD). Northwest Forests and Coast (LDI		_ Local re	elief (concav	e, convex, none): none	Slope (%): <u>0-3%</u>		
Subregion (LRR): Northwest Forests and Coast (LRI	R A) Lat:		45.919	9876189 Long: -	122.748126820 Datum:		
Soil Map Unit Name: Newberg fine sandy loam				NWI Classification			
Are climatic / hydrologic conditions on the site typical f		•	Yes_	X No	_(If no, explain in Remarks)		
Are Vegetation, Soil, or Hydrolog					ces" Present? Yes X No		
Are Vegetation, Soil, or Hydrolog	У	naturally pr	oblematic?	(If needed, explain any a	nswers in Remarks.)		
SUMMARY OF FINDINGS – Attach site ma	p showing	sampling	point loca	ations, transects, impo	ortant features, etc.		
Hydrophytic Vegetation Present? Yes x	No	1.41.0					
Hydric Soil Present? Yes	No <u>x</u>		ampled Are a Wetland?	YAS	No x		
Wetland Hydrology Present? Yes	No <u>x</u>						
VEGETATION				Daminona Tast wastab			
<u>Free Stratum</u> (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status?	Dominance Test workshow Number of Dominant Spec That Are OBL, FACW, or F	cies		
2.				Total Number of Dominant	, , ,		
3.				Species Across All Strata:	(B)		
ITotal Cov	ver: 0		. ———	Percent of Dominant Spec That Are OBL, FACW, or F			
Show to Characteria				Duning and the days Warden			
Shrub Stratum I. Corylus cornuta	20	Υ	ŒACU□	Prevalence Index Works Total % Cover of:	neet:  Multiply by:		
2.		· <del>'</del>		OBL species	x1 = <b>0</b>		
3.		•		·	x2 = <b>0</b>		
l.	_			FAC species	x3 = <b>0</b>		
5.				FACU species	x4 = <b>0</b>		
Total Cov	ver: 20			UPL species	x5 = <b>0</b>		
Herb Stratum				Column Totals: 0	(A)(B)		
. Phalaris arundinacea	50	Y	<u> </u> FACW □	Prevalence Index = B/A	=		
2. Lotus corniculatus	50	Y	FAC□				
3.				Hydrophytic Vegetation I			
ł					r Hydrophytic Vegetation		
5				X 2 - Dominance To 3 - Prevalence In			
5. 7.				<del></del> -			
		· <del></del>	·		Adaptation1 (Provide supporting or on a separate sheet)		
		-		5 - Wetland Non-	' '		
9.   0.					rophytic Vegetation <sup>1</sup> (Explain)		
1.							
Total Co							
Woody Vine Stratum  .				<sup>1</sup> Indicators of hydric soil ar be present, unless disturbe	nd wetland hydrology must ed or problematic.		
2				Hydrophytic			
Total Co				Vegetation			
% Bare Ground in Herb Stratum0	_% Cover of B	iotic Crust	0	Present?	Yes x No		

	Sampling Point:	
nfirm the absence of	of indicators.)	
– Texture	Remarks	
SL	Remarks	
	-	
	n: PL=Pore Lining, M=Matrix.	
	roblematic Hydric Soils <sup>3</sup> :	
	2 cm Muck (A10)	
<u> </u>	Red Parent Material (TF2)	
t MLRA 1) (	Other (Explain in Remarks)	
<sup>3</sup> Indicators	of hydrophytic vegetation and	
	hydrology must be present,	
	disturbed or problematic.	
lydric Soil Present?	Yes	No x
<u> </u>		
S	econdary Indicators (2 or more	e required)
	Water-Stained Leaves (B9) (M	
<del></del>	4A and 4B)	
<del>-</del>	Drainage Patterns (B10)	
	, ,	
	Dry-Season Water Table (C2)	
	Saturation Visible on Aerial Im	agery (C9)
- · · · —	Geomorphic Position (D2)	
	Shallow Aquitard (D3)	
· · · · · · · · · · · · · · · · · · ·	FAC-Neutral Test (D5)	
.RR A)	Raised Ant Mounds (D6) ( <b>LRR</b>	( <b>A</b> )
F	Frost-Heave Hummocks (D7)	
Wetland Hydrolo	ogy Present? Yes	No x
Welland Hydrolo	gy Fresent: res	_Nox
s), if available:		
oj, ii avaliabie.		
s), if av	ʻailable:	ailable:

Project/Site: <u>I-5 Woodland</u>		City/County	. woodiand	/Cowlitz Sampling Date: Oct.15, 2020
Applicant/Owner: Logan Partners LLC				State: WA Sampling Point:
nvestigator(s): KB		Sectio	n, Township	, Range: <u>S13, T5N, R1W</u>
Landform (hillslope, terrace, etc.): terrace		Local re	elief (concav	e, convex, none): concave Slope (%): 0-3%
Subregion (LRR): Northwest Forests and Coas	st (LRR A) Lat:		45.919	9930373 Long: -122.747739824 Datum:
Soil Map Unit Name: Newberg fine sandy				NWI Classification: none
Are climatic / hydrologic conditions on the site type	•	•	Yes_	X No (If no, explain in Remarks)
Are Vegetation, Soil, or Hyd				
Are Vegetation, Soil, or Hyd	drology	naturally pr	oblematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach sit	e map showing	sampling	point loca	ations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	x No			
Hydric Soil Present? Yes	x No		ampled Are a Wetland?	YAS Y NO
Wetland Hydrology Present? Yes	x No	Within	a welland:	
VEGETATION				
	Absolute % Cover	Dominant Species?	Indicator Status?	Dominance Test worksheet:
Tree Stratum (Use scientific names.)			#AC□	Number of Dominant Species That Are OBL, FACW, or FAC:
1. Populus balsamifera 2.	100	Y	EAC	Total Number of Dominant
3.		-		Species Across All Strata: 4 (B)
  .				(5)
	al Cover: 100	-		Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
		_		(` ',
Shrub Stratum				Prevalence Index Worksheet:
1. Cornus sericea	40	Y	FACW	Total % Cover of: Multiply by:
2				OBL speciesx1 =0
3				FACW speciesx2 =0
1				FAC speciesx3 =
5	<del></del>	-		FACU species x4 = 0
	al Cover: 40	-		UPL species x5 = 0
Herb Stratum	10	V		Column Totals: 0 (A) 0 (B)
Phalaris arundinacea     Juncus effusus	<u>10</u> 20	- <u>Y</u> Y	#ACW	Prevalence Index = B/A =
3.		T	<u> </u>	Hydrophytic Vegetation Indicators:
1	<del></del> -			1 - Rapid Test for Hydrophytic Vegetation
				X 2 - Dominance Test is >50%
S				3 - Prevalence Index is ≤3.0 <sup>1</sup>
7.				4 - Morphological Adaptation1 (Provide supporting
3.				data in Remarks or on a separate sheet)
9.	<u> </u>			5 - Wetland Non-Vascular Plants <sup>1</sup>
0.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1				
Tot	al Cover: 30	_		
Woody Vine Stratum  .	<u> </u>			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.				Hydrophytic
	al Cover:			Vegetation
Tot				
			0	Present?

epth	Matrix		Re	dox Featı			_			
nches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-16	10YR5/2	75	7.5YR4/6	25	<u>C</u>	M	<u>S</u>			
ype: C=0	Concentration, D=Dep	letion, RM	=Reduced Matrix,	CS=Cove	ered or Coa	ted San	d Grains. <sup>2</sup> Lo	ocation: PL=Poi	re Lining, M=Matrix.	
ydric Soi	I Indicators: (Applic	able to all			-		Indicators	for Problemat	ic Hydric Soils <sup>3</sup> :	
	sol (A1)		<u>x</u> Sandy l				-	2 cm Muc		
	Epipedon (A2)			d Matrix (					nt Material (TF2)	
Hydro	Histic (A3) gen Sulfide (A4) ted Below Dark Surfa	ce (A11)	Loamy		ineral (F1) latrix (F2) (F3)	(except	MLRA 1)	Other (Ex	plain in Remarks)	
	Dark Surface (A12)	, ,		Dark Surf	-		<sup>3</sup> Indic	ators of hydropl	hytic vegetation and	
Sandy	/ Muck Mineral (S1)				urface (F7	)			must be present,	
Sandy	gleyed Matrix (S4)		Redox	Depression	ons (F8)		u	nless disturbed	or problematic.	
estrictive	Layer (if present):									
me.										
	nes):					Hy	ydric Soil Pre	sent?	Yes x	No _
epth (inch	nes):					Hy	ydric Soil Pre	sent?	Yes x	No _
epth (inch						Ну	ydric Soil Pre	sent?	Yes x	No
epth (inch narks:	Y					Hy	ydric Soil Pre	sent?	Yes <u>x</u>	No
epth (inch narks: DROLOG	Y ydrology Indicators:		ficient)			Hy	ydric Soil Pre			
PROLOG Tetland H	Y			Stained L	eaves (B9)			Secondary	Indicators (2 or more	require
PROLOG Surface Surface	Y ydrology Indicators: licators (any one indic		Water-		eaves (B9)			Secondary	Indicators (2 or more ained Leaves (B9) (ML	require
DROLOG /etland H rimary Inc Surfac High \( \)	Y ydrology Indicators: licators (any one indic ce Water (A1)		Water-9 MLR		` '			Secondary Water-Sta	Indicators (2 or more ained Leaves (B9) (ML	require
PROLOG Setland H Simary Inc Surfa High V Satura	Y ydrology Indicators: licators (any one indicators (A1) Water Table (A2)		Water-S MLR Salt Cru	<b>A 1, 2, 4</b> <i>A</i> ust (B11)	` '	(except		Secondary Water-Sta 4A and Drainage	Indicators (2 or more ained Leaves (B9) ( <b>ML</b> d <b>4B</b> )	require
DROLOG Vetland H rimary Inc High V Satura	Y ydrology Indicators: licators (any one indicators (A1) Water Table (A2) ation (A3)		Water-3 MLR Salt Cru Aquatic	<b>A 1, 2, 4</b> /ust (B11) Inverteb	A and 4B)	(except		Secondary Water-Sta 4A and Drainage Dry-Seaso	Indicators (2 or more ained Leaves (B9) ( <b>ML</b> d <b>4B</b> ) Patterns (B10)	require
PROLOG Petland H Primary Inc Surfac High N Satura Water Sedin	ydrology Indicators: licators (any one indicators (A1) Water Table (A2) ation (A3)		Water-S MLR Salt Cru Aquatio Hydrog	<b>A 1, 2, 4</b> <i>A</i> ust (B11) Inverteble en Sulfide	A and 4B) rates (B13) e Odor (C1	(except		Secondary Water-Sta 4A and Drainage Dry-Seaso Saturation	Indicators (2 or more ained Leaves (B9) ( <b>ML</b> d <b>4B</b> ) Patterns (B10) on Water Table (C2)	require
PROLOG Petland H Fimary Inc Surfac High V Satura C Water Sedim Drift E	ydrology Indicators: licators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2)		Water-S MLR Salt Cru Aquatic Hydrog Oxidize	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizosp	A and 4B) rates (B13) e Odor (C1	(except		Secondary Water-Sta 4A and Drainage Dry-Seasd Saturation Geomorph	Indicators (2 or more ained Leaves (B9) ( <b>ML</b> d <b>4B</b> ) Patterns (B10) on Water Table (C2)	require
DROLOG Vetland H rimary Inc Satura  Watel Sedin Drift E Algal Iron D	ydrology Indicators: licators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)		Water-s MLR Salt Cri Aquatic Hydrog Oxidize Present Recent	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red	A and 4B) rates (B13) e Odor (C1 pheres alou luced Iron uction in P	(except ) ng Living (C4) owed So	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut	Indicators (2 or more ained Leaves (B9) (ML d 4B) Patterns (B10) on Water Table (C2) on Visible on Aerial Imathic Position (D2) equitard (D3) tral Test (D5)	require RA 1,
DROLOG Vetland H rimary Inc Satura C Watel Sedin Drift E Algal Iron E Surfac	ydrology Indicators: licators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B6)	ator is suff	Water-S MLR Salt Cru Aquatic Hydrog Oxidize Presen Recent Stunted	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red	rates (B13) e Odor (C1 pheres alol luced Iron uction in Pl sed Plants	(except ) ng Living (C4) owed So (D1) (LF	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar	Indicators (2 or more ained Leaves (B9) (ML d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imahic Position (D2) equitard (D3) tral Test (D5) nt Mounds (D6) (LRR	require RA 1,
PROLOG etland H imary Inc Surfac High V Satura C Water Sedim Drift D Algal Iron D Surfac	yydrology Indicators: licators (any one indicators (any one indicators)  Material (B4) Deposits (B3) Material (B4) Deposits (B5) Deposits (B5) Deposits (B6)	ator is suff	Water-S MLR Salt Cru Aquatio Hydrog Oxidize Presen Recent Stunted B7) Water-S	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red	A and 4B) rates (B13) e Odor (C1 pheres alou luced Iron uction in P	(except ) ng Living (C4) owed So (D1) (LF	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar	Indicators (2 or more ained Leaves (B9) (ML d 4B) Patterns (B10) on Water Table (C2) on Visible on Aerial Imathic Position (D2) equitard (D3) tral Test (D5)	require RA 1,
DROLOG Vetland H rimary Inc Surfar High V Satura K Watel Sedim Drift E Algal Iron E Surfar Inund Spars	ydrology Indicators: licators (any one indicators (any one indicators)  Marks (B1) Marks (B1) Marks (B2) Marks (B3) Mat or Crust (B4) Mat or Crust (B4) Mat or Crust (B4) Mat or Crust (B5) Mat or Crust (B6) Mation Visible on Aerial	ator is suff	Water-S MLR Salt Cru Aquatio Hydrog Oxidize Presen Recent Stunted B7) Water-S	A 1, 2, 4A ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red	rates (B13) e Odor (C1 pheres alol luced Iron uction in Pl sed Plants	(except ) ng Living (C4) owed So (D1) (LF	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar	Indicators (2 or more ained Leaves (B9) (ML d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imahic Position (D2) equitard (D3) tral Test (D5) nt Mounds (D6) (LRR	require RA 1,
DROLOG Vetland H rimary Inc Surfar High V Satura X Water Sedin Drift E Algal Iron E Surfar Inund Spars ield Obse	ydrology Indicators: licators (any one indicators (any one indicators (any one indicators (any one indicators (A1) Water Table (A2) ation (A3) Marks (B1) Deposits (B3) Mat or Crust (B4) Deposits (B5) Deposits (B5) Deposits (B5) Deposits (B6)	ator is suff	Water-S MLR Salt Cru Aquatio Hydrog Oxidize Present Recent Stunted B7) Other (i	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizospece of Red Iron Red or Stress Explain in	rates (B13) e Odor (C1 pheres alor luced Iron uction in Pl sed Plants Remarks)	(except ) ng Living (C4) owed So (D1) (LF	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar	Indicators (2 or more ained Leaves (B9) (ML d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imahic Position (D2) equitard (D3) tral Test (D5) nt Mounds (D6) (LRR	require RA 1,
DROLOG Vetland H rimary Inc Surfac High V Satura X Watel Sedim Drift E Algal Iron E Surfac Inund Spars ield Obse	ydrology Indicators: licators (any one indicators (any one indicat	Imagery (l	Water-S  MLR  Salt Cru  Aquatio  Hydrog  Oxidize  Present  Recent  Stunted  B7)  Other (I	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red or Stress Explain in	rates (B13) Prates (B13) Prates (B13) Prates alor Record Iron Reco	(except ) ng Living (C4) owed So (D1) (LF	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar	Indicators (2 or more ained Leaves (B9) (ML d 4B) Patterns (B10) on Water Table (C2) n Visible on Aerial Imahic Position (D2) equitard (D3) tral Test (D5) nt Mounds (D6) (LRR	require RA 1,
DROLOG Vetland H rimary Inc Surfar High V Satura X Water Sedim Drift E Algal Iron E Surfac Inund Spars ield Obse urface Wa /ater table	ydrology Indicators: licators (any one indicators (any one indicat	Imagery (l	Water-S   MLR   Salt Cru   Aquatio   Hydrog   Oxidize   Presen   Recent   Stunted   Stunted   B7)   Other (I   Hydrog   Oxidize   Presen   Recent   Control   Contro	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizospece of Red Iron Red or Stress Explain in	rates (B13) e Odor (C1 pheres alor luced Iron uction in Pl sed Plants Remarks)	(except ) ng Living (C4) owed So (D1) (LF	Roots (C3)	Secondary Water-Sta 4A and Drainage Dry-Sease Saturation Geomorph Shallow A FAC-Neut Raised Ar	Indicators (2 or more ained Leaves (B9) (ML d 4B) Patterns (B10) on Water Table (C2) on Visible on Aerial Imachic Position (D2) equitard (D3) tral Test (D5) ont Mounds (D6) (LRR ave Hummocks (D7)	require RA 1,
DROLOG Vetland H rimary Inc Surfac High V Satura X Watel Sedim Drift E Algal Iron E Surfac Inund Spars ield Obse urface Wa /ater table aturation ncludes ca	ydrology Indicators: licators (any one indicators (any one indicators) Ce Water (A1) Water Table (A2) Action (A3) Marks (B1) Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B6) Action Visible on Aerial Cely Vegetated Concavervations: Cervations: Cervatio	Imagery (lye Surface	Water-s   MLR	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red I or Stress Explain in in (inches) in (inches)	rates (B13) e Odor (C1 pheres alor luced Iron uction in P sed Plants Remarks)	(except ng Living (C4) owed So (D1) (LF	Roots (C3) pils (C6) RR A) Wetland Hy	Secondary Water-Sta 4A and Drainage Dry-Sease Saturatior Geomorph Shallow A FAC-Neut Raised Ar Frost-Hea	Indicators (2 or more ained Leaves (B9) (ML d 4B) Patterns (B10) on Water Table (C2) on Visible on Aerial Imachic Position (D2) equitard (D3) tral Test (D5) ont Mounds (D6) (LRR ave Hummocks (D7)	require_RA 1,
DROLOG Vetland H rimary Inc Surfac High V Satura X Watel Sedim Drift E Algal Iron E Surfac Inund Spars ield Obse urface Wa /ater table aturation ncludes ca	ydrology Indicators: licators (any one indicators (any one indicat	Imagery (lye Surface	Water-s   MLR	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red I or Stress Explain in in (inches) in (inches)	rates (B13) e Odor (C1 pheres alor luced Iron uction in P sed Plants Remarks)	(except ng Living (C4) owed So (D1) (LF	Roots (C3) pils (C6) RR A) Wetland Hy	Secondary Water-Sta 4A and Drainage Dry-Sease Saturatior Geomorph Shallow A FAC-Neut Raised Ar Frost-Hea	Indicators (2 or more ained Leaves (B9) (ML d 4B) Patterns (B10) on Water Table (C2) on Visible on Aerial Imachic Position (D2) equitard (D3) tral Test (D5) ont Mounds (D6) (LRR ave Hummocks (D7)	require_RA 1,
Surfary Inc. Surfary High N Satura X Water Sedim Drift E Algal Iron E Surfar Inund Spars Gurface Wa Vater table Saturation Includes Care	ydrology Indicators: licators (any one indicators (any one indicators) Ce Water (A1) Water Table (A2) Action (A3) Marks (B1) Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) De Soil Cracks (B6) Action Visible on Aerial Cely Vegetated Concavervations: Cervations: Cervatio	Imagery (lye Surface	Water-s   MLR	A 1, 2, 44 ust (B11) Invertebren Sulfide d Rhizospice of Red Iron Red I or Stress Explain in in (inches) in (inches)	rates (B13) e Odor (C1 pheres alor luced Iron uction in P sed Plants Remarks)	(except ng Living (C4) owed So (D1) (LF	Roots (C3) pils (C6) RR A) Wetland Hy	Secondary Water-Sta 4A and Drainage Dry-Sease Saturatior Geomorph Shallow A FAC-Neut Raised Ar Frost-Hea	Indicators (2 or more ained Leaves (B9) (ML d 4B) Patterns (B10) on Water Table (C2) on Visible on Aerial Imachic Position (D2) equitard (D3) tral Test (D5) ont Mounds (D6) (LRR ave Hummocks (D7)	require RA 1, gery (C

Project/Site: I-5 Woodland		City/County:	Woodland	/Cowlitz	Sampling Date: Oct.15, 2020
Applicant/Owner: Logan Partners LLC				State: WA	Sampling Point: 53
Investigator(s): KB		_ Section	n, Township	o, Range: S13, T5N, R1W	
Landform (hillslope, terrace, etc.): terrace		_ Local re	lief (concav	re, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR): Northwest Forests and Coast (LRR A)	<u>)</u> Lat:		45.91	9953493 Long: -12	22.747731027 Datum:
Soil Map Unit Name: Newberg fine sandy loam				NWI Classification:	
Are climatic / hydrologic conditions on the site typical for the			Yes		(If no, explain in Remarks)
Are Vegetation, Soil, or Hydrology					es" Present? Yes X No
Are Vegetation, Soil, or Hydrology		naturally pro	oblematic?	(If needed, explain any an	swers in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	showing	sampling	point loc	ations, transects, impo	rtant features, etc.
Hydrophytic Vegetation Present? Yes x No	)				
Hydric Soil Present? YesNo	x		ampled Are a Wetland?	YAS	No x
Wetland Hydrology Present? YesNo	<u> </u>	_			
VEGETATION					
Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status?	Number of Dominant Specie	es
1. Populus balsamifera	100	Y	ı∄AC□	That Are OBL, FACW, or FA	AC:(A)
2.		·		Total Number of Dominant	
3.				Species Across All Strata:	(B)
4		<u> </u>		Percent of Dominant Specie	es
Total Cover:	100	-		That Are OBL, FACW, or FA	AC: <u>100%</u> (A/B)
Shrub Stratum  1. Crataegus monogyna  2	25	Y	ŒAC□	FACW species	Multiply by:  x1 = 0  x2 = 0
4					x3 = <b>0</b>
5				· —	x4 = <b>0</b>
Total Cover:	25	-			x5 = <b>0</b>
Herb Stratum		.,	EA OVA	Column Totals: 0	(A) <b>0</b> (B)
1. Phalaris arundinacea	70	Y	FACW □	Prevalence Index = B/A =	
2				Hydronhytic Vegetation In	diagtoro
3. 4.	-			Hydrophytic Vegetation Inc	Hydrophytic Vegetation
-		-		X 2 - Dominance Tes	• • •
<u> </u>			. ———	3 - Prevalence Inde	
7.	•	-	. ———		Adaptation1 (Provide supporting
3.					r on a separate sheet)
Э.				5 - Wetland Non-V	. ,
10.				<del></del>	phytic Vegetation <sup>1</sup> (Explain)
11.					
Total Cover:					
Woody Vine Stratum  I				<sup>1</sup> Indicators of hydric soil and be present, unless disturbed	
2.		_		Hydrophytic	
Total Cover:		_		Vegetation	
% Bare Ground in Herb Stratum 0 %	Cover of B	iotic Crust	0		Yes x No
Remarks: 30% leaf litter					
Remarks: 30% leaf litter					

SUIL				Sampling Point:	53
Profile Description: (Desc	ribe to the depth n	eeded to document the indicator o	r confirm the abse	ence of indicators.)	
Depth Matr	ix	Redox Features			
(inches) Color (mois			oc² Texture	<u>,</u>	Remarks
0-16 10YR3/3	100	70 Type L	SL	<u> </u>	temano
0-10 1011(3/3			<u> </u>		
			<del></del>		
4					
'Type: C=Concentration, D=	Depletion, RM=Rec	duced Matrix, CS=Covered or Coated	Sand Grains. <sup>2</sup> Lo	ocation: PL=Pore Lining,	M=Matrix.
Hydric Soil Indicators: (Ap	oplicable to all LRF	Rs, unless otherwise noted.)	Indicators	for Problematic Hydric	Soils <sup>3</sup> :
Histosol (A1)		Sandy Redox (S5)		2 cm Muck (A10)	
Histic Epipedon (A2)		Stripped Matrix (S6)		Red Parent Materia	ıl (TF2)
Black Histic (A3)		Loamy Mucky Mineral (F1) (ex	cept MLRA 1)	Other (Explain in Re	
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	,		,
Depleted Below Dark S	Surface (A11)	Depleted Matrix (F3)			
Thick Dark Surface (A	` '	Redox Dark Surface (F6)	<sup>3</sup> Indic	ators of hydrophytic vege	atation and
		Depleted Dark Surface (F7)		tland hydrology must be p	
Sandy Muck Mineral (S		Redox Depressions (F8)		inless disturbed or proble	
Sandy gleyed Matrix (S Restrictive Layer (if preser		Redux Depressions (Fo)	1	iriless disturbed or proble	matic.
	ity.				
Type:		_	Hudria Cail Dra	voont? Voo	No. v
Depth (inches):		-	Hydric Soil Pre	esent? Yes	No <u>x</u>
IYDROLOGY  Wetland Hydrology Indicat	ors:				
Primary Indicators (any one		t)		Secondary Indicators	s (2 or more required)
Surface Water (A1)		Water-Stained Leaves (B9) (ex	cent		ves (B9) ( <b>MLRA 1, 2,</b>
High Water Table (A2)		MLRA 1, 2, 4A and 4B)	ОСР	4A and 4B)	, oo (Bo) (M21011, 1, 2,
		Salt Crust (B11)	•		(D10)
Saturation (A3) Water Marks (B1)			•	Drainage Patterns (	
	Λ.	Aquatic Invertebrates (B13)	•	Dry-Season Water	
Sediment Deposits (B2)	.)	Hydrogen Sulfide Odor (C1)	inin - Dt- (00)		n Aerial Imagery (C9)
Drift Deposits (B3)		Oxidized Rhizospheres along L		Geomorphic Position	
Algal Mat or Crust (B4)		Presence of Reduced Iron (C4	, ·	Shallow Aquitard (D	,
Iron Deposits (B5)		Recent Iron Reduction in Plowe		FAC-Neutral Test (	,
Surface Soil Cracks (B	•	Stunted or Stressed Plants (D1	) (LRR A)	Raised Ant Mounds	
Inundation Visible on A	erial Imagery (B7)	Other (Explain in Remarks)	•	Frost-Heave Humm	iocks (D7)
Sparsely Vegetated Co	ncave Surface (B8)				
Field Observations:		V D # ( 1 )			
Surface Water Present? Water table Present?	Yes No Yes No	X Depth (inches):  X Depth (inches):	-		
Saturation Present?	Yes No	x Depth (inches):	- Wetland H	/drology Present?	Yes No x
(includes capillary fringe)			-	,	<u> </u>
Describe Recorded Data (stream	am gauge, monitorin	g well, aerial photos, previous inspec	tions), if available:		
Remarks:					

Project/Site: I-5 Woodland		City/County:	Woodland	/Cowlitz	Sampling Date: Oct.15, 2020
Applicant/Owner: Logan Partners LLC				State: WA	Sampling Point: 54
Investigator(s): KB		Section	ո, Township	, Range: S13, T5N, R1W	
Landform (hillslope, terrace, etc.): ditch		_ Local re	lief (concav	e, convex, none): none	Slope (%): <u>0-3%</u>
Subregion (LRR): Northwest Forests and Coast (LRR A)	<u>)</u> Lat:		45.919	9786308 Long: -12	22.749199779 Datum:
Soil Map Unit Name: Newberg fine sandy loam				NWI Classification:	none
Are climatic / hydrologic conditions on the site typical for the	his time of	year?	Yes_	X No	(If no, explain in Remarks)
Are Vegetation, Soil, or Hydrology		significantly	disturbed?	Are "Normal Circumstance	es" Present? Yes X No
Are Vegetation, Soil, or Hydrology		naturally pro	oblematic?	(If needed, explain any ans	swers in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	showing	sampling	point loca	ations, transects, impor	rtant features, etc.
Hydrophytic Vegetation Present? YesNo	<u>х</u>	la tha Si	ampled Are		
Hydric Soil Present? YesNo	<u> </u>		ampied Area	244	No x
Wetland Hydrology Present? YesNo	<u> </u>	_			
Plot placed in bottom of upland ditch					
VEGETATION					
	Absolute	Dominant	Indicator	Dominance Test workshee	et:
Tree Stratum (Use scientific names.) 1.	% Cover	Species?	Status?	Number of Dominant Specie That Are OBL, FACW, or FA	
2.			. ———	Total Number of Dominant	(/`\)
3.	-	-	· <del></del>	Species Across All Strata:	<b>4</b> (B)
4.			. ———	Percent of Dominant Specie	
Total Cover:	0	-		That Are OBL, FACW, or FA	
Shrub Stratum				Prevalence Index Workshe	 eet:
1. Corylus cornuta	30	Υ		Total % Cover of:	Multiply by:
2. Rubus armeniacus	80	Υ	ı∉AC □	OBL species	x1 = <b>0</b>
3.					x2 = <b>0</b>
4.		·			x3 = <b>0</b>
5.		·			x4 = 0
Total Cover:	110	· <del></del>		UPL species	x5 = <b>0</b>
Herb Stratum				Column Totals: 0	(A) <b>0</b> (B)
1. Phalaris arundinacea	20	Y	FACW □	Prevalence Index = B/A =	
2					
3				Hydrophytic Vegetation Inc	
4					Hydrophytic Vegetation
5				2 - Dominance Tes	
6				3 - Prevalence Inde	
7					Adaptation1 (Provide supporting
8					r on a separate sheet)
9				5 - Wetland Non-Va	
10				Problematic Hydror	phytic Vegetation <sup>1</sup> (Explain)
11					
Total Cover:	20	-		1	
Woody Vine Stratum	000/		ı∉ACU□	<sup>1</sup> Indicators of hydric soil and be present, unless disturbed	
1. Rubus ursinus	30%	Y	IFACU_	be present, unless disturbed	or problematic.
2				Hydrophytic	
Total Cover: % Bare Ground in Herb Stratum 50 %		iotio Cruot	0	Vegetation Present?	Ven No v
	Cover or B	iolic Crust	0	Fresentr	Yes No x
Remarks:	20101 01 B	ond ordat			110 <u>x</u>

SOIL								Sampli	ng Point:	
Profile Desc	ription: (Descr	ibe to the dep	th needed	to document	the indicate	or or cor	nfirm the abse	nce of indica	tors.)	
Depth	Matrix	· ·		Redox Fe	atures					
(inches)	Color (moist)		Color (mo			Loc <sup>2</sup>	- Texture		Remarks	
0-16	10YR3/3	100	00101 (1110	70	Турс	LOC	I TEXIGIE		Remarks	
0 10	101110/0									
		<del></del> ·					-	<del></del>		
							_			
							_			
							_			
1Typo: C=C	naontration D-	Donletion DM	-Daduaad N	Actrix CS=Co	word or Cod	atad Can	d Craina 21 a	action: DL Do	re Lining, M=Matrix	
						aleu San				x.
Hydric Soil I	ndicators: (Ap	plicable to all	LRRs, unle	ess otherwis	e noted.)		Indicators	for Problema	tic Hydric Soils <sup>3</sup> :	
Histoso	l (A1)		8	Sandy Redox	(S5)		_	2 cm Mud	ck (A10)	
Histic E	pipedon (A2)		8	Stripped Matri	x (S6)		_	Red Pare	ent Material (TF2)	
Black H	listic (A3)		L	oamy Mucky	Mineral (F1)	(except	MLRA 1)	Other (Ex	plain in Remarks)	
Hydroge	en Sulfide (A4)		<u> </u>	_oamy Gleyed	Matrix (F2)		_			
	d Below Dark Su	urface (A11)		Depleted Matr	-					
	ark Surface (A1:			' Redox Dark S			<sup>3</sup> Indic	ators of hydror	hytic vegetation an	nd
	Muck Mineral (S	•		Depleted Dark		`\			must be present,	
	gleyed Matrix (S4			Redox Depres	-	,			or problematic.	
	_ayer (if present			Tedox Depres	5510115 (1 0)		u	iless disturbed	or problematic.	
	ayer (ii presen	.,.								
Type:	۵)،					Lu.	udria Cail Dra	nont?	Vaa	Na
Depth (inche	s)					П	ydric Soil Pre	Sent?	Yes	No
YDROLOGY Wetland Hvo	drology Indicate	ors:								
•	ators (any one ir		icient)					Secondary	Indicators (2 or mo	ore required
	Water (A1)			Nater-Stained	LL eaves (B9)	) (excep			ained Leaves (B9)	
	ater Table (A2)				4A and 4B)		-	4A an		(, _
<del></del>	ion (A3)		c	Salt Crust (B1			-		Patterns (B10)	
	Marks (B1)			Aquatic Invert	,	`	-		on Water Table (C	2)
							-		•	-
	nt Deposits (B2)			Hydrogen Sulf	•	-	- Doots (C2)		n Visible on Aerial I	imagery (Cs
	posits (B3)			Oxidized Rhize	•		Roots (C3)		hic Position (D2)	
	at or Crust (B4)			Presence of R		` '	-		Aquitard (D3)	
	posits (B5)			Recent Iron R			• •		tral Test (D5)	
	Soil Cracks (B6			Stunted or Str	essed Plants	(D1) ( <b>Li</b>	RR A)	Raised A	nt Mounds (D6) ( <b>Li</b>	RR A)
Inundat	ion Visible on Ae	erial Imagery (E	37) (	Other (Explain	in Remarks)	)	_	Frost-Hea	ave Hummocks (D7	7)
Sparsel	y Vegetated Cor	ncave Surface	(B8)							
Field Observ										
Surface Water			No X	Depth (inche						
Water table F Saturation Pr			No x	Depth (inche Depth (inche	es): 		Wetland H.	drology Prese	ent? Yes	No
(includes cap			NO X	Deptil (ilicili			Welland my	urology Frest	-iit: 165	No
	rded Data (strea	m gauge, mon	itorina well.	aerial photos.	previous ins	spections	), if available:			
		gaage,e		aona priotos	, p. 0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,			
emarks:										

## APPENIDIX D. WETLAND RATING FORMS

# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): WL-1	Date of site visit: 10/15/2020					
Rated by K Biafora	Trained by Ecology? $\underline{X}$ YesNo Date of training $\underline{2015}$					
HGM Class used for rating Slope	Wetland has multiple HGM classes?Y X_N					
NOTE: Form is not complete with Source of base aerial photo/ma	out the figures requested (figures can be combined).  ap ESRI, 2020					
OVERALL WETLAND CATEGORY <u>I</u>	(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	Improving Water Quality			Hydrologic			Habitat			
					Circle t	the ap	propr	iate ra	tings	
Site Potential	Н	M	L	Н	M	L	Н	M	L	
Landscape Potential	Н	М	L	Н	М	L	Н	M	L	
Value	Н	М	L	Н	M	L	Н	М	L	TOTAL
Score Based on										
Ratings	4			5			5			14

## Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L 5 = 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
Bog		I
Mature Forest		I
Old Growth Forest		I
Coastal Lagoon	I	II
Interdunal	I II	III IV
None of the above	Х	

# Maps and figures required to answer questions correctly for Western Washington

## <u>Depressional Wetlands</u>

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

## **Riverine Wetlands**

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

## Lake Fringe Wetlands

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

## Slope Wetlands

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

# **HGM Classification of 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	1
------------------------	---

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

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

SLOPE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
	_
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)	
Slope is 1% or less points = 3	
Slope is > 1%-2% points = 2	
Slope is > 2%-5% points = 1	
Slope is greater than 5% points = 0	3
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants:	
Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you	
have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher	
than 6 in.	
Dense, uncut, herbaceous plants > 90% of the wetland area points = 6	
Dense, uncut, herbaceous plants > ½ of area points = 3	
Dense, woody, plants > ½ of area points = 2	
Dense, uncut, herbaceous plants > ¼ of area points = 1	
Does not meet any of the criteria above for plants points = 0	6
Total for S 1 Add the points in the boxes above	9
Rating of Site Potential If score is: 12 = H X 6-11 = M 0-5 = L  Record the rating on the first page	
S 2.0. Does the landscape have the potential to support the water quality function of the site?	
C 2 1 les 100/ of the angenithin 150 ft on the until side of the until and use that appeared in line that appeared in line and use the use that appeared in line and use that appeared in line and use the use the use the use that appeared in line and use the use the use the use that appeared in line and use the use that appeared in line and use the use that appeared in line and use the use the use the use the use that appeared in line and use the use the use that appeared in line and use the use t	

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?	
Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?	
Other sources Yes = 1 No = 0	0
Total for S 2 Add the points in the boxes above	0

Rating of Landscape Potential If score is: \_\_\_1-2 = M  $X_0$  = 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	0
Total for S 3 Add the points in the boxes above	0

Rating of Value If score is: \_\_\_2-4 = H \_\_\_1 = M  $X_0$  = L

Record the rating on the first page

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream ero	sion
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during 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, <b>rigid</b> plants cover > 90% of the area of the wetland points = 1	1
All other conditions points = 0	the first nage

Rating of Site Potential If score is:  $X_1 = M_0 = 0$ 

Record the rating on 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 go surface runoff?	enerate excess Yes = 1 No = 0	0
Rating of Landscape Potential If score is:1 = MX_0 = L	Record the rating on	the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?					
S 6.1. Distance to the nearest areas downstream that have flooding problems:					
The sub-basin immediately down-gradient of site has flooding problems that	result in damage to human or				
natural resources (e.g., houses or salmon redds) points = 2					
Surface flooding problems are in a sub-basin farther down-gradient	points = 1				
No flooding problems anywhere downstream	points = 0	1			
S 6.2. Has the site been identified as important for flood storage or flood conveyan	ce in a regional flood control plan?				
	Yes = 2 No = 0	0			
Total for S 6	Add the points in the boxes above	1			

Rating of Value If score is:  $2-4 = H \times X = 1 = M = 0 = L$ 

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 X Emergent 3 structures: points = 2 X Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 X Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: X\_The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) 4 that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 X 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 2 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. 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 1 points = 0 < 5 species 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 Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points 3

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
Standing snags (dbh > 4 in) within the wetland	
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m)	
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered	
where wood is exposed)	
X At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are	
permanently or seasonally inundated (structures for egg-laying by amphibians)	
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of	1
strata)	I .
Total for H 1 Add the points in the boxes above	11
Rating of Site Potential If score is:15-18 = HX 7-14 = M0-6 = L	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).	
Calculate: % undisturbed habitat $\frac{3}{2}$ + [(% moderate and low intensity land uses)/2] $\frac{23}{2}$ = $\frac{26}{2}$ %	
If total accessible habitat is:	
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
1	
20-33% of 1 km Polygon points = 2	
10-19% of 1 km Polygon points = 1	2
< 10% of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate: % undisturbed habitat $26 + (\% \text{ moderate and low intensity land uses})/2] 15 = 41 \ \%$	
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	
	1
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3. Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (- 2)	0
≤ 50% of 1 km Polygon is high intensity points = 0	U
Total for H 2 Add the points in the boxes above	3
Rating of Landscape Potential If score is:4-6 = H $\times$ _1-3 = M<1 = L Record the rating on the	he first page
H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score	
that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
— It has 3 or more priority habitats within 100 m (see next page)	
— It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)	
— It is mapped as a location for an individual WDFW priority species	
— It is a Wetland of High Conservation Value as determined by the Department of Natural Resources	
<ul> <li>It has been categorized as an important habitat site in a local or regional comprehensive plan, in a</li> </ul>	
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	0

Rating of Value If score is:\_\_\_2 = H \_\_\_\_1 = M \_\_\_X\_0 = L

Record the rating on the first page

# **WDFW Priority Habitats**

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

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

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

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

# **CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

Watland Type	Catagory
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 <b>SC 1.1</b> No= <b>Not an estuarine wetland</b>	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area	
Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151	?
Yes = Category I No - Go to SC 1.2	Cati
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?	
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less	
than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25)	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.	
— The wetland has at least two of the following features: tidal channels, depressions with open water, or	Cat. II
contiguous freshwater wetlands. Yes = Category I No = Category I	
SC 2.0. Westlands of High Conservation Value (W/HCV)	
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 = 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	,
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? Use the ke	у
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 o	
more of the first 32 in of the soil profile? Yes – Go to <b>SC 3.3</b> No – Go to <b>SC 3.2</b>	
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 o pond?  Yes – Go to <b>SC 3.3</b> No = <b>Is not a bog</b>	
pond? Yes – Go to <b>SC 3.3</b> No = <b>Is not a bog</b> 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	
<b>NOTE:</b> 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	:

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</i>	
the wetland based on its functions.	
— <b>Old-growth forests</b> (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.	
— <b>Mature forests</b> (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).	
	C-+ 1
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)	Cat. I
during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	Cat. I
Yes – Go to <b>SC 5.1</b> No = <b>Not a wetland in a coastal lagoon</b> 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).	Cat. II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	
— The wetland is larger than $^{1}/_{10}$ ac (4350 ft <sup>2</sup> )	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If	
you answer yes you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
<ul><li>Long Beach Peninsula: Lands west of SR 103</li></ul>	
<ul><li>— Grayland-Westport: Lands west of SR 105</li></ul>	Cat I
<ul><li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li></ul>	
Yes – Go to <b>SC 6.1</b> No = <b>not an interdunal wetland for rating</b>	
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	C-+ 1).
	Cat. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): WL 2	Date of site visit:							
Rated by K Biafora	Trained by Ecology?YesNo Date of training							
HGM Class used for rating Depression	Wetland has multiple HGM classes?Y XN							
NOTE: Form is not complete without the figures requested (figures can be combine Source of base aerial photo/map ESRI, 2020								
OVERALL WETLAND CATEGORY	V (based on functions X or special characteristics )							
1 Category of wetland based on Fl	UNCTIONS							

## 1. Category of wetland based on FUNCTIONS

\_\_\_\_\_Category I — Total score = 23 - 27
\_\_\_\_Category II — Total score = 20 - 22
\_\_\_\_Category III — Total score = 16 - 19
\_\_\_X\_\_Category IV — Total score = 9 - 15

FUNCTION	Improving Water Quality		H	ydrologic		Habitat				
					Circle t	the ap	propr	iate ra	tings	
Site Potential	Н	M	L	H	М	L	Н	М	L	
Landscape Potential	Н	М	L	Н	М	L	Н	M	L	
Value	Н	М	L	Н	M	L	Н	М	L	TOTAL
Score Based on Ratings	4			6			4			14

## Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M 7 = H,H,L7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L 5 = 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		
Bog	I		
Mature Forest	I		
Old Growth Forest		I	
Coastal Lagoon	I	II	
Interdunal	I II	III IV	
None of the above			

# Maps and figures required to answer questions correctly for Western Washington

## **Depressional Wetlands**

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

## **Riverine Wetlands**

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

## Lake Fringe Wetlands

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

## Slope Wetlands

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

# **HGM Classification of 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 th	ne entire u	ınit usuallv	controlled	by tides	except di	uring f	loods?

NO - go to 2

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

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

#### **NO - Saltwater Tidal Fringe (Estuarine)**

**YES - Freshwater Tidal Fringe** 

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

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

NO - go to 3

**YES** – The wetland class is **Flats** 

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

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

NO – go to 4

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

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

NO – go to 5

**YES** - The wetland class is **Slope** 

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

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

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

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

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

DEPRESSIONAL AND FLATS WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).  points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.  points = 2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	3
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):	
Wetland has persistent, ungrazed, plants > 95% of area points = 5	
Wetland has persistent, ungrazed, plants > ½ of area points = 3	
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area points = 1	
Wetland has persistent, ungrazed plants $<^1/_{10}$ of area points = 0	1
D 1.4. Characteristics of seasonal ponding or inundation:	
This is the area that is ponded for at least 2 months. See description in manual.	
Area seasonally ponded is > ½ total area of wetland points = 4	
Area seasonally ponded is > 1/4 total area of wetland points = 2	4
Area seasonally ponded is < ¼ total area of wetland points = 0	7
Total for D 1 Add the points in the boxes above	8
<b>Rating of Site Potential</b> If score is:12-16 = H $\underline{X}$ 6-11 = M $\underline{\hspace{0.5cm}}$ 0-5 = L Record the rating on the first pa	ge
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is $>$ 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?	
Source Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	0
Rating of Landscape Potential If score is:3 or 4 = H1 or 2 = MX_0 = L	st page
D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?  Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	0
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)?  Yes = 2 No = 0	0
Total for D 3  Add the points in the boxes above	0
Rating of Value If score is: 2-4 = H 1 = M X 0 = L Record the rating on the first page	-

DEPRESSIONAL AND FLATS WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradat	ion
D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression with no surface water leaving it (no outlet)  points = 4	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	4
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands	
with no outlet, measure from the surface of permanent water or if dry, the deepest part.	
Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7	
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5	
Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3	
The wetland is a "headwater" wetland points = 3	
Wetland is flat but has small depressions on the surface that trap water points = 1	7
Marks of ponding less than 0.5 ft (6 in) points = 0	
D 4.3. <u>Contribution of the wetland to storage in the watershed</u> : <i>Estimate the ratio of the area of upstream basin</i>	
contributing surface water to the wetland to the area of the wetland unit itself.  The area of the basin is less than 10 times the area of the unit points = 5	
The area of the basin is less than 10 times the area of the unit points = 5  The area of the basin is 10 to 100 times the area of the unit points = 3	
The area of the basin is more than 100 times the area of the unit points = 0	•
Entire wetland is in the Flats class points = 5	3
Total for D 4 Add the points in the boxes above	14
Rating of Site Potential If score is: X 12-16 = H6-11 = M0-5 = L Record the rating on the	first page
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0
D 5.2. Is $>10\%$ of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?  Yes = 1 No = 0	0
Total for D 5  Add the points in the boxes above	0
·	
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M X 0 = L Record the rating on the	Jirst page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around	
the wetland unit being rated. Do not add points. <u>Choose the highest score if more than one condition is met.</u>	
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has	
damaged human or natural resources (e.g., houses or salmon redds):	
<ul> <li>Flooding occurs in a sub-basin that is immediately down-gradient of unit.</li> <li>Surface flooding problems are in a sub-basin farther down-gradient.</li> <li>points = 2</li> </ul>	
Flooding from groundwater is an issue in the sub-basin. points = 1	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. <i>Explain why</i> points = 0	
	1
There are no problems with flooding downstream of the wetland. points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?  Yes = 2 No = 0	0
Total for D 6 Add the points in the boxes above	1

Rating of Value If score is: \_\_\_2-4 = H  $_{\underline{X}}$ 1 = M \_\_\_0 = L

Record the rating on the first page

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 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 X \_Emergent 3 structures: points = 2 \_\_\_Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) 0 that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). X Permanently flooded or inundated 4 or more types present: points = 3 X Seasonally flooded or inundated 3 types present: points = 2 Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 type present: points = 0 \_\_\_Permanently flowing stream or river in, or adjacent to, the wetland Seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland 2 points Freshwater tidal wetland 2 points 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 0 points = 0 < 5 species 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 Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points 1

H 1.5. Special habitat features:			
Check the habitat features that are present in the wetland. The number of checks is the number of points.			
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).			
Standing snags (dbh > 4 in) within the wetland			
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m)			
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)			
X Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree			
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered			
where wood is exposed)			
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are			
permanently or seasonally inundated (structures for egg-laying by amphibians)			
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of	۱ ،		
strata)	1		
Total for H 1 Add the points in the boxes above	3		
Rating of Site Potential If score is:15-18 = H7-14 = M $\times$ 0-6 = L Record the rating on	the first page		
1120 December landscape have the notantial to compare the helitatic matient of the site?			
H 2.0. Does the landscape have the potential to support the habitat functions of the site?			
H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i> ).	1		
Calculate: % undisturbed habitat $3 + (\% \text{ moderate and low intensity land uses})/2] 23 = 26 - \%$			
If total accessible habitat is:			
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3			
20-33% of 1 km Polygon points = 2			
10-19% of 1 km Polygon points = 1			
< 10% of 1 km Polygon points = 0	2		
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.			
Calculate: % undisturbed habitat $\frac{26}{2}$ + [(% moderate and low intensity land uses)/2] $\frac{41}{2}$ = $\frac{41}{2}$ %			
Undisturbed habitat > 50% of Polygon points = 3			
Undisturbed habitat 10-50% and in 1-3 patches points = 2			
Undisturbed habitat 10-50% and > 3 patches points = 1			
Undisturbed habitat < 10% of 1 km Polygon points = 0	1		
H 2.3. Land use intensity in 1 km Polygon: If			
> 50% of 1 km Polygon is high intensity land use points = (-2)			
$\leq$ 50% of 1 km Polygon is high intensity points = 0	0		
Total for H 2 Add the points in the boxes above	3		
Rating of Landscape Potential If score is:4-6 = H $\times$ _1-3 = M<1 = L			
H 3.0. Is the habitat provided by the site valuable to society?			
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score			
that applies to the wetland being rated.			
Site meets ANY of the following criteria: points = 2			
<ul> <li>— It has 3 or more priority habitats within 100 m (see next page)</li> </ul>	1		
<ul> <li>— It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</li> </ul>			
<ul> <li>— It is mapped as a location for an individual WDFW priority species</li> </ul>			
<ul> <li>— It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</li> </ul>	1		
<ul> <li>— It has been categorized as an important habitat site in a local or regional comprehensive plan, in a</li> </ul>			
Shoreline Master Plan, or in a watershed plan			
Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1	0		

Site does not meet any of the criteria above

Rating of Value If score is: 2 = H 1 = M X = D

points = 0

Record the rating on the first page

# **WDFW Priority Habitats**

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

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

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

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

## **CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	C-4
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 <b>SC 1.1</b> No= <b>Not an estuarine wetland</b>	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area	
Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Yes = Category I No - Go to SC 1.2	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	
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	Cat. II
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 = 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	
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 below.</i> If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile?  Yes – Go to SC 3.3  No – Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or	
pond? Yes – Go to <b>SC 3.3</b> No = <b>Is not a bog</b>	
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	
<b>NOTE:</b> 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	

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</i>	
the wetland based on its functions.	
— <b>Old-growth forests</b> (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.	
— <b>Mature forests</b> (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).	
	C-+ 1
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)	Cat. I
during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	Cat. I
Yes – Go to <b>SC 5.1</b> No = <b>Not a wetland in a coastal lagoon</b> 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).	Cat. II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	
— The wetland is larger than $^{1}/_{10}$ ac (4350 ft <sup>2</sup> )	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If	
you answer yes you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
<ul><li>Long Beach Peninsula: Lands west of SR 103</li></ul>	
<ul><li>— Grayland-Westport: Lands west of SR 105</li></ul>	Cat I
<ul><li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li></ul>	
Yes – Go to <b>SC 6.1</b> No = <b>not an interdunal wetland for rating</b>	
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	C-+ 1).
	Cat. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): WL 3	Date of site visit: 10/15/2020
Rated by K Biafora	Trained by Ecology?X YesNo Date of training 2015
HGM Class used for rating Depression	Wetland has multiple HGM classes? Y X N
NOTE: Form is not complete witho Source of base aerial photo/map	p ESRI, 2020
OVERALL WETLAND CATEGORY IV	(based on functions X or special characteristics )

#### 1. Category of wetland based on FUNCTIONS

FUNCTION		mprov ter Q	ing uality	H	ydrolo	gic		Habita	at	
	Circle the appropriate ratings									
Site Potential	Н	M	L	Н	М	L	Н	М	L	
Landscape Potential	Н	М	L	Н	М	L	Н	M	L	
Value	Н	М	L	Н	M	L	Н	М	L	TOTAL
Score Based on Ratings	4			4			4			12

## Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L 5 = 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	
Bog	I	
Mature Forest	I	
Old Growth Forest	I	
Coastal Lagoon	I	II
Interdunal	I II	III IV
None of the above		

# Maps and figures required to answer questions correctly for Western Washington

## <u>Depressional Wetlands</u>

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

#### **Riverine Wetlands**

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

#### Slope Wetlands

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

# **HGM Classification of 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	1 40 + 60 - 110 + 04	larrala in tha	antina mait	11	acoutualled by	+: d		~ fl ~ ~ d ~?
	are the water	ieveis in ine	eniire iinii	usuanv	controlled b	V HOPS PXCE	mi allicini	9 HOOGS?
ㅗ.	Are the water	IC V CID III CIIC	CIICII C GIII	abaany	continuinca b	y craco chec	peauin	5 1100as.

NO - go to 2

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

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

#### **NO - Saltwater Tidal Fringe (Estuarine)**

**YES - Freshwater Tidal Fringe** 

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

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

NO - go to 3

**YES** – The wetland class is **Flats** 

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

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

NO – go to 4

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

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

NO – go to 5

**YES** - The wetland class is **Slope** 

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

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

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

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

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

DEDDESSIONAL AND FLATS WIFTLANDS	
<u>DEPRESSIONAL AND FLATS WETLANDS</u> Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).	
points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	
points = 2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	3
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes)	:
Wetland has persistent, ungrazed, plants > 95% of area points = 5	
Wetland has persistent, ungrazed, plants > ½ of area points = 3	
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area points = 1	_
Wetland has persistent, ungrazed plants $< \frac{1}{10}$ of area points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation:	
This is the area that is ponded for at least 2 months. See description in manual.	
Area seasonally ponded is > ½ total area of wetland points = 4	
Area seasonally ponded is > 1/4 total area of wetland points = 2	0
Area seasonally ponded is < ¼ total area of wetland points = 0	
Total for D 1 Add the points in the boxes above	8
<b>Rating of Site Potential</b> If score is:12-16 = H $\underline{X}$ 6-11 = M $\underline{\hspace{0.5cm}}$ 0-5 = L Record the rating on the first	page
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
D 2.3. Are there septic systems within 250 ft of the wetland?  Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?	
Source Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	0
Rating of Landscape Potential If score is:3 or 4 = H1 or 2 = MX_0 = L Record the rating on the	first page
D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the	
303(d) list? Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	0
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES	
if there is a TMDL for the basin in which the unit is found)?  Yes = 2 No = 0	0
Total for D 3 Add the points in the boxes above	0
<b>Rating of Value</b> If score is: $2-4 = H$ $1 = M$ $X = 0 = L$ Record the rating on the first page	

DEPRESSIONAL AND FLATS WETLANDS							
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation							
D 4.0. Does the site have the potential to reduce flooding and erosion?							
D 4.1. Characteristics of surface water outflows from the wetland:							
Wetland is a depression or flat depression with no surface water leaving it (no outlet)  points = 4							
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 2 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1							
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch  Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing  points = 1	4						
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands							
with no outlet, measure from the surface of permanent water or if dry, the deepest part.							
Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7							
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5							
Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3							
The wetland is a "headwater" wetland points = 3							
Wetland is flat but has small depressions on the surface that trap water points = 1	0						
Marks of ponding less than 0.5 ft (6 in) points = 0							
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin							
contributing surface water to the wetland to the area of the wetland unit itself.							
The area of the basin is less than 10 times the area of the unit points = 5							
The area of the basin is 10 to 100 times the area of the unit points = 3							
The area of the basin is more than 100 times the area of the unit points = 0  Entire wetland is in the Flats class points = 5	0						
·	4						
Total for D 4 Add the points in the boxes above  Rating of Site Potential If score is: 12-16 = H 6-11 = M X 0-5 = L Record the rating on the	-						
	jii st page						
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?  D 5.1. Does the wetland receive stormwater discharges?  Yes = 1 No = 0							
C C C C C C C C C C C C C C C C C C C	0						
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	0						
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?  Yes = 1 No = 0	0						
Total for D 5 Add the points in the boxes above	0						
Rating of Landscape Potential If score is:3 = H1 or 2 = MX_0 = L	first page						
D 6.0. Are the hydrologic functions provided by the site valuable to society?							
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around							
the wetland unit being rated. Do not add points. <u>Choose the highest score if more than one condition is met.</u>							
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has							
damaged human or natural resources (e.g., houses or salmon redds):							
• Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2							
• Surface flooding problems are in a sub-basin farther down-gradient. points = 1							
Flooding from groundwater is an issue in the sub-basin. points = 1							
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the							
water stored by the wetland cannot reach areas that flood. Explain why points = 0							
There are no problems with flooding downstream of the wetland. points = 0	1						
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	0						
Yes = 2 No = 0	1						
Total for D 6 Add the points in the boxes above							

Rating of Value If score is: \_\_\_2-4 = H  $_{\underline{X}}$ 1 = M \_\_\_0 = L

Record the rating on the first page

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 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 3 structures: points = 2 \_\_\_Emergent 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) 0 that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 Seasonally flooded or inundated 3 types present: points = 2 X Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 type present: points = 0 \_\_\_Permanently flowing stream or river in, or adjacent to, the wetland Seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland 2 points Freshwater tidal wetland 2 points H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 0 points = 0 < 5 species 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 Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points 0

H 1.5. Special habitat features:		
Check the habitat features that are present in the wetland. The number of checks is the number of points.		
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).		
Standing snags (dbh > 4 in) within the wetland		
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m)		
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)		
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree		
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered		
where wood is exposed)		
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are		
permanently or seasonally inundated (structures for egg-laying by amphibians)		
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of	0	
strata)		
Total for H 1 Add the points in the boxes above	4 0	
Rating of Site Potential If score is:15-18 = H7-14 = M $\times$ 0-6 = 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).		
Calculate: % undisturbed habitat $\frac{3}{2}$ + [(% moderate and low intensity land uses)/2] $\frac{23}{2}$ = $\frac{26}{2}$ %		
If total accessible habitat is:		
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3		
20-33% of 1 km Polygon points = 2		
10-19% of 1 km Polygon points = 1		
< 10% of 1 km Polygon points = 0	2	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.		
Calculate: % undisturbed habitat $\frac{26}{100}$ + [(% moderate and low intensity land uses)/2] $\frac{41}{100}$ %		
Undisturbed habitat > 50% of Polygon points = 3		
Undisturbed habitat 10-50% and in 1-3 patches points = 2		
Undisturbed habitat 10-50% and > 3 patches points = 1		
Undisturbed habitat < 10% of 1 km Polygon points = 0	1	
H 2.3. Land use intensity in 1 km Polygon: If		
> 50% of 1 km Polygon is high intensity land use points = (-2)	0	
≤ 50% of 1 km Polygon is high intensity points = 0	<del>                                     </del>	
Total for H 2 Add the points in the boxes above	3	
Rating of Landscape Potential If score is:4-6 = HX1-3 = M< 1 = L	ne first p	oage
H 3.0. Is the habitat provided by the site valuable to society?	-	_
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score		
that applies to the wetland being rated.		
Site meets ANY of the following criteria: points = 2		
<ul> <li>— It has 3 or more priority habitats within 100 m (see next page)</li> </ul>		
<ul> <li>— It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</li> </ul>		
<ul> <li>— It is mapped as a location for an individual WDFW priority species</li> </ul>		
<ul> <li>— It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</li> </ul>		
<ul> <li>It has been categorized as an important habitat site in a local or regional comprehensive plan, in a</li> </ul>		
Shoreline Master Plan, or in a watershed plan		
Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1	I	

Site does not meet any of the criteria above

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

Record the rating on the first page

points = 0

# **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. <a href="http://wdfw.wa.gov/publications/00165/wdfw00165.pdf">http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</a> or access the list from here: <a href="http://wdfw.wa.gov/conservation/phs/list/">http://wdfw.wa.gov/conservation/phs/list/</a>)

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

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

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

## **CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	C-4
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 <b>SC 1.1</b> No= <b>Not an estuarine wetland</b>	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area	
Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Yes = Category I No - Go to SC 1.2	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	
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	Cat. II
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 = 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	
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 below.</i> If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile?  Yes – Go to SC 3.3  No – Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or	
pond? Yes – Go to <b>SC 3.3</b> No = <b>Is not a bog</b>	
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	
<b>NOTE:</b> 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	

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</i>	
the wetland based on its functions.	
— <b>Old-growth forests</b> (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.	
— <b>Mature forests</b> (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).	
	C-+ 1
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)	Cat. I
during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	Cat. I
Yes – Go to <b>SC 5.1</b> No = <b>Not a wetland in a coastal lagoon</b> 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).	Cat. II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	
— The wetland is larger than $^{1}/_{10}$ ac (4350 ft <sup>2</sup> )	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If	
you answer yes you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
<ul><li>Long Beach Peninsula: Lands west of SR 103</li></ul>	
<ul><li>— Grayland-Westport: Lands west of SR 105</li></ul>	Cat I
<ul><li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li></ul>	
Yes – Go to <b>SC 6.1</b> No = <b>not an interdunal wetland for rating</b>	
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	C-+ 1).
	Cat. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): WL 4	Date of site visit: 10/15/2020
Rated by K Biafora	Trained by Ecology?X YesNo Date of training 2015
HGM Class used for rating Depression	Wetland has multiple HGM classes? Y X N
NOTE: Form is not complete without Source of base aerial photo/ma	p ESRI, 2020
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	Improving Water Quality		H	Hydrologic		Habitat				
Circle the appropriate ratings										
Site Potential	Н	M	L	Н	М	L	Н	М	L	
Landscape Potential	Н	M	L	Н	M	L	Н	M	L	
Value	Н	М	L	Н	M	L	Н	М	L	TOTAL
Score Based on Ratings	5				5		4			14

## Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H, M, M6 = H,M,L6 = M,M,M5 = H,L,L 5 = 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
Bog		I
Mature Forest		I
Old Growth Forest		I
Coastal Lagoon	I	II
Interdunal	I II	III IV
None of the above		

# Maps and figures required to answer questions correctly for Western Washington

## <u>Depressional Wetlands</u>

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 polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

#### Slope Wetlands

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

# **HGM Classification of 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 b	v tides exce	nt during	floods?
Ι.	Ale the water	ieveis ili tile	chill c unit	usuany	controlled b	y nues exce	pt uui iiiş	s moous:

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). Type text here

NO - go to 4

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

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

NO – go to 5

**YES** - The wetland class is **Slope** 

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

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

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

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

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

DEPRESSIONAL AND FLATS WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).	
points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	
points = 2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1	3
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. <u>Characteristics and distribution of persistent plants</u> (Emergent, Scrub-shrub, and/or Forested Cowardin classes):	
Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3	
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area points = 1	
Wetland has persistent, ungrazed plants $^{1}/_{10}$ of area points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation:	
This is the area that is ponded for at least 2 months. See description in manual.	
Area seasonally ponded is > ½ total area of wetland points = 4	
Area seasonally ponded is > 1/4 total area of wetland points = 2	0
Area seasonally ponded is < ¼ total area of wetland points = 0	
Total for D 1 Add the points in the boxes above	8
<b>Rating of Site Potential</b> If score is:12-16 = H $\underline{X}$ 6-11 = M $\underline{C}$ 0-5 = L Record the rating on the first $\mu$	oage
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?  Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?	
Source Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	1
Rating of Landscape Potential If score is:3 or 4 = HX_1 or 2 = M0 = L Record the rating on the state of the st	first page
D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?  Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	0
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES	
if there is a TMDL for the basin in which the unit is found)? Yes = $2 \text{ No} = 0$	0
Total for D 3 Add the points in the boxes above	0
<b>Rating of Value</b> If score is: $2-4 = H$ $1 = M$ $X = 0 = L$ Record the rating on the first page	•

<u>DEPRESSIONAL AND FLATS WETLANDS</u> Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradati	on
D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outletpoints = 2	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1	4
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	4
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands	
with no outlet, measure from the surface of permanent water or if dry, the deepest part.	
Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7	
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5	
Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3	
The wetland is a "headwater" wetland points = 3	
Wetland is flat but has small depressions on the surface that trap water points = 1	0
Marks of ponding less than 0.5 ft (6 in) points = 0	
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin	
contributing surface water to the wetland to the area of the wetland unit itself.	
The area of the basin is less than 10 times the area of the unit points = 5	
The area of the basin is 10 to 100 times the area of the unit points = 3	
The area of the basin is more than 100 times the area of the unit points = 0	0
Entire wetland is in the Flats class points = 5	
Add the points in the soxes above	4
Rating of Site Potential If score is:12-16 = H6-11 = M $\times$ 0-5 = L Record the rating on the j	first page
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at	4
>1 residence/ac, urban, commercial, agriculture, etc.)?  Yes = 1 No = 0	1
Total for D 5 Add the points in the boxes above	2
Rating of Landscape Potential If score is: 3 = H X 1 or 2 = M 0 = L  Record the rating on the part of the rating of the rating of the part of the rating of the part of the rating of the rating of the rating of the part of the pa	first page
D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around	
the wetland unit being rated. Do not add points. <u>Choose the highest score if more than one condition is met.</u>	
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has	
damaged human or natural resources (e.g., houses or salmon redds):	
• Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2	
• Surface flooding problems are in a sub-basin farther down-gradient. points = 1	
Flooding from groundwater is an issue in the sub-basin. points = 1	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the	
water stored by the wetland cannot reach areas that flood. <i>Explain why</i> points = 0	
There are no problems with flooding downstream of the wetland. points = 0	1
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?  Yes = 2 No = 0	0
Total for D.6.  Add the points in the hoxes above	4

Rating of Value If score is: \_\_\_2-4 = H  $_{\underline{\chi}}$ 1 = M \_\_\_0 = L

Record the rating on the first page

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 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 3 structures: points = 2 X Emergent 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) 1 that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 Seasonally flooded or inundated 3 types present: points = 2 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 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. 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 1 points = 0 < 5 species 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 Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points 1

H 1.5. Special habitat features:	
Check the habitat features that are present in the wetland. The number of checks is the number of points.	
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).	
Standing snags (dbh > 4 in) within the wetland	
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m)	
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree	
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered	
where wood is exposed)	
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are	
permanently or seasonally inundated (structures for egg-laying by amphibians)	
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of	0
strata)	U
Total for H 1 Add the points in the boxes above	4
Rating of Site Potential If score is:15-18 = H7-14 = M	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).	
Calculate: % undisturbed habitat $\frac{3}{2}$ + [(% moderate and low intensity land uses)/2] $\frac{23}{2}$ = $\frac{26}{2}$ %	
If total accessible habitat is:	
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3	
20-33% of 1 km Polygon points = 2	
10-19% of 1 km Polygon points = 1	
< 10% of 1 km Polygon points = 0	2
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.	
Calculate: % undisturbed habitat $\frac{26}{}$ + [(% moderate and low intensity land uses)/2] $\frac{41}{}$ %	
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	1
Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3. Land use intensity in 1 km Polygon: If	
> 50% of 1 km Polygon is high intensity land use points = (-2)	0
≤ 50% of 1 km Polygon is high intensity points = 0	
Total for H 2 Add the points in the boxes above	3
Rating of Landscape Potential If score is:4-6 = H X_1-3 = M<1 = L Record the rating on t	he first page
H 3.0. Is the habitat provided by the site valuable to society?	-
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score	
that applies to the wetland being rated.	
Site meets ANY of the following criteria: points = 2	
<ul> <li>— It has 3 or more priority habitats within 100 m (see next page)</li> </ul>	
<ul> <li>It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</li> </ul>	
It is mapped as a location for an individual WDFW priority species	
<ul> <li>It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</li> </ul>	1
<ul> <li>— It has been categorized as an important habitat site in a local or regional comprehensive plan, in a</li> </ul>	
Shoreline Master Plan, or in a watershed plan	
Site has 1 or 2 priority habitats (listed on next page) within 100 m	1

Site does not meet any of the criteria above

Rating of Value If score is: \_\_\_2 = H \_\_\_\_1 = M \_\_\_X\_0 = L

Record the rating on the first page

points = 0

0

# **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. <a href="http://wdfw.wa.gov/publications/00165/wdfw00165.pdf">http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</a> or access the list from here: <a href="http://wdfw.wa.gov/conservation/phs/list/">http://wdfw.wa.gov/conservation/phs/list/</a>)

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

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

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

## **CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	C-4
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 <b>SC 1.1</b> No= <b>Not an estuarine wetland</b>	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area	
Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Yes = Category I No - Go to SC 1.2	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	
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	Cat. II
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 = 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	
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 below.</i> If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile?  Yes – Go to SC 3.3  No – Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or	
pond? Yes – Go to <b>SC 3.3</b> No = <b>Is not a bog</b>	
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	
<b>NOTE:</b> 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	

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</i>	
the wetland based on its functions.	
— <b>Old-growth forests</b> (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.	
— <b>Mature forests</b> (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).	
	C-+ 1
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)	Cat. I
during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	Cat. I
Yes – Go to <b>SC 5.1</b> No = <b>Not a wetland in a coastal lagoon</b> 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).	Cat. II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	
— The wetland is larger than $^{1}/_{10}$ ac (4350 ft <sup>2</sup> )	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If	
you answer yes you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
<ul><li>Long Beach Peninsula: Lands west of SR 103</li></ul>	
<ul><li>— Grayland-Westport: Lands west of SR 105</li></ul>	Cat I
<ul><li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li></ul>	
Yes – Go to <b>SC 6.1</b> No = <b>not an interdunal wetland for rating</b>	
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	C-+ 1).
	Cat. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): WL-5	Date of site visit: 10/15/2020
Rated by K Biafora	Trained by Ecology?X_ YesNo Date of training
HGM Class used for rating Slope	Wetland has multiple HGM classes?Y XN
NOTE: Form is not complete witho Source of base aerial photo/map	put the figures requested (figures can be combined).  ESRI, 2020
OVERALL WETLAND CATEGORY <u>IV</u>	(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		mprov ter Q	ing uality	H	ydrolo	gic	I	Habita	at	
					Circle 1	the ap	propr	iate ra	itings	
Site Potential	Н	M	L	Н	М	L	Н	М	L	
Landscape Potential	Н	M	L	Н	М	L	Н	M	L	
Value	Н	М	L	Н	M	L	Н	М	L	TOTAL
Score Based on										
Ratings	5				4		4			13

## Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H,M,M 6 = H,M,L6 = M,M,M5 = H,L,L 5 = 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
Bog		I
Mature Forest		I
Old Growth Forest		I
Coastal Lagoon	I	II
Interdunal	I II	III IV
None of the above	Х	

# Maps and figures required to answer questions correctly for Western Washington

## <u>Depressional Wetlands</u>

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

#### **Riverine Wetlands**

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

#### Lake Fringe Wetlands

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

#### Slope Wetlands

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

# **HGM Classification of 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.

Wedana name of mamber	W	/etland	name	or	number	• 5
-----------------------	---	---------	------	----	--------	-----

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

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

SLOPE WETLANDS					
Water Quality Functions - Indicators that the site functions to improve water quality					
S 1.0. Does the site have the potential to improve water quality?					
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)					
Slope is 1% or less points = 3					
Slope is > 1%-2% points = 2					
Slope is > 2%-5% points = 1					
Slope is greater than 5% points = 0	3				
S 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic (use NRCS definitions): Yes = 3 No = 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. <i>Dense means you have trouble seeing the soil surface (&gt;75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i>					
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	3				
Does not meet any of the criteria above for plants points = 0	3				
Total for S 1 Add the points in the boxes above	6				
Rating of Site Potential If score is: $12 = H$ $X_6-11 = M$ $0-5 = L$ Record the rating on	the first page				
S 2.0. Does the landscape have the potential to support the water quality function of the site?					
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1  No = 0	1				
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?					
Other sources Yes = 1 No = 0	0				
Total for S 2 Add the points in the boxes above	1				
Rating of Landscape Potential If score is: X_1-2 = M0 = L Record the rating on the first					
S 3.0. Is the water quality improvement provided by the site valuable to society?					

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	0
Total for S 3 Add the points in the boxes above	0

Rating of Value If score is:  $__2$ -4 = H  $__1$  = M  $_1$  = M  $_2$  0 = L

Record the rating on the first page

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream eros	sion
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during 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, <b>rigid</b> plants cover > 90% of the area of the wetland points = 1  All other conditions points = 0	0
Patient (Ch. Patential Managine 4 A4 V C I	the Cost of the

**Rating of Site Potential** If score is: 1 = M X = 0 = L

Record the rating on 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 th surface runoff?	at generate excess Yes = 1 No = 0	0
Rating of Landscape Potential If score is: 1 = M X 0 = I	Record the rating on	the first nage

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems:	
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2 Surface flooding problems are in a sub-basin farther down-gradient points = 1 No flooding problems anywhere downstream points = 0	1
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?  Yes = 2 No = 0	
Total for S 6 Add the points in the boxes above	1

Rating of Value If score is: \_\_\_2-4 = H  $X_1$  = M \_\_\_0 = L

Record the rating on the first page

**NOTES and FIELD OBSERVATIONS:** 

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 X 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) 1 that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 X Seasonally flooded or inundated 3 types present: points = 2 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 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. 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 1 points = 0 < 5 species 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 Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points 1

H 1.5. Special habitat features:					
Check the habitat features that are present in the wetland. The number of checks is the number of points.					
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).					
Standing snags (dbh > 4 in) within the wetland					
Undercut banks are present for at least 6.6 ft (2 m) <b>and/or</b> overhanging plants extends at least 3.3 ft (1 m)					
over a stream (or ditch) in, or contiguous with the wetland, for at least 3.3 ft (1 m)					
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree					
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)					
X At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are					
permanently or seasonally inundated (structures for egg-laying by amphibians)					
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of	1				
Strata)  Total for H 1  Add the points in the boxes above	_				
<u> </u>	5				
Rating of Site Potential If score is:15-18 = H7-14 = MX_0-6 = L	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).					
Calculate: % undisturbed habitat $3 + ((\% \text{ moderate and low intensity land uses})/2) 23 = 26 %$					
If total accessible habitat is:					
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3					
20-33% of 1 km Polygon points = 2					
10-19% of 1 km Polygon points = 1					
< 10% of 1 km Polygon points = 0	2				
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.					
Calculate: % undisturbed habitat $\underline{26}$ + [(% moderate and low intensity land uses)/2] $\underline{15}$ = $\underline{41}$ %					
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	4				
Undisturbed habitat < 10% of 1 km Polygon points = 0	1				
H 2.3. Land use intensity in 1 km Polygon: If					
> 50% of 1 km Polygon is high intensity land use points = (- 2)	0				
≤ 50% of 1 km Polygon is high intensity points = 0	0				
Total for H 2 Add the points in the boxes above	3				
Rating of Landscape Potential If score is:4-6 = HX1-3 = M< 1 = L Record the rating on to	<u> </u>				
H 2.0. Is the habitat provided by the site valuable to seciety?					
H 3.0. Is the habitat provided by the site valuable to society?					
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score</i>					
that applies to the wetland being rated.					
Site meets ANY of the following criteria: points = 2					
<ul> <li>— It has 3 or more priority habitats within 100 m (see next page)</li> </ul>					
<ul> <li>It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</li> </ul>					
<ul> <li>— It is mapped as a location for an individual WDFW priority species</li> </ul>					
<ul> <li>— It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</li> </ul>					
It has been categorized as an important habitat site in a local or regional comprehensive plan, in a					
Shoreline Master Plan, or in a watershed plan					
Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1	1				

Site does not meet any of the criteria above

Rating of Value If score is: \_\_\_2 = H \_\_\_1 = M \_\_X\_0 = L

Record the rating on the first page

points = 0

0

# **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. <a href="http://wdfw.wa.gov/publications/00165/wdfw00165.pdf">http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</a> or access the list from here: <a href="http://wdfw.wa.gov/conservation/phs/list/">http://wdfw.wa.gov/conservation/phs/list/</a>)

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

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

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

## **CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	C-4
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 <b>SC 1.1</b> No= <b>Not an estuarine wetland</b>	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area	
Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Yes = Category I No - Go to SC 1.2	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	
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	Cat. II
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 = 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	
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 below.</i> If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile?  Yes – Go to SC 3.3  No – Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or	
pond? Yes – Go to <b>SC 3.3</b> No = <b>Is not a bog</b>	
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	
<b>NOTE:</b> 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	

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</i>	
the wetland based on its functions.	
— <b>Old-growth forests</b> (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.	
— <b>Mature forests</b> (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).	
	C-+ 1
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)	Cat. I
during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	Cat. I
Yes – Go to <b>SC 5.1</b> No = <b>Not a wetland in a coastal lagoon</b> 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).	Cat. II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	
— The wetland is larger than $^{1}/_{10}$ ac (4350 ft <sup>2</sup> )	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If	
you answer yes you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
<ul><li>Long Beach Peninsula: Lands west of SR 103</li></ul>	
<ul><li>— Grayland-Westport: Lands west of SR 105</li></ul>	Cat I
<ul><li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li></ul>	
Yes – Go to <b>SC 6.1</b> No = <b>not an interdunal wetland for rating</b>	
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	C-+ 1).
	Cat. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): WL 6	Date of site visit: 10/15/2020
Rated by K Biafora	Trained by Ecology?X YesNo Date of training 2015
HGM Class used for rating Depression	Wetland has multiple HGM classes? Y X N
NOTE: Form is not complete witho Source of base aerial photo/ma	p ESRI, 2020
OVERALL WETLAND CATEGORY IV	(based on functions X or special characteristics )
4.6. 6.11.11.1	UNICTIONIC

#### 1. Category of wetland based on FUNCTIONS

\_\_\_\_\_Category I - Total score = 23 - 27
\_\_\_\_Category II - Total score = 20 - 22
\_\_\_\_Category III - Total score = 16 - 19
\_\_\_X\_\_Category IV - Total score = 9 - 15

FUNCTION	Improving Water Quality		H	ydrolo	gic		Habita	at		
					Circle 1	the ap	propr	iate ra	itings	
Site Potential	Н	M	L	Н	М	L	Н	М	L	
Landscape Potential	Н	M	L	Н	M	L	Н	M	L	
Value	Н	М	L	Н	M	L	Н	М	L	TOTAL
Score Based on Ratings	5				5		4			14

## Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L 5 = 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		
Bog		I	
Mature Forest	I		
Old Growth Forest		I	
Coastal Lagoon	I	II	
Interdunal	I II III IV		
None of the above			

# Maps and figures required to answer questions correctly for Western Washington

## <u>Depressional Wetlands</u>

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

#### **Riverine Wetlands**

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

#### Lake Fringe Wetlands

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

### Slope Wetlands

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

# **HGM Classification of 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 b	v tides exce	nt during	floods?
Ι.	Are the water	ieveis ili tile	chill c unit	usuany	controlled b	y nues exce	pt uui iiiş	s moous:

NO - go to 2

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

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

#### **NO - Saltwater Tidal Fringe (Estuarine)**

**YES - Freshwater Tidal Fringe** 

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

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

NO - go to 3

**YES** – The wetland class is **Flats** 

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

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

NO – go to 4

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

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

NO – go to 5

**YES** - The wetland class is **Slope** 

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

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

Wetland name or number \_\_6\_\_\_

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

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

DEPRESSIONAL AND FLATS WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).	
points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	
points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	3
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):	
Wetland has persistent, ungrazed, plants > 95% of area points = 5	
Wetland has persistent, ungrazed, plants > ½ of area points = 3	
Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area points = 1	_
Wetland has persistent, ungrazed plants $< \frac{1}{10}$ of area points = 0	5
D 1.4. Characteristics of seasonal ponding or inundation:	
This is the area that is ponded for at least 2 months. See description in manual.	
Area seasonally ponded is > ½ total area of wetland points = 4	
Area seasonally ponded is > ¼ total area of wetland points = 2	0
Area seasonally ponded is < 1/4 total area of wetland points = 0	
Total for D 1 Add the points in the boxes above	8
Rating of Site Potential If score is: 12-16 = H X 6-11 = M 0-5 = L Record the rating on the first po	age
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?	
Source Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	1
Rating of Landscape Potential If score is:3 or 4 = HX_1 or 2 = M0 = L Record the rating on the fi	rst page
D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the	
303(d) list? Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	0
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES	
if there is a TMDL for the basin in which the unit is found)?  Yes = 2 No = 0	0
Total for D 3 Add the points in the boxes above	0
<b>Rating of Value</b> If score is: $2-4 = H$ $1 = M$ $X$ $0 = L$ Record the rating on the first page	

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

Rating of Value If score is: \_\_\_2-4 = H  $_{\underline{X}}$ 1 = M \_\_\_0 = L

Record the rating on the first page

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 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 3 structures: points = 2 \_\_\_Emergent Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 X 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) 0 that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 Seasonally flooded or inundated 3 types present: points = 2 X Occasionally flooded or inundated 2 types present: points = 1 Saturated only 1 type present: points = 0 \_\_\_Permanently flowing stream or river in, or adjacent to, the wetland Seasonally flowing stream in, or adjacent to, the wetland Lake Fringe wetland 2 points Freshwater tidal wetland 2 points 0 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. 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 1 points = 0 < 5 species 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 Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points 0

	1			
H 1.5. Special habitat features:				
Check the habitat features that are present in the wetland. The number of checks is the number of points.				
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).				
Standing snags (dbh > 4 in) within the wetland				
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m)				
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)				
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree				
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered				
where wood is exposed)				
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are				
permanently or seasonally inundated (structures for egg-laying by amphibians)				
X Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of				
strata)	1			
Total for H 1 Add the points in the boxes above	2			
Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L Record the rating on				
	the jirst 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).				
Calculate: % undisturbed habitat $3 + ((\% \text{ moderate and low intensity land uses})/2) 23 = 26 - \%$				
If total accessible habitat is:				
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3				
20-33% of 1 km Polygon points = 2				
10-19% of 1 km Polygon points = 1				
< 10% of 1 km Polygon points = 0	2			
·				
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.				
Calculate: % undisturbed habitat $\underline{26}$ + [(% moderate and low intensity land uses)/2] $\underline{15}$ = $\underline{41}$ %				
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	1			
Undisturbed habitat < 10% of 1 km Polygon points = 0				
H 2.3. Land use intensity in 1 km Polygon: If				
> 50% of 1 km Polygon is high intensity land use points = (- 2)	0			
≤ 50% of 1 km Polygon is high intensity points = 0	U			
Total for H 2 Add the points in the boxes above	3			
Rating of Landscape Potential If score is: 4-6 = H X 1-3 = M <1 = L Record the rating on to	he first page			
	<u> </u>			
H 3.0. Is the habitat provided by the site valuable to society?				
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score				
that applies to the wetland being rated.				
Site meets ANY of the following criteria: points = 2				
<ul> <li>— It has 3 or more priority habitats within 100 m (see next page)</li> </ul>				
<ul> <li>It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</li> </ul>				
It is mapped as a location for an individual WDFW priority species				
It is a Wetland of High Conservation Value as determined by the Department of Natural Resources				
It has been categorized as an important habitat site in a local or regional comprehensive plan, in a				
Shoreline Master Plan, or in a watershed plan				
Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1				
Site does not meet any of the criteria above points = 0	0			
Rating of Value If score is: 2 = H 1 = M × 0 = I	., 6			

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

Record the rating on the first page

# **WDFW Priority Habitats**

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

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

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

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

## **CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	C-4
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 <b>SC 1.1</b> No= <b>Not an estuarine wetland</b>	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area	
Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Yes = Category I No - Go to SC 1.2	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	
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	Cat. II
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 = 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	
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 below.</i> If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile?  Yes – Go to SC 3.3  No – Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or	
pond? Yes – Go to <b>SC 3.3</b> No = <b>Is not a bog</b>	
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	
<b>NOTE:</b> 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	

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</i>	
the wetland based on its functions.	
— <b>Old-growth forests</b> (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.	
— <b>Mature forests</b> (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).	
	C-+ 1
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)	Cat. I
during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	Cat. I
Yes – Go to <b>SC 5.1</b> No = <b>Not a wetland in a coastal lagoon</b> 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).	Cat. II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	
— The wetland is larger than $^{1}/_{10}$ ac (4350 ft <sup>2</sup> )	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If	
you answer yes you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
<ul><li>Long Beach Peninsula: Lands west of SR 103</li></ul>	
<ul><li>— Grayland-Westport: Lands west of SR 105</li></ul>	Cat I
<ul><li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li></ul>	
Yes – Go to <b>SC 6.1</b> No = <b>not an interdunal wetland for rating</b>	
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	C-+ 1).
	Cat. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #): WL-7	Date of site visit: 10/15/2020
Rated by K Biafora	Trained by Ecology?X YesNo Date of training
HGM Class used for rating Slope	Wetland has multiple HGM classes?Y X_N
NOTE: Form is not complete with Source of base aerial photo/ma	out the figures requested (figures can be combined).  ap ESRI, 2020
OVERALL WETLAND CATEGORY <u>I</u>	V (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		mprov ter Q	ing uality	H	ydrolo	gic		Habita	at	
					Circle 1	the ap	propr	iate ra	itings	
Site Potential	Н	M	L	Н	М	L	Н	М	L	
Landscape Potential	Н	M	L	Н	M	L	Н	M	L	
Value	Н	М	L	Н	M	L	Н	М	L	TOTAL
Score Based on										
Ratings	5			5			4			14

## Score for each function based on three ratings (order of ratings is not *important)* 9 = H,H,H8 = H,H,M7 = H,H,L 7 = H,M,M6 = H,M,L6 = M,M,M5 = H,L,L 5 = 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		
Bog	I		
Mature Forest	I		
Old Growth Forest	I		
Coastal Lagoon	I	II	
Interdunal	I II	III IV	
None of the above	Х		

# Maps and figures required to answer questions correctly for Western Washington

## **Depressional Wetlands**

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

#### **Riverine Wetlands**

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

### Lake Fringe Wetlands

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

### Slope Wetlands

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

# **HGM Classification of 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	7	,

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

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

SLOPE WETLANDS			
Water Quality Functions - Indicators that the site functions to improve water quality			
S 1.0. Does the site have the potential to improve water quality?			
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)			
Slope is 1% or less points = 3			
Slope is > 1%-2% points = 2			
Slope is > 2%-5% points = 1			
Slope is greater than 5% points = 0	2		
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = 0			
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants:			
Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you			
have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.			
Dense, uncut, herbaceous plants > 90% of the wetland area points = 6			
Dense, uncut, herbaceous plants > ½ of area points = 3			
Dense, woody, plants > ½ of area points = 2			
Dense, uncut, herbaceous plants > ¼ of area points = 1	6		
Does not meet any of the criteria above for plants points = 0	6		
Total for S 1 Add the points in the boxes above	8		
Rating of Site Potential If score is: 12 = H X 6-11 = M 0-5 = L Record the rating on	the first page		
S 2.0. Does the landscape have the potential to support the water quality function of the site?			

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?	
Yes = 1 No = 0	1
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?	
Other sources Yes = 1 No = 0	0
Total for S 2 Add the points in the boxes above	1

Rating of Landscape Potential If score is: X 1-2 = M 0 = L

Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?  Yes = 1 No = 0	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? At least one aquatic resource in the basin is on the 303(d) list.  Yes = 1 No = 0	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	0
Total for S 3 Add the points in the boxes above	0

Rating of Value If score is: \_\_\_2-4 = H \_\_\_1 = M  $X_0$  = L

Record the rating on the first page

SLOPE WETLANDS	
<b>Hydrologic Functions</b> - Indicators that the site functions to reduce flooding and stream eros	sion
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during 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, <b>rigid</b> plants cover > 90% of the area of the wetland points = 1  All other conditions points = 0	0
Pating of Site Potential If score is: 1 - M X 0 - I	the first nage

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	1

Rating of Landscape Potential If score is:  $X_1 = M_0 = L$ 

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?		
S 6.1. Distance to the nearest areas downstream that have flooding problems:		
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or		
natural resources (e.g., houses or salmon redds) points = 2		
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	1
No flooding problems anywhere downstream	points = 0	1
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?		
	Yes = 2 No = 0	0
Total for S 6 Add the point	ts in the boxes above	1

Rating of Value If score is:  $_2-4 = H \times X_1 = M = _0 = L$ 

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

#### These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat H 1.0. Does the site have the potential to provide habitat? H 1.1. Structure of plant community: Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked. Aquatic bed 4 structures or more: points = 4 X\_Emergent 3 structures: points = 2 \_\_\_\_Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 Forested (areas where trees have > 30% cover) 1 structure: points = 0 If the unit has a Forested class, check if: The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) 0 that each cover 20% within the Forested polygon H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (see text for descriptions of hydroperiods). Permanently flooded or inundated 4 or more types present: points = 3 X Seasonally flooded or inundated 3 types present: points = 2 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 1 H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. 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 1 points = 0 < 5 species 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 Moderate = 2 points Low = 1 point All three diagrams in this row are **HIGH** = 3points 0

H 1.5. Special habitat features:		
Check the habitat features that are present in the wetland. The number of checks is the number of points.		
Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).		
Standing snags (dbh > 4 in) within the wetland		
Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m	)	
over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)		
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree		
slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered		
where wood is exposed)		
At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are		
permanently or seasonally inundated (structures for egg-laying by amphibians)		
Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of	0	
strata)		
Total for H 1 Add the points in the boxes above	2	
Rating of Site Potential If score is:15-18 = H7-14 = MX_0-6 = L	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).		
Calculate: % undisturbed habitat $3 + (\% \text{ moderate and low intensity land uses})/2] 23 = 26 %$		
If total accessible habitat is:		
$> \frac{1}{3}$ (33.3%) of 1 km Polygon points = 3		
20-33% of 1 km Polygon points = 2		
10-19% of 1 km Polygon points = 1		
< 10% of 1 km Polygon points = 0	2	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.		
Calculate: % undisturbed habitat $\frac{26}{15}$ + [(% moderate and low intensity land uses)/2] $\frac{15}{15}$ = $\frac{41}{15}$ %		
Undisturbed habitat > 50% of Polygon points = 3		
Undisturbed habitat 10-50% and in 1-3 patches points = 2		
Undisturbed habitat 10-50% and > 3 patches points = 1		
Undisturbed habitat < 10% of 1 km Polygon points = 0	1	
H 2.3. Land use intensity in 1 km Polygon: If		
> 50% of 1 km Polygon is high intensity land use points = (-2)		
$\leq$ 50% of 1 km Polygon is high intensity points = 0	0	
	2	
Total for H 2 Add the points in the boxes above  Rating of Landscape Potential If score is: 4-6 = H X 1-3 = M <1 = L Record the rating of	3 the first nage	
nating of Earlascape Potential Processing 4 0 - 11 2/12 1 3 - 101 1 1 - 1	ttile jii st page	
H 3.0. Is the habitat provided by the site valuable to society?		
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score		
that applies to the wetland being rated.		
Site meets ANY of the following criteria: points = 2		
<ul> <li>It has 3 or more priority habitats within 100 m (see next page)</li> </ul>		
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		
<ul> <li>It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</li> </ul>		
It has been categorized as an important habitat site in a local or regional comprehensive plan, in a		
Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on post page) within 100 m		
Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1	0	
Site does not meet any of the criteria above points = 0		
Rating of Value If score is: $2 = H$ $1 = M$ $X_0 = L$ Record the rating	on the first page	

# **WDFW Priority Habitats**

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

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.

2

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

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

## **CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	C-4
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 <b>SC 1.1</b> No= <b>Not an estuarine wetland</b>	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area	
Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	
Yes = Category I No - Go to SC 1.2	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	
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	Cat. II
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 = 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	
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 below.</i> If you answer YES you will still need to rate the wetland based on its functions.	
SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or	
more of the first 32 in of the soil profile?  Yes – Go to SC 3.3  No – Go to SC 3.2	
SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep	
over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or	
pond? Yes – Go to <b>SC 3.3</b> No = <b>Is not a bog</b>	
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	
<b>NOTE:</b> 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	

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</i>	
the wetland based on its functions.	
— <b>Old-growth forests</b> (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.	
— <b>Mature forests</b> (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).	
	C-+ 1
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)	Cat. I
during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)	Cat. I
Yes – Go to <b>SC 5.1</b> No = <b>Not a wetland in a coastal lagoon</b> 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).	Cat. II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-	
mowed grassland.	
— The wetland is larger than $^{1}/_{10}$ ac (4350 ft <sup>2</sup> )	
Yes = Category I No = Category II	
SC 6.0. Interdunal Wetlands	
Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? If	
you answer yes you will still need to rate the wetland based on its habitat functions.	
In practical terms that means the following geographic areas:	
<ul><li>Long Beach Peninsula: Lands west of SR 103</li></ul>	
<ul><li>— Grayland-Westport: Lands west of SR 105</li></ul>	Cat I
<ul><li>Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li></ul>	
Yes – Go to <b>SC 6.1</b> No = <b>not an interdunal wetland for rating</b>	
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	C-+ 1).
	Cat. IV
Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	

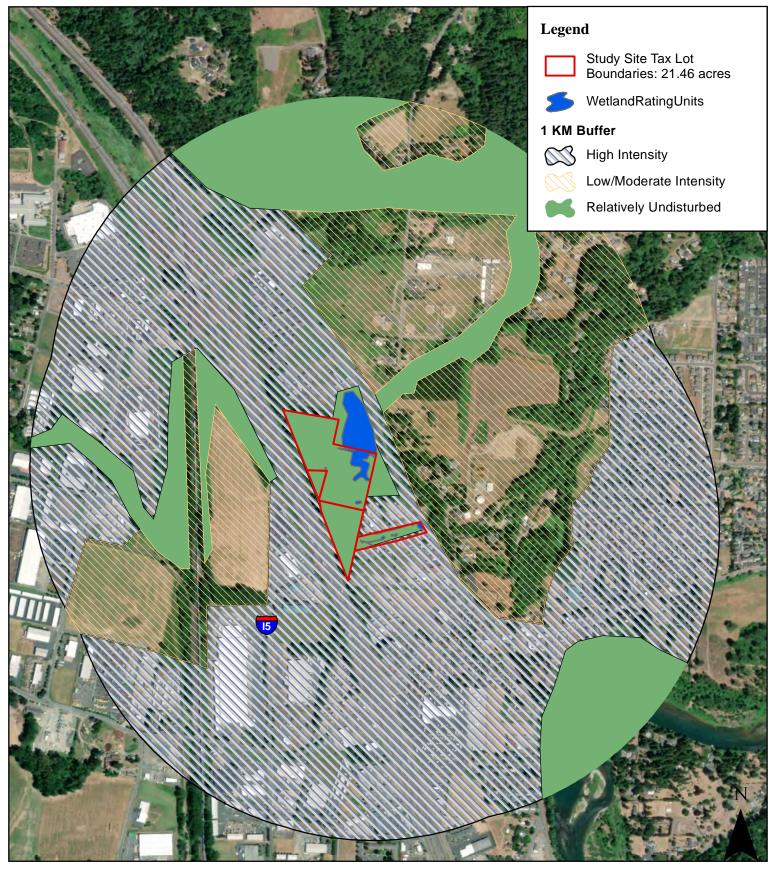


Date: 2/28/2022

Data Source: ESRI, 2021; Cowlitz County GIS Dept., 2019 Appendix D. Wetland Rating Map - 150-ft. Buffer and Contributing Basins



Woodland Project Site: S&A # 2818



Date: 2/28/2022

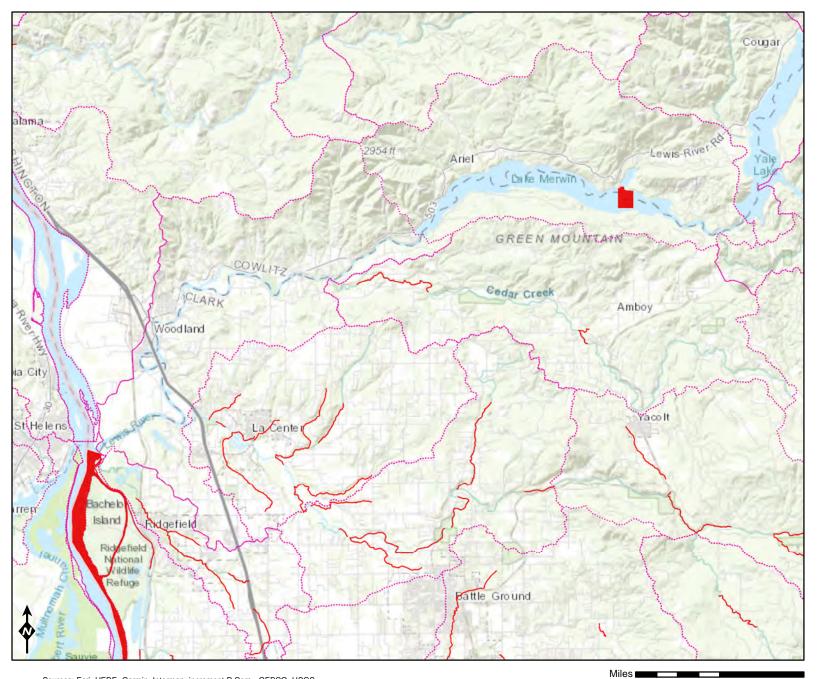
Data Source: ESRI, 2021; Cowlitz County GIS Dept., 2019 Appendix D. Wetland Rating Map - 1 KM Buffer



Woodland Project Site: S&A # 2818

0 500 1,000 2,000 Feet

# 303(d) Listed Waters



#### **Assessed Water/Sediment**

Water

Category 5 - 303d

Category 4C

Category 4B

Category 4A

Category 2

Category 1

#### Sediment

Category 5 - 303d

ZZZ Category 4C

ZZZ Category 4B

ZZZZ Category 4A

ZZZ Category 2

ZZZZ Category 1

#### **Subbasins (12 digit HUCs)**

HUC boundary





Washington State Water Quality Assessment 303(d)/305(b) List

Approved WQ Assessment	Candidate List	Contact Us	WQ Atlas

New Search Modify Search Export

Search Results - 6 Matched Listings

Scarcii Results - 0 Matched Listings								
ListingID	AU ID	Medium	Parameter	Category	Waterbody Name	WRIA	WQ Improvement Project	WQ Atlas Map Link
6532	17080002000150	Water	Total Dissolved Gas	4B	LEWIS RIVER	27 - Lewis	Lewis River Hydropower Project 4B	6532
6533	17080002005764	Water	Total Dissolved Gas	4B	SWIFT CREEK #2 POWER CANAL	27 - Lewis	Lewis River Hydropower Project 4B	6533
6535	46122A2F6	Water	Total Dissolved Gas	4B	LEWIS RIVER	27 - Lewis	Lewis River Hydropower Project 4B	6535
6542	17080002018508	Water	Total Dissolved Gas	4B	LEWIS RIVER	27 - Lewis	Lewis River Hydropower Project 4B	6542
7812	170800030900_01_08	Water	Total Dissolved Gas	4A	COLUMBIA RIVER	27 - Lewis	Lower Columbia River TDG TMDL	7812
8785	170800030900_01_08	Water	Dioxin	4A	COLUMBIA RIVER	27 - Lewis	Columbia River Basin Dioxin TMDL	8785
	6532 6533 6535 6542 7812	6532     17080002000150       6533     17080002005764       6535     46122A2F6       6542     17080002018508       7812     170800030900_01_08	6532       17080002000150       Water         6533       17080002005764       Water         6535       46122A2F6       Water         6542       17080002018508       Water         7812       170800030900_01_08       Water	6532         17080002000150         Water         Total Dissolved Gas           6533         17080002005764         Water         Total Dissolved Gas           6535         46122A2F6         Water         Total Dissolved Gas           6542         17080002018508         Water         Total Dissolved Gas           7812         170800030900_01_08         Water         Total Dissolved Gas	ListingID         AU ID         Medium         Parameter         Category           6532         17080002000150         Water         Total Dissolved Gas         4B           6533         17080002005764         Water         Total Dissolved Gas         4B           6535         46122A2F6         Water         Total Dissolved Gas         4B           6542         17080002018508         Water         Total Dissolved Gas         4B           7812         170800030900_01_08         Water         Total Dissolved Gas         4A	ListingID         AU ID         Medium         Parameter         Category         Waterbody Name           6532         17080002000150         Water         Total Dissolved Gas         4B         LEWIS RIVER           6533         17080002005764         Water         Total Dissolved Gas         4B         SWIFT CREEK #2 POWER CANAL           6535         46122A2F6         Water         Total Dissolved Gas         4B         LEWIS RIVER           6542         17080002018508         Water         Total Dissolved Gas         4B         LEWIS RIVER           7812         170800030900_01_08         Water         Total Dissolved Gas         4A         COLUMBIA RIVER	ListingID         AU ID         Medium         Parameter         Category         Waterbody Name         WRIA           6532         17080002000150         Water         Total Dissolved Gas         4B         LEWIS RIVER         27 - Lewis           6533         17080002005764         Water         Total Dissolved Gas         4B         SWIFT CREEK #2 POWER CANAL         27 - Lewis           6535         46122A2F6         Water         Total Dissolved Gas         4B         LEWIS RIVER         27 - Lewis           6542         17080002018508         Water         Total Dissolved Gas         4B         LEWIS RIVER         27 - Lewis           7812         170800030900_01_08         Water         Total Dissolved Gas         4A         COLUMBIA RIVER         27 - Lewis	ListingIDAU IDMediumParameterCategoryWaterbody NameWRIAWQ Improvement Project653217080002000150WaterTotal Dissolved Gas4BLEWIS RIVER27 - LewisLewis River Hydropower Project 4B653317080002005764WaterTotal Dissolved Gas4BSWIFT CREEK #2 POWER CANAL27 - LewisLewis River Hydropower Project 4B653546122A2F6WaterTotal Dissolved Gas4BLEWIS RIVER27 - LewisLewis River Hydropower Project 4B654217080002018508WaterTotal Dissolved Gas4BLEWIS RIVER27 - LewisLewis River Hydropower Project 4B7812170800030900_01_08WaterTotal Dissolved Gas4ACOLUMBIA RIVER27 - LewisLower Columbia River TDG TMDL

New Search Modify Search Export