

# **CRITICAL AREAS ASSESSMENT**

### WESTERN PORTION OF PARCEL 0420351003 CASCADE SHAW DEVELOPMENT, LLC City of Puyallup, Pierce County, Washington

This document has been revised to incorporate comments provided by City of Puyallup review

prepared for

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A VETERAN OWNED SMALL BUSINESS COOPERATIVE

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### 1.0 INTRODUCTION

This document presents the culmination of activities and onsite evaluations undertaken to complete a *Critical Areas Assessment* of specific critical areas (wetlands, surface water drainage corridors, fish and wildlife critical habitats) within and immediately adjacent to the western portion of **Parcel 0420351003 (project site).** The eastern and central portions of Parcel 0420351003 had been developed pursuant to a City of Puyallup approved permit associated with the adjacent Cascade Christian Schools. The project site was located along 25<sup>th</sup> Street SE, to the south of East Pioneer Way within the eastern portion of the City of Puyallup, Pierce County, Washington (part of Section 35, Township 20 North, Range 04 East, W.M.) (Figure 1). The evaluation and characterization of onsite and adjacent critical areas is a vital element in land use planning. The goal of this approach is to ensure that present and future proposed planned site development does not result in adverse environmental impacts to identified wetland or other critical areas, their associated buffer, or local water quality.

The onsite assessment and characterization of specific critical areas was completed followed the methods and procedures defined in the *Corps of Engineers Wetland Delineation Manual* (1987 Manual) with the 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (2010 Supplement); the *Washington State Wetlands Rating System* (WDOE 2014 version); the State of Washington Department of Natural Resources (WDNR) Forest Practice Rules (WAC 222-16-030); and the City of Puyallup *Critical Areas Ordinance*. The overall intent of this onsite assessment focuses on the identification of potential specific critical areas within and immediately adjacent to the proposed site development. This document incorporates modifications identified within the "third-party review" letter of January 28, 2022, and is designed to accommodate site planning and potentially other resource permitting agencies for critical areas verification and permitting actions.

#### 1.1 PROJECT SITE DESCRIPTION

The project site was generally flat and had been managed for the production of annual agricultural corps for several decades. The project site was located within an area of existing and increasing urban development and bound on the south by an existing single-family homesite and the Cascade Christian School facility, on the east by remainder of Parcel 0420351003 which had been developed pursuant to a City of Puyallup permit, on the north by similarly managed agricultural production, and on the west by 25<sup>th</sup> Street SE. A ditch within the eastern portion of the right of way for 25<sup>th</sup> Street SE contained a drainage corridor (Deer Creek) that forms a tributary to the Lower Puyallup River well offsite to the northwest.

**Directions to Project Site:** From the City of Puyallup continue easterly on East Pioneer Way to 25<sup>th</sup> Street SE. Turn south onto 25<sup>th</sup> Street SE and continue to the project site.

### 2.0 BACKGROUND INFORMATION

#### 2.1 NATIONAL WETLAND INVENTORY

The *National Wetland Inventory (NWI) Mapping* completed by the U.S. Fish and Wildlife Service was reviewed as a part of this assessment (Figure 2). This mapping resource did not identify any wetlands or surface water drainages within or immediately adjacent to the project site.

#### 2.2 STATE OF WASHINGTON PRIORITY HABITATS AND SPECIES

The State of Washington *Priority Habitats and Species (PHS) Mapping* was reviewed as a part of this assessment (Figure 3). This mapping resource did not identify any priority habitats or priority species within or immediately adjacent to the project site.

#### 2.3 STATE OF WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

The State of Washington Department of Fish and Wildlife (WDFW) *SalmonScale Mapping* was reviewed as a part of this assessment (Figure 4). This mapping resource identified a drainage corridor (Deer Creek) along the southwestern corner of the project site. Deer Creek adjacent to the project site is noted as providing the documented presence of coho salmon (*Oncorhynchus kisutch*) and as providing gradient accessible habitats for Chinook salmon (*Oncorhynchus tshawytscha*), pink salmon (*Oncorhynchus gorbuscha*), steelhead/rainbow trout (*Oncorhynchus mykiss*), and cutthroat trout (*Oncorhynchus clarkii*).

#### 2.4 STATE OF WASHINGTON DEPARTMENT OF NATURAL RESOURCES

The State of Washington Department of Natural Resources (WDNR) *Water Type Mapping* was reviewed as a part of this assessment (Figure 5). This mapping resource identified a drainage corridor along the southwestern corner of the project site. This drainage corridor was identified "unknown."

#### 2.5 CITY OF PUYALLUP MAPPING

The City of Puyallup *Inventory Mapping* was reviewed as a part of this assessment (Figure 6). This mapping resource identified three "field-verified" wetlands to the east of the project site and a stream along the western boundary of the project site – adjacent to 25<sup>th</sup> Street SE.

#### 2.6 SOILS MAPPING

The *Soil Mapping Inventory* completed the Natural Resource Conservation Service was reviewed as a part of this assessment (Figure 7). This mapping resource identified the soil throughout the project site as Briscot Ioam (6A). The Briscot soil series is defined as somewhat poorly drained, as formed in alluvium, and as listed as "hydric."

### 3.0 ONSITE ANALYSIS

### 3.1 CRITERIA AREAS IDENTIFICATION

The City of Puyallup defines "Critical Areas" to include those areas established as volcanic hazard areas, wetlands, flood hazard areas, fish and wildlife habitat areas, seismic hazard areas, landslide hazard areas, erosion hazard areas, and aquifer recharge areas. For the purpose of the assessment the critical areas reviewed included potential wetlands, surface water drainage corridors (streams), and fish and wildlife habitats which may be located within or immediately adjacent to the project site. This assessment did <u>not</u> include an assessment of potential seismic hazard areas, landslide hazard areas, erosion hazard areas, or aquifer recharge areas.

**Wetlands:** Within the City of Puyallup "wetlands" are defined to mean those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate the conversion of

wetlands. Wetlands shall be rated according to the Washington State Department of Ecology wetland rating system (Washington State Wetland Rating System for Western Washington (revised), Department of Ecology Document No. 04-06-025) or as further revised by Ecology.

Wetlands exhibit three essential characteristics, all of which must be present for an area to meet the established criteria (United States Army Corps of Engineers, 1987 and United States Army Corps of Engineers, 2010). These essential characteristics are:

- 1. Hydrophytic Vegetation: The assemblage of macrophytes that occurs in areas where inundation or soil saturation is either permanent or of sufficient frequency and duration to influence plant occurrence. Hydrophytic vegetation is present when the plant community is dominated by species that require or can tolerate prolonged inundation or soil saturation during the growing season.
- 2. Hydric Soil: A soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper parts. Most hydric soils exhibit characteristic morphologies that result from recent periods of saturation or inundation. These processes result in distinctive characteristics that persist in the soil during both wet and dry periods.
- **3. Wetland Hydrology:** Permanent or periodic inundation, or surface soil saturation, at least seasonally. Wetland hydrology indicators are used in combination with indicators of hydric soil and hydrophytic vegetation to define the area. Wetland hydrology indications provide evidence that the site has a continuing wetland hydrology regime. Where hydrology has not been altered vegetation and soils provide strong evidence that wetland hydrology is present.

**Streams:** A "stream" is generally defined to include areas where surface water has produced a defined channel or bed and includes: bedrock, gravel beds, and sand or silt beds. "Streams" may also include swales which lack a channel of bed if such areas are connected to a fish and wildlife habitat conservation area. A channel need not contain water year-round to be considered a natural water. "Streams" include man-made drainage channels that result from the modification of a natural watercourse or wetland and excludes only artificial channels.

**Fish and Wildlife Habitat Areas:** The City of Puyallup defines "critical habitat" as those habitat areas with which endangered, threatened, sensitive or monitored plant or wildlife species have a primary association (e.g., feeding, breeding, rearing of young, migrating). Such areas are identified herein with reference to lists, categories, and definitions promulgated by the Washington Department of Fish and Wildlife as identified in WAC 232-12-011 or 232-12-014; in the Priority Habitat and Species (PHS) program of the Department of Fish and Wildlife; or by rules and regulations adopted by the U.S. Fish and Wildlife Service, National Marine Fisheries Service, or other agency with jurisdiction for such designations.

"Fish and Wildlife Habitat Conservation Areas" are areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term.

(a) These areas may include, but are not limited to, rare or vulnerable ecological systems, communities, and habitat or habitat elements including seasonal ranges, breeding habitat, winter range, and movement corridors; and areas with high relative population density or species richness. These areas also include locally important habitats and species as determined by the city.

(b) "Habitats of local importance" designated as fish and wildlife habitat conservation areas include those areas found to be locally important by the city.

(c) These areas do not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of and are maintained by a port district or an irrigation district, unless these features are documented as being used by salmonids for habitat.

#### 3.2 STUDY METHODS

Habitat Technologies completed a series of onsite assessments between November 2019 and the end of April 2020. In addition, Habitat Technologies has completed similar assessments for parcels within the area of the project site.

The project site was generally flat and had been managed for several decades for the production of annual agricultural corps. The project site had been manipulated through regular tilling, plowing, planting, harvesting, and ditch maintenance. The project site had also been manipulated by the development of adjacent properties and public roadways/utilities. As such, onsite assessment focused on early spring growing season hydrology patterns throughout the project site to best define those areas meeting the specific wetland criteria. Boundaries between wetland and non-wetland areas were established by examining the transitional gradient between wetland criteria. Onsite activities were completed in accordance with criteria and procedures established in the *Corps of Engineers Wetland Delineation Manual* (1987 Manual) with the 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual*: *Western Mountains, Valleys, and Coast Region* (2010 Supplement); the *Washington State Wetlands Rating System* (WDOE 2014 version); the State of Washington Department of Natural Resources (WDNR) Forest Practice Rules (WAC 222-16-030); and the City of Puyallup Critical Areas Ordinance.

#### 3.3 FIELD OBSERVATION

The project site was accessed from 25<sup>th</sup> Street SE – a paved public roadway forming the western boundary. The project site was generally flat and had been managed for the production of annual agricultural corps for several decades. A ditch within the eastern portion of the right of way for 25<sup>th</sup> Street SE contained a drainage corridor (Deer Creek) that forms a tributary to the Puyallup River. Field data are provided in Appendix A.

#### 3.3.1 Soils

As documented at representative sample plots the soil profile throughout the project site had been modified by prior and ongoing land use actions generally associated with regular plowing, tilling, planting, and crop harvesting. The soil throughout the project site was generally a mixture of sandy loam and sandy silty loam that appeared to drain somewhat poorly to somewhat moderately well following seasonal storm events. The majority of the soil throughout the project site did not exhibit prominent redoximorphic features.

A few test plots (SP8, SP12, SP15) generally within the shallow depressions in the northwesterly and southwesterly portions of the project site exhibited few to faint redoximorphic features and a soil matrix color meeting the hydric soils criteria. These shallow depressions appeared best defined as formed by fall agricultural activities generally associated with tractor compaction within the corner turning areas. A viewed during prior years these shallow depressions were also routinely different in shape and location.

### 3.3.2 Hydrology

The presence and timing of seasonal surface water and shallow ground water hydrology patterns within and adjacent to the project site had been greatly modified by a mixture of both public and private urbanization actions. These actions included the prior channelization of the Deer Creek Corridor, the placement of fill within adjacent parcels for site developments, the development of regional stormwater control actions and facilities, and onsite field ditching.

The assessment of early spring 2020 growing season hydrology patterns was completed at fifteen (15) representative test plot locations (Appendix B). Field data were collected from the end of February through the fourth week of April. Data collection at each plot location was completed through the hand-excavation of a test hole to a depth of 24 inches. Each test hole was allowed to stabilize for approximately 30 minutes and then the level of soil saturation and the free water (if present) within each test plot was documented.

Three test plots were identified to exhibit field indicators of wetland hydrology patterns during the early spring of 2020. These test plots (SP8, SP12, SP15) were generally located within the shallow depressions in the northwesterly and southwesterly portions of the project. The two areas associated with these test plots were identified to exhibit temporary, very shallow ponding (less than one inch of depth) during the winter rainy period (December 2019 through mid-February 2020) and then to exhibit soil saturation at or near the surface for a period of more than fourteen (14) consecutive days during the early growing season (mid-February through April 2020). However, these three test plots – as with all the other test plots – were identified as "dry" to a depth of twenty four (24) inches following the second week of April.

Deer Creek was located within a created ditch offsite to the west of the western boundary of the project site. This creek was identified to exhibit perennial flow patterns and had been modified by prior ditching, roadway and utility development, property development, and stormwater management/diversion actions.

#### 3.3.3 Vegetation

The plant community throughout the project site had been modified by prior and ongoing land management use actions generally associated with annual agricultural production and harvest. Following fall harvest it appeared that a cover crop of blue grass had been seeded but had proven of limited establishment. While also very limited, additional grass and herbs species within the project site included buttercup (*Ranunculus repens*), aster (*Aster occidentalis*), cats ear (*Hypochaeris lanatus*), mustard (*Brassica campestris*), plantain (*Plantago major*), Queen Annes lace (*Daucus carota*), Canadian thistle (*Cirsium arvensis*), dandelion (*Taraxacum officinale*), Colonial bent grass (*Agrostis tenuis*), velvet grass (*Holcus lanatus*), and toad rush (*Juncus bufonius*).

The plant community along the area immediately to the west of the project site – along Deer Creek – had been regularly managed as a part of ongoing ditch management actions. The plant community along this ditched drainage in included seedling red alder (*Alnus rubra*), starts of Sitka willow (Salix sitchensis), Himalayan blackberry (*Rubus armeniacus*), evergreen blackberry (*Rubus laciniatus*), Scots broom (*Cytisus scoparius*), rose (Rosa spp.), knotweed (*Polygonum cuspidatum*), morning glory (*Impomaea purpurea*), bracken fern (*Pteridium aquilium*), and reed canarygrass (Pha*laris arundinacea*).

The plant community along the southern boundary of the project site was generally dominated by reed canarygrass and blackberries.

#### 3.3.4 Fish and Wildlife Observations

Wildlife species observed directly and indirectly within the project site during the early spring 2020 assessment; along with those species observed during prior assessments and those species that would reasonably be expected to use the habitats provided within and immediately adjacent to the project site included red tailed hawk (*Buteo jamaicensis*), American crow (*Corvus brachynchos*), American robin (*Turdus migratorius*), dark eyed junco (*Junco hyemalis*), common mallard, Canada goose (*Branta canadensis*), black capped chickadee (*Parus atricapillus*), purple finch (*Carpodacus purpureus*), song sparrow (*Melospiza melodia*), killdeer (*Charadrius vociferus*), eastern cottontail (*Sylvilagus floridanus*), striped skunk (*Mephitis mephitis*), opossum (*Didelphis virginianus*), deer mouse (*Peromyscus maniculatus*), shrew (*Sorex spp.*), mole (*Scapanus spp.*), bats (*Myotis spp.*), Norway rat (*Rattus norvegicus*), and common garter snake (*Thamnophis sirtalis*).

During prior assessments Deer Creek had been documented to provide habitats for coho salmon, steelhead/rainbow trout, cutthroat trout, three-spinned stickleback, and sculpin.

**Wildlife Movement Corridors:** The project site was within an area of adjacent high intensity land uses. As identified by a few onsite wildlife trails, small and medium sized mammals appeared to be moving along the western and southern boundaries of the project site. The project site was also within the general area of the migratory movement of waterfowl, raptors, and passerine birds.

#### 3.3.4.a State Priority Species

A few species identified by the State of Washington as "Priority Species" were observed onsite or potentially may utilize the habitats provided within or immediately adjacent to the project site. Priority species require protective measures for their survival due to their population status, sensitivity to habitat alteration, and/or recreational, commercial, or tribal importance.

**Game Species:** "Game species" are regulated by the State of Washington through recreational hunting bag limits, harvest seasons, and harvest area restrictions. Observed or documented "game species" within and adjacent to the project site included mourning dove, common mallard, Canada goose, coho salmon, steelhead/rainbow trout, and cutthroat trout.

**State Candidate:** State Candidate species are presently under review by the State of Washington Department of Fish and Wildlife (WDFW) for possible listing as endangered, threatened, or sensitive. No State Candidate species were observed to use the habitats provided within the project site as a part of this assessment.

**State Sensitive**: State Sensitive species are native to Washington and is vulnerable to declining and is likely to become endangered or threatened throughout a significant portion of its range without cooperative management or removal of threats. No State Sensitive species were observed to use the habitats provided within the project site as a part of this assessment.

**State Threatened:** State Threatened species means any wildlife species native to the state of Washington that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range within the state without cooperative management or removal of threats. The project site did not appear to provide and has not been documented to provide direct critical habitats for State Threatened species.

**State Endangered:** State endangered species means any species native to the state of Washington that is seriously threatened with extinction throughout all or a significant portion of its range within the state. The project site did not appear to provide and has not been documented to provide direct critical habitats for State Endangered species.

#### 3.3.4.b Federally Listed Species

No federally listed endangered or sensitive species were observed or have been documented to utilize the habitats provided within the project site. Two, federally listed "species of concern" – bald eagle and coho salmon – has been documented to utilize the habitats generally associated with aquatic areas (to include Deer Creek) within the lower Puyallup River Valley.

Puget Sound Steelhead trout – a federally listed threatened species has been documented within Deer Creek offsite to the west of the project site.

### 4.0 CRITICAL AREAS DETERMINATION

#### 4.1 ONSITE CRITICAL AREAS

Current code, PMC 21.06.910(4), indicates that Category IV wetlands are regulated, but the project is vested to prior code. However, stormwater regulations do regulate Category IV wetlands. See Ecology Manual MR8 requirements. [Critical Area Assessment; Pg 12 of 109]

As documented within this assessment the project site was identified contain two shallow depressional wetlands. In addition, Deer Creek was identified directly to the west of the project site and was associated with 25<sup>th</sup> Street SE (Figure 8). <u>Of Special Note</u> the three wetlands identified onsite within the City of Puyallup *Inventory Mapping* were not present onsite. The areas of these wetlands had been developed pursuant to a City of Puyallup approved permit associated with the adjacent Cascade Christian Schools.

| WETLAND | CLASSIFICATION | SURVEYED  | CITY OF  | WDOE   | WDOE    | STANDARD    |
|---------|----------------|-----------|----------|--------|---------|-------------|
|         | (USFWS)        | SIZE      | PUYALLUP | RATING | HABITAT | CITY BUFFER |
|         |                |           | CATEGORY | SCORE  | SCORE   | WIDTH       |
| A       | PEMAdf         | 4,684sqft | IV       | 15     | IV      | Non-        |
|         |                | •         |          |        |         | regulated   |
| В       | PEMAdf         | 9,603sqft | IV       | 15     | IV      | Non-        |
|         |                |           |          |        |         | regulated   |

**Wetland A:** Wetland A was identified as a shallow depression within the southwestern corner of the project site. This wetland was actively managed for the production of annual agricultural crops and appeared generally formed in an area where fall harvest and plowing actions concentrated in a turn. This shallow depression was identified to exhibit temporary pond less than a few inches in depth following heavy rainfall events. The wetland was identified to remain saturated at or near the surface into early April 2020. This wetland receives seasonal stormwater runoff from onsite and from the developed areas to the east and southeast. Fall management actions had created a shallow ditch that allowed surface water from this wetland to continue to the west and enter Deer Creek.

Wetland A was noted as generally void of vegetation, regularly managed for annual agricultural production, and to meet the USFWS criteria for classification of palustrine, emergent, temporarily flooded, farmed, ditched (PEMAdf). Wetland A was also identified to meet the criteria for designation as a City of Puyallup Category IV Wetland. Wetland A achieved a total functions score of 15 points (4 habitat points) utilizing the WDOE Wetland Rating Form for Western Washington 2014 Version (Appendix C).

**Wetland B:** Wetland B was identified as a shallow depression within the northwestern corner of the project site. This wetland was actively managed for the production of annual agricultural crops and appeared generally formed in an area where fall harvest and plowing actions concentrated in a turn. This shallow depression was identified to

exhibit temporary pond less than a few inches in depth following heavy rainfall events. The wetland was identified to remain saturated at or near the surface into early April 2020. This wetland receives seasonal stormwater runoff from onsite and from the developed areas to the east and southeast. Fall management actions had created a shallow ditch that allowed surface water from this wetland to continue to the west and enter Deer Creek.

Wetland B was noted as generally void of vegetation, regularly managed for annual agricultural production, and to meet the USFWS criteria for classification of palustrine, emergent, temporarily flooded, farmed, ditched (PEMAdf). Wetland B was also identified to meet the criteria for designation as a City of Puyallup Category IV Wetland. Wetland B achieved a total functions score of 15 points (4 habitat points) utilizing the WDOE Wetland Rating Form for Western Washington 2014 Version (Appendix C).

**Deer Creek:** Deer Creek was identified immediately within an excavated roadside ditch between the western boundary of the project site and 25<sup>th</sup> Street SE. The vegetation along this creek was regularly managed through mowing and appeared also somewhat excavated to retain capacity. Deer Creek has been documented to provide existing or accessible habitats for a variety of salmonid fish species.

Deer Creek would appear best defined as a City of Puyallup Type II Stream (fish bearing). The standard buffer for a City of Puyallup Type II Stream is 100 feet in width as measured perpendicular from the ordinary high water mark.

### 4.2 ONSITE CRITICAL AREAS VERIFICATION

The identified onsite wetlands documented within the *CRITICAL AREAS ASSESSMENT, WESTERN PORTION OF PARCEL 0420351003* dated June 1, 2020, were verified by the City of Puyallup following an onsite "third-party review" on January 7, 2022.

### 4.3 OFFSITE CRITICAL AREAS

As documented within this assessment and additional onsite assessments during the spring of 2022 two (2) "potential" wetlands were identified offsite to the north and one (1) "potential wetland was identified offsite to the south of the project site. The wording of "potential" is used since no specific onsite data were collected for these areas as a result of denied access (Figure 8). In addition, Deer Creek was identified to extend to the north and south along 25<sup>th</sup> Street SE.

| POTENTIAL<br>OFFSITE<br>WETLANDS | CLASSIFICATION<br>(USFWS) | APPROXIMATE<br>SIZE | CITY OF<br>PUYALLUP<br>CATEGORY | WDOE<br>RATING<br>SCORE | WDOE<br>HABITAT<br>SCORE | STANDARD<br>CITY BUFFER<br>WIDTH |
|----------------------------------|---------------------------|---------------------|---------------------------------|-------------------------|--------------------------|----------------------------------|
| OFFSITE<br>X                     | PEMAdf                    | 4,000sqft           | IV                              | 15                      | IV                       | Non-<br>regulated                |
| OFFSITE<br>Y                     | PEMAdf                    | 10,000sqft          | IV                              | 15                      | IV                       | Potentially<br>Non-<br>regulated |
| OFFSITE<br>Z                     | PEME                      | 500sqft             | III                             | 16                      |                          | Non-<br>regulated                |

**Potential Offsite Wetland X:** This potential wetland was identified as a shallow depression within the southwestern corner of the parcel located directly to the north of the project site – north of onsite Wetland B. As with onsite Wetlands A and B, this wetland was actively managed for the production of annual agricultural crops and appeared generally formed in an area where fall harvest and plowing actions concentrated in a turn. This shallow depression was identified to exhibit temporary ponding less than a few inches in depth following heavy rainfall events. The wetland was observed to remain saturated at or near the surface into early April 2020 and into early May 2022. This wetland receives seasonal stormwater runoff from the local agricultural area.

In the spring of 2020 and 2022 this offsite wetland was noted as generally void of vegetation, regularly managed for annual agricultural production, and to meet the USFWS criteria for classification of palustrine, emergent, temporarily flooded, farmed, ditched (PEMAdf). Offsite Wetland X was identified as very similar to Wetland B and as meeting the criteria for designation as a City of Puyallup Category IV Wetland. As with Wetland B, offsite Wetland X would achieve a total functions score of 15 points (4 habitat points) utilizing the WDOE Wetland Rating Form for Western Washington 2014 Version.

Wetland B and Offsite Wetland X are separated by an existing internal roadway and do not exhibit a hydrologic, soils, or plant community connection. Both wetlands independently drain via a small ditch into Deer Creek to the west.

**Potential Offsite Wetland Y:** This potential wetland was identified as a shallow depression within the central/northern portion of the parcel located directly to the north of the project site. As with onsite Wetlands A and B and Offsite Wetland X, this wetland was actively managed for the production of annual agricultural crops and appeared generally formed in an area where fall harvest and plowing actions concentrated in a turn. This shallow depression was identified to exhibit temporary pond less than a few inches in depth following heavy rainfall events. The wetland was observed to remain saturated at or near the surface into early April 2020 and early April 2022. This wetland receives seasonal stormwater runoff from the local agricultural area.

In the spring of 2020 and 2022 this offsite wetland was noted as generally void of vegetation, regularly managed for annual agricultural production, and to meet the USFWS criteria for classification of palustrine, emergent, temporarily flooded, farmed, ditched (PEMAdf). Offsite Wetland Y was identified as very similar to Wetland B and as meeting the criteria for designation as a City of Puyallup Category IV Wetland. As with Wetland B, Offsite Wetland Y achieved a total functions score of 15 points (4 habitat points) utilizing the WDOE Wetland Rating Form for Western Washington 2014 Version. This wetland appeared to be approximately 10,000 square feet in total size and potentially non-regulated by the City of Puyallup.

**Potential Offsite Wetland Z:** This potential wetland was identified as a shallow swale within the managed lawn area associated with the existing single-family homesite directly to the south of the project site. This shallow swale was dominated by seeded lawn grasses and appeared to remain saturated to the surface into the first part of the growing season. In the spring of 2020 and 2022 this offsite wetland was noted to meet the USFWS criteria for classification of palustrine, emergent, seasonally saturated (PEME). Offsite Wetland Z was identified as separated from the project site by an existing single-family homesite and as meeting the criteria for designation as a City of Puyallup Category III Wetland. Offsite Wetland Z achieved a total functions score of 16 points (4 habitat points) utilizing the WDOE Wetland Rating Form for Western Washington 2014 Version.

Current code regulates Category IV wetlands. Add commentary that the project is vested to prior regulations. In addition, it should be clarified that Category IV wetlands are regulated per the City's stormwater regulations. [Critical Area Assessment; Pg 15 of 109]

#### 4.3 CITY OF PUYALLUP REGULATORY CONSIDERATIONS

Wetlands: The City of Puyallup has identified that all wetlands shall be regulated and subject to the provisions of Chapter 21.06 regardless of size, except for Category III wetlands less than 2,500 square feet if the wetland is not associated with a riparian corridor or part of a wetland mosaic and Category IV wetlands less than 10,000 square feet. Since both onsite Wetland A, onsite Wetland B, and immediately offsite Wetland Z are defined as Category IV Wetland less than 10,000 square feet in total size it appears that these wetlands would not be regulated by the City of Puyallup (21.06.910(4)).

**Streams:** Deer Creek was identified along the western boundary of the project site within the managed right of way of 25<sup>th</sup> Street SE. Deer Creek is defined by the City of Puyallup as a Type II Stream with an associated buffer of 100 feet in width as measured perpendicular from the ordinary high water mark. Stream buffers shall be established landward of the ordinary high water mark adjacent to streams to protect the integrity, functions, and values of the resource. Buffers shall consist of an undisturbed area of native vegetation and shall reflect the sensitivity of the stream and the type and intensity of the adjacent human use or activity (21.06.1050).

Verify-4.4? [Critical Area Assessment; Pg 15 of 109]

### 5.0 SELECTED DEVELOPMENT ACTION

The *Selected Development Action* for this project site has focused on the future creation of a high-intensity residential community consistent with the City of Puyallup Comprehensive Plan and local zoning, along with the City of Puyallup stormwater, traffic, and critical areas regulations. Primary access into this residential community would be provided by a direct connection to Shaw Road at the northeastern corner of the project site. As a part of this residential community a critical areas tract would be created and enhanced along the western boundary of the project site – adjacent to Deer Creek within the 25<sup>th</sup> Street East right-of-way (Figure 9).

#### 5.1 PRELIMINARY STORMWATER PROGRAM

As presently outlined, stormwater management facilities would be established as a part of the proposed residential community to ensure protection of local water quality and to ensure meeting the City of Puyallup stormwater regulations. Stormwater collection and treatment features would collect stormwater and direct the stormwater generally into a buried treatment and detention system along the northern boundary of the project site. Overflow from the treatment and detention system would be conveyed via a buried pipeline along an existing roadway to outlet into Deer Creek at the northwestern corner of the project site. The proposed outlet structure and proposed discharge volumes following seasonal storm events would be consistent with applicable standards and ensure protection of local water quality and ensure protection of the structure and integrity of the receiving stream channel.

### 5.2 CRITICAL AREAS IMPACT ANALYSIS

As presently designed, the overall development of this residential community is designed to meet the growing need for workforce housing within the City of Puyallup and surrounding communities. The need for affordable workforce housing is identified within the City of Puyallup *Comprehensive Plan* and associated City of Puyallup long-term planning documents. In addition, this residential community is located along the Shaw Road Corridor and within an area well served by local and regional transit, along with being located within an area well supported by public and private health services (fire, police, emergency care, local and regional healthcare), public roadways, local shopping, and local religious facilities.

As noted above, the majority of the project site has been previously filled and leveled to allow for future development pursuant to a previously authorized City of Puyallup permit. This previous action has created a suitable development pad and an associated temporary stormwater collection and detention system. The very western portion of the project site was not included within the prior City development permit and had been retained and utilized for agricultural production through 2021. Onsite assessment and City verification completed between the spring of 2020 and the winter of 2022 identified two City of Puyallup Category IV Non-regulated Wetlands within the very northwestern and southwestern corners of the project site. A City of Puyallup Type II Stream was also located within the public roadway right-of-way along the western boundary of the project site.

As a part of the development of the presently proposed site development action the project team reviewed a variety of alternative site development actions. These actions reviewed potential commercial/retail development scenarios along with a reduced density of residential development. The no-action alternative was also reviewed. However, the presently proposed residential development action was identified as the best alternative to meet the present goals of the *Comprehensive Plan*, a best meeting the need for affordable workforce housing, as meeting the character of the neighborhood and adjacent development actions, and as meeting the objectives of the *Critical Areas Ordinance*.

# 5.2.1 Critical Areas Impact Avoidance and Minimization

As verified by the City of Puyallup review, there were no onsite wetlands regulated by the City of Puyallup within or immediately adjacent to the project site. The two Category IV Wetlands identified within the project site, along with a Category IV Wetland located directly to the north of the northwestern corner of the project site, were identified as non-regulated by the City of Puyallup because of their size and habitat score. A City of Puyallup Type II Stream was located directly to the west of the western boundary of the project site. The standard City of Puyallup buffer for this stream is 100 feet in width as measured from the ordinary high water mark.

The proposed site development actions would establish a minimum 100-foot stream corridor restoration area along the western boundary of the project site. This 100-foot restoration area would provide avoid any adverse impact to Wetland A through the retention the entire wetland and minimize adverse impacts to Wetland B through the retention of approximately 90% of Wetland B. The establishment on this 100-foot stream corridor restoration area would also avoid adverse impacts to the Deer Creek Corridor through the establishment and restoration of a viable buffer consistent with the provision of the City of Puyallup *Critical Areas Ordinance*. In addition, overall site development would implement stormwater quality and quantity protections for the short-term (construction related) development phase and the long-term (project) residential phase of this project.

#### 5.2.2 Stream Corridor Restoration Program

As noted above, proposed site development actions would establish a protective stream corridor buffer with a minimum width of 100 feet within the western portion of the project

site. This protective stream corridor buffer area has been managed and manipulated by prior land use actions generally associated with agricultural management and is presently dominated by a variety of grasses and herbs that have recently established. To ensure the long-term protection and viability of this stream corridor buffer area the entire buffer would be planted with a variety of desirable native trees, shrubs, and emergent common to the local area and selected to provide wildlife habitat opportunities, to match soil characteristics and hydrology patterns, and to provide enhance soil stability. The restored stream buffer area would also provide detrital inputs to Deer Creek along with enhanced thermal protections and terrestrial habitats. However, Deer Creek is located within the right-of-way for 25<sup>th</sup> Street East and the management to the plant community along the stream banks is at the direction of the City of Puyallup which incorporates a somewhat regular mowing program that maintain a grass and generally invasive shrubs shoreline plant community.

The Stream Corridor Restoration Program discussed above is presented in concept. Upon the approval of the City of Puyallup to move forward with program development a final project would be prepared that incorporates a detailed planting plan, an implementation schedule and detailed plan, a project monitoring schedule and standards of success, a vegetation management plan, project continencies, and a reporting program consistent with the City of Puyallup Critical Areas Ordinance. The overall intent is to establish a viable native plant community that does not require routine maintenance and provided restored physical and biological functions for the Deer Creek Corridor.

#### STANDARD OF CARE 6.0

This document has been completed by Habitat Technologies for use by **Abbey Road** Group Land Development Services Company LLC. Prior to extensive site planning the defined critical habitats should be reviewed and verified by the City of Puyallup personnel and potentially other resource and permitting agencies. Habitat Technologies has provided professional services that are in accordance with the degree of care and skill generally accepted in the nature of the work accomplished. No other warranties are expressed or implied. Habitat Technologies is not responsible for design costs incurred before this document is approved by the appropriate resource and permitting agencies.

Bryan W. Peck Bryan W. Peck

Senior Wetland Biologist

Thomas D. Deming

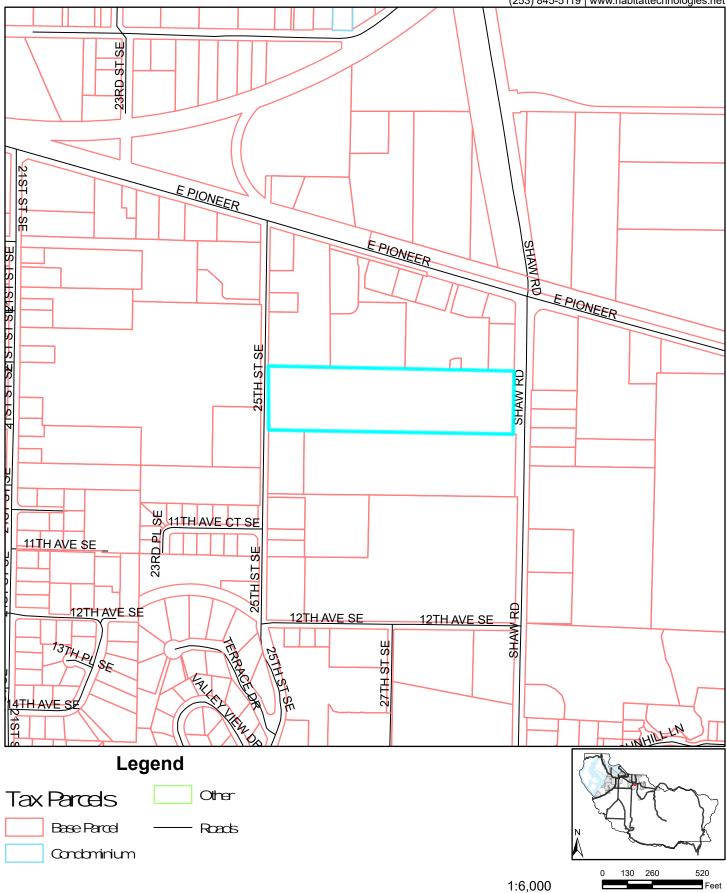
Thomas D. Deming, SPWS Habitat Technologies

## 7.0 FIGURES

# Figure 1 Site Vicinity

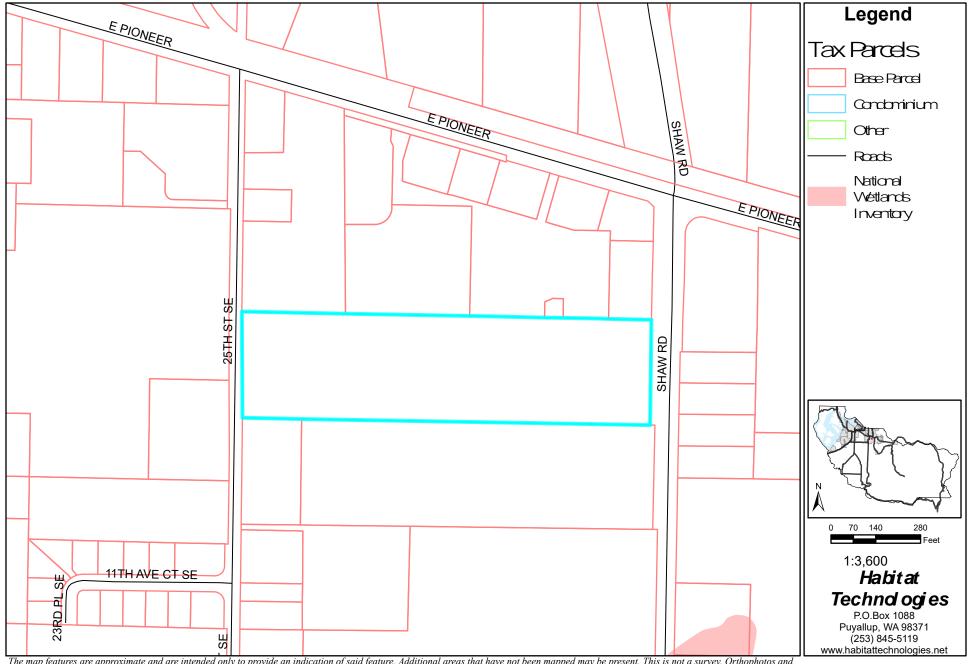
# Habitat Technologies

P.O.Box 1088 Puyallup, WA 98371 (253) 845-5119 | www.habitattechnologies.net



The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS'AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose. Date: 5/13/2020 03:25 PM

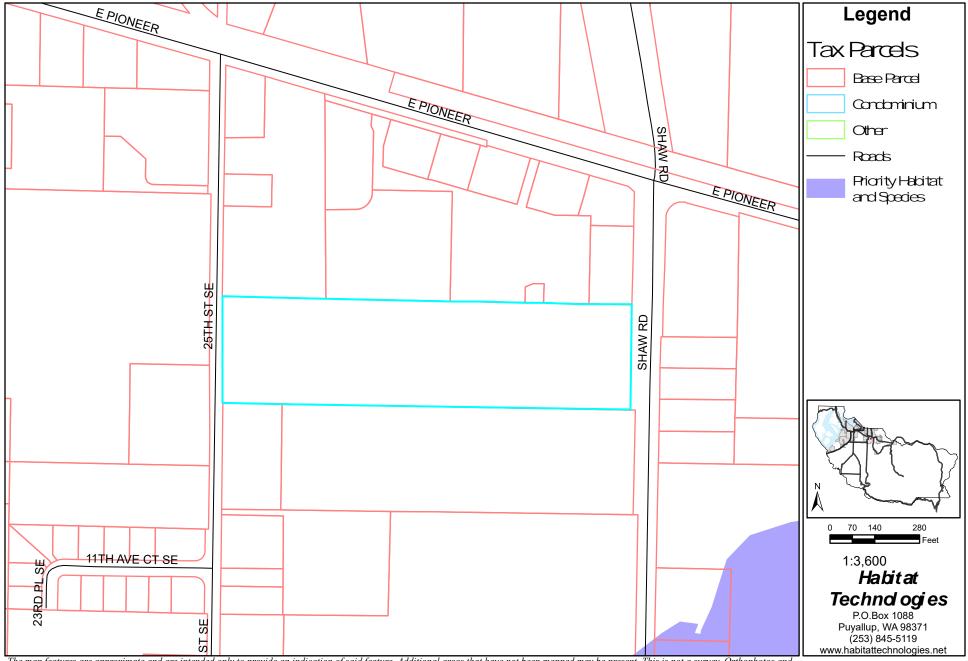
# Figure 2 NWI Mapping



The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose.

Date: 5/13/2020 03:23 PM

# Figure 3 PHS Mapping



The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose.

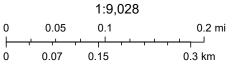
Date: 5/13/2020 04:22 PM

# Figure 4 WDFW Salmonscape Mapping



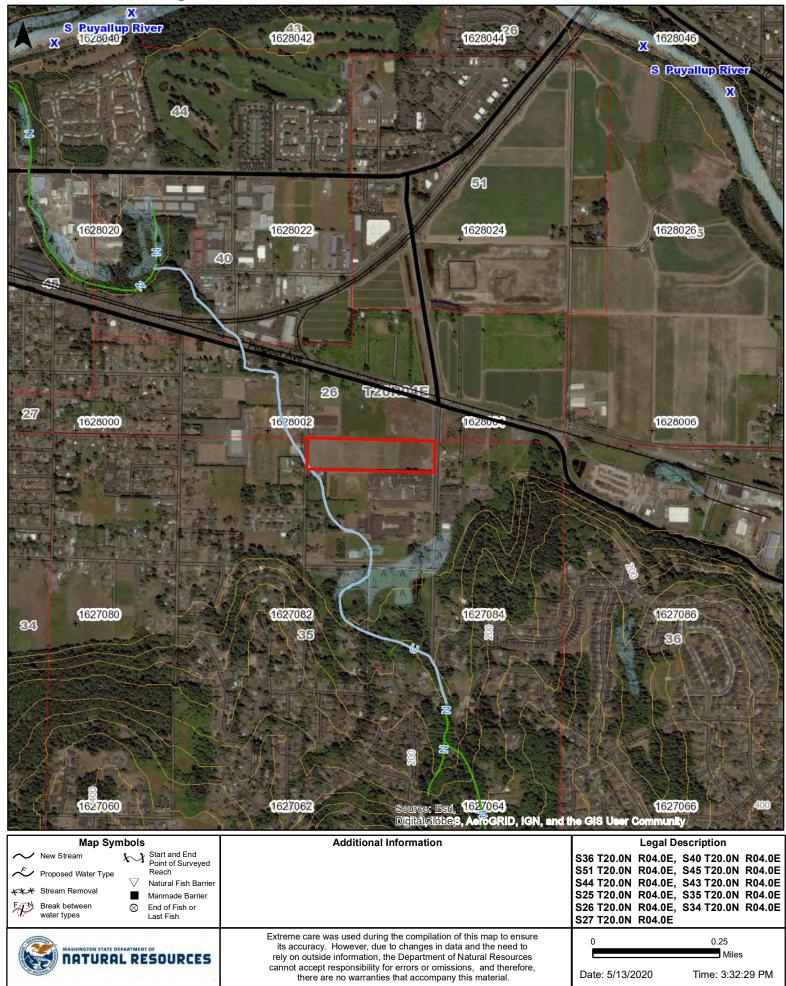
May 13, 2020

All SalmonScape Species

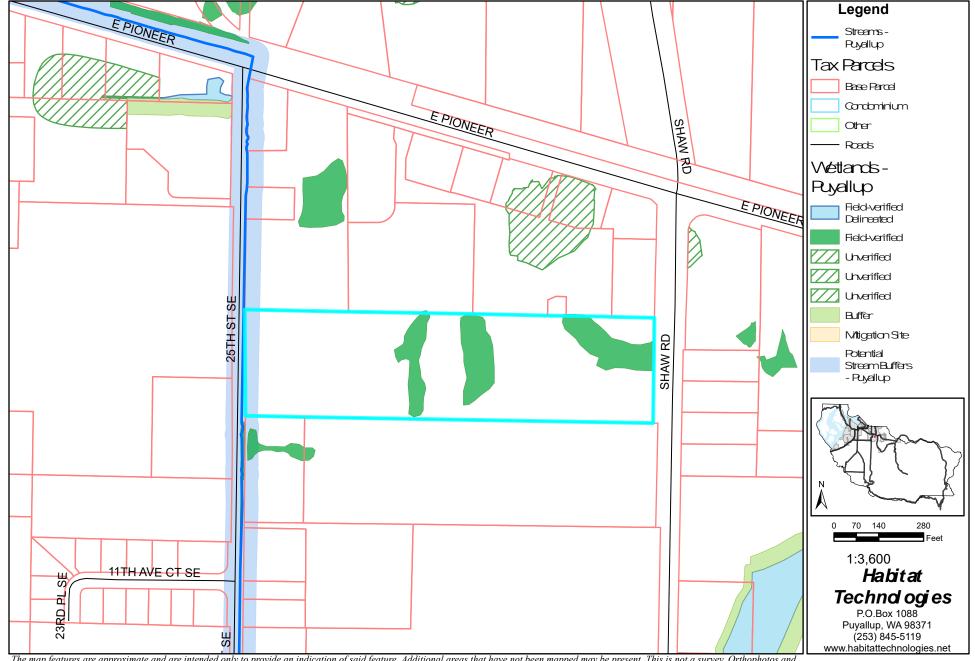


USGS/NHD, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

#### Figure 5 Forest Practices Water Type Map



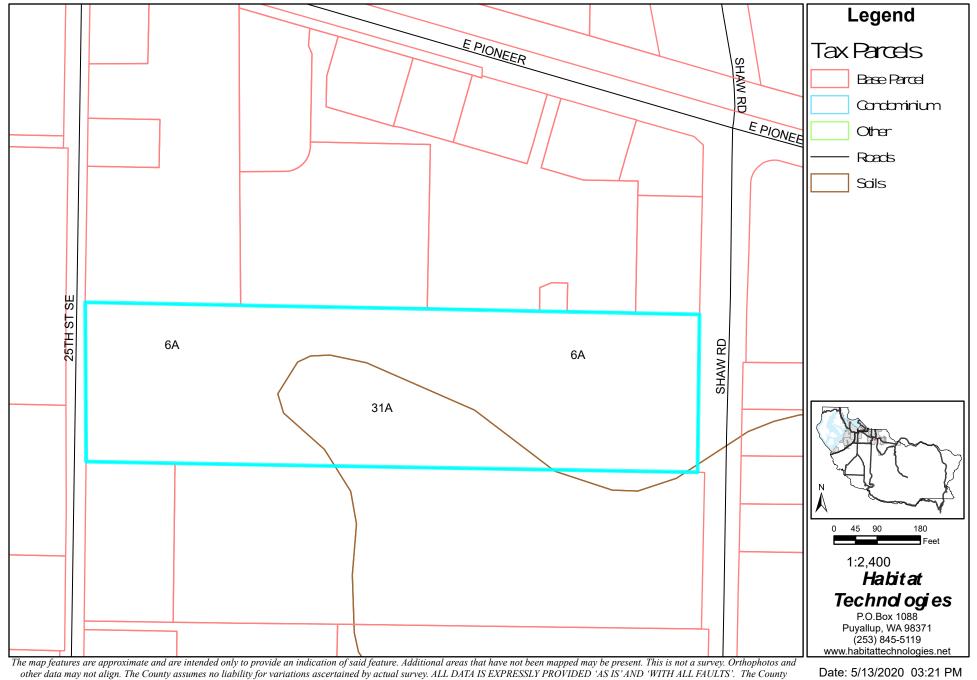
# Figure 6 City of Puyallup Mapping



The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose.

Date: 5/13/2020 03:28 PM

# Figure 7 Soils Mapping



makes no warranty of fitness for a particular purpose.

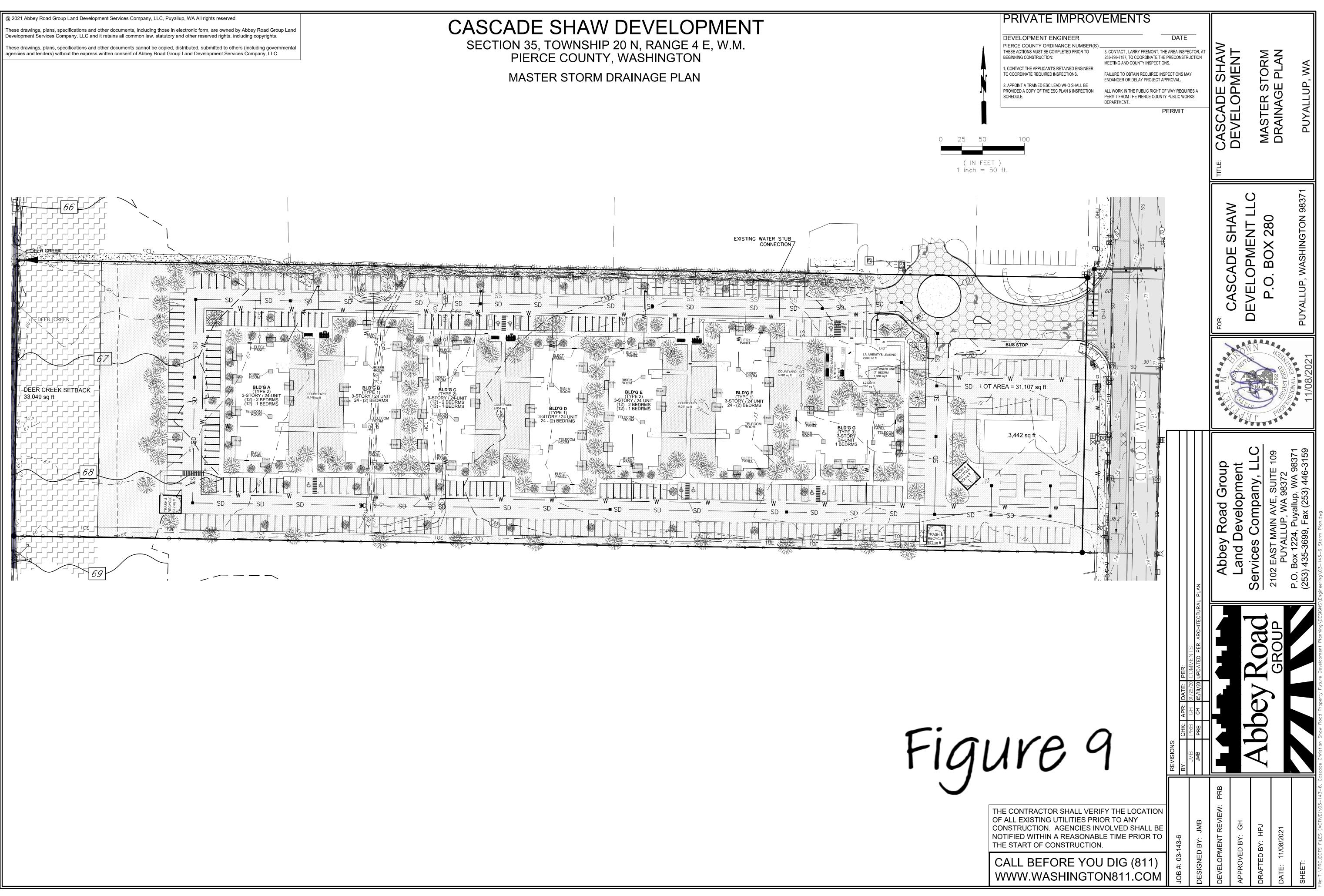
Date: 5/13/2020 03:21 PM

# Figure 8 Site Graphic



The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose.

Date: 6/15/2022 09:31 AM



### 8.0 REFERENCE AND BACKGROUND MATERIALS

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Washington State Department of Fish and Wildlife SalmonScape Mapping System, 2016 (for fish presence): http://apps.wdfw.wa.gov/salmonscape/map.html

Washington State Department of Natural Resources FPARS Mapping System, 2016 (for stream typing): http://fortess.wa.gov/dnr/app1/fpars/viewer.htm

# 9.0 Appendix A – Field Data

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

| Project/Site: Western Portion of Parcel 0420351003                  | City/County: <u>City of Puyallup</u> | <u>), Pierce County</u> San     | npling Date: <u>16 APR 2020</u> |
|---|--------------------------------------|---------------------------------|---------------------------------|
| Applicant/Owner: Cascade Development                                | Sʻ                                   | tate: <u>WA</u> San             | npling Point: <u>SP1</u>        |
| Investigator(s): Habitat Technologies                               | Section, Townshi                     | ip, Range: <u>Sec 35 T20N I</u> | R04E QT 12                      |
| Landform (hillslope, terrace, etc.): valley                         | Local relief (concave, conve         | ex, none): <u>flat</u>          | Slope (%): <u>&lt;1%</u>        |
| Subregion (LRR): A  | Lat: Lon                             | ng:                             | Datum: <u>USGS</u>              |
| Soil Map Unit Name: Briscot loam                                    |                                      | NWI classification:             | somewhat poorly drained         |
| Are climatic / hydrologic conditions on the site typical for this t | ime of year? Yes 🛛 🛛 No 🗌 (If no, e  | explain in Remarks.)            |                                 |
| Are Vegetation, Soil, or Hydrology signif                           | icantly disturbed? Are "Normal (     | Circumstances" present?         | Yes 🛛 No 🗌                      |
| Are Vegetation, Soil, or Hydrology natura                           | Illy problematic? (If needed, ex     | plain any answers in Ren        | narks.)                         |
| SUMMARY OF FINDINGS – Attach site map sl                            | nowing sampling point locati         | ions, transects, imp            | oortant features, etc.          |
| Hydrophytic Vegetation Present? Yes No                              | Is the Osmulad Are                   | _                               |                                 |

| Hydrophytic Vegetation Present?<br>Hydric Soil Present?<br>Wetland Hydrology Present? | Yes 🗌       | No 🖸<br>No 🖾            | Is the Sampled Area within a Wetland? | Yes 🗌 No 🛛 |
|---|-------------|-------------------------|---------------------------------------|------------|
| Remarks: managed for annual agricultu   | iral crop p | production and harvest. |                                       |            |

#### **VEGETATION – Use scientific names of plants.**

|  | Absolute       | Dominant Indicator      | Dominance Test worksheet:                                   |                     |
|--|----------------|-------------------------|---|---------------------|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )     | <u>% Cover</u> | Species? Status         | Number of Dominant Species                                  | <i>(</i> <b>1</b> ) |
| 1  |                | · ·                     | That Are OBL, FACW, or FAC:                                 | (A)                 |
| 2  |                |                         | Total Number of Dominant                                    |                     |
| 3  |                | · ·                     | Species Across All Strata:                                  | (B)                 |
| 4  |                | · ·                     | Percent of Dominant Species                                 |                     |
|  |                | = Total Cover           | That Are OBL, FACW, or FAC:                                 | (A/B)               |
| Sapling/Shrub Stratum (Plot size: <u>15ft radius</u> )   |                |                         |   |                     |
| 1  |                |                         | Prevalence Index worksheet:                                 |                     |
| 2  |                | · ·                     | Total % Cover of:Multiply by                                |                     |
| 3  |                | · ·                     | OBL species x 1 =   |                     |
| 4  |                | · ·                     | FACW species x 2 =  |                     |
| 5  |                |                         | FAC species x 3 =   |                     |
|  |                | = Total Cover           | FACU species x 4 =  |                     |
| Herb Stratum (Plot size: <u>15ft radius</u> )            |                |                         | UPL species x 5 =   |                     |
| 1  |                | · ·                     | Column Totals: (A)  |                     |
| 2  |                | · ·                     |   |                     |
| 3  |                |                         | Prevalence Index = B/A =                                    | _                   |
| 4  |                |                         | Hydrophytic Vegetation Indicators:                          |                     |
| 5  |                |                         | Rapid Test for Hydrophytic Vegetation                       |                     |
| 6  |                |                         | Dominance Test is >50%                                      |                     |
| 7  |                |                         | ☐ Prevalence Index is ≤3.0 <sup>1</sup>                     |                     |
| 8  |                |                         | Morphological Adaptations <sup>1</sup> (Provide supp        |                     |
| 9  |                |                         | data in Remarks or on a separate she                        | et)                 |
| 10   |                |                         | Wetland Non-Vascular Plants <sup>1</sup>                    |                     |
| 11   |                | ·                       | Problematic Hydrophytic Vegetation <sup>1</sup> (Exp        | olain)              |
| ····   |                | = Total Cover           | <sup>1</sup> Indicators of hydric soil and wetland hydrolog | gy must             |
| Woody Vine Stratum (Plot size: <u>15ft radius)</u>       | 100            |                         | be present, unless disturbed or problematic.                |                     |
| 1  |                |                         |   |                     |
| 2  |                |                         | Hydrophytic<br>Vegetation                                   |                     |
|  | 0              | = Total Cover           | Present? Yes No   |                     |
| % Bare Ground in Herb Stratum                            | <u></u>        |                         |   |                     |
| Remarks: managed for annual agricultural crop production | and harves     | st. plant community pri | or to spring plowing a mixture of cover crop, he            | rbs, and            |
| grasses.   |                |                         |   |                     |

#### SOIL

Sampling Point: SP1

|  | Color (moist)  | %                                       | Colo        | r (moist)   | %  | Type <sup>1</sup>   | Loc <sup>2</sup>               | Textu        | re      | Remarks   |
|--|--|---|-------------|---|--|---|--------------------------------|--------------|---------|---|
| 0-24   | 10YR 3/3   | 100                                     |             |   |  |   |                                | SL           |         | mixed sandy loam  |
|  |  |   |             |   |  |   |                                |              |         |   |
|  |  |   |             |   |  |   |                                |              |         |   |
|  |  |   |             |   |  | <u> </u>  |                                |              |         |   |
|  |  |   |             |   |  |   |                                |              |         |   |
|  |  |   |             |   |  |   |                                |              |         |   |
|  |  |   |             |   |  |   |                                |              |         |   |
|  |  |   |             |   |  |   |                                |              |         |   |
|  |  |   |             |   |  |   |                                |              |         |   |
|  |  |   |             |   |  |   |                                |              |         |   |
|  | ncentration, D=De  |   |             |   |  |   | ed Sand Gr                     |              |         | cation: PL=Pore Lining, M=Matrix.   |
| -  | ndicators: (Appl   | icable to a                             |             |   |  | ed.)  |                                |              |         | ors for Problematic Hydric Soils <sup>3</sup> :   |
| Histosol (   | ,  |   |             | Sandy Redox (   |  |   |                                |              |         | n Muck (A10)  |
| ] Histic Epi   |  |   |             | Stripped Matrix   | . ,  |   |                                |              |         | Parent Material (TF2)   |
| Black Hist   |  |   |             | oamy Mucky N  |  |   | MLRA 1)                        | L            | -       | y Shallow Dark Surface (TF12)   |
|  | n Sulfide (A4)<br>Rolow Dork Surfo   | 00 (111)                                |             | oamy Gleyed   |  |   |                                | L            |         | er (Explain in Remarks)   |
|  | Below Dark Surfa<br>k Surface (A12)  | ce (ATT)                                |             | Depleted Matrix<br>Redox Dark Su  |  |   |                                | 31           | ndicate | ors of hydrophytic vegetation and   |
| _  | ucky Mineral (S1)  |   |             | Depleted Dark   | ( )  | 7)  |                                | .1           |         | and hydrology must be present,  |
|  | eyed Matrix (S4)   |   |             | Redox Depress   | •  | ()  |                                |              |         | ss disturbed or problematic.  |
|  | ayer (if present):   |   | ·           |   |  |   |                                |              |         |   |
|  |  |   |             |   |  |   |                                |              |         |   |
|  | hes):  |   |             |   |  |   |                                | Hydr         | ic Soil | l Present? Yes 🗌 No 🛛   |
|  | prominent indica   |   |             |   |  |   |                                | Tiyu         |         |   |
|  | prominent indica   | lors of flyd                            | 10 3013     |   |  |   |                                |              |         |   |
|  |  |   |             |   |  |   |                                |              |         |   |
|  |  |   |             |   |  |   |                                |              |         |   |
|  |  |   |             |   |  |   |                                |              |         |   |
|  |  |   |             |   |  |   |                                |              |         |   |
| DROLOG   | Y  |   |             |   |  |   |                                |              |         |   |
|  |  | s:                                      |             |   |  |   |                                |              |         |   |
| etland Hyd   | Irology Indicator  |   | ed: che     | ck all that app   | lv)  |   |                                |              | Seco    | ndary Indicators (2 or more required  |
| <b>/etland Hyd</b><br>rimary Indica  | Irology Indicators<br>ators (minimum of  |   | red; che    |   |  | es (BQ) ( <b>e</b>  | vcent MI F                     | 20           |         | ndary Indicators (2 or more required  |
| <b>/etland Hyd</b><br>rimary Indica<br>] Surface V   | Irology Indicators<br>ators (minimum of<br>Vater (A1)  |   | ed; che     | U Water-Sta   | ined Leave   |   | xcept MLF                      | RA           |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b>   |
| <b>/etland Hyd</b><br>rimary Indica<br>] Surface W<br>] High Wate  | Irology Indicator<br>ators (minimum of<br>Vater (A1)<br>er Table (A2)  |   | red; che    | Water-Sta 1, 2, 4   | iined Leave<br><b>A, and 4B)</b>   |   | xcept MLF                      | A            |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b><br>4A, and 4B)  |
| <b>/etland Hyd</b><br>rimary Indica<br>] Surface W<br>] High Wate<br>] Saturatior  | Irology Indicators<br>ators (minimum of<br>Vater (A1)<br>er Table (A2)<br>n (A3)   |   | red; che    | ☐ Water-Sta<br>1, 2, 4,<br>☐ Salt Crust   | iined Leave<br><b>A, and 4B)</b><br>(B11)  |   | xcept MLF                      | RA           |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b><br><b>4A, and 4B)</b><br>Irainage Patterns (B10)  |
| /etland Hyd<br>rimary Indica<br>] Surface W<br>] High Wate<br>] Saturation<br>] Water Ma   | Irology Indicators<br>ators (minimum of<br>Vater (A1)<br>er Table (A2)<br>n (A3)<br>ırks (B1)  |   | red; che    | □ Water-Sta<br><b>1, 2, 4</b><br>□ Salt Crust<br>□ Aquatic In   | iined Leave<br><b>A, and 4B)</b><br>(B11)<br>vertebrates   | s (B13)   | xcept MLF                      | A.           |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b><br><b>4A, and 4B)</b><br>Prainage Patterns (B10)<br>Pry-Season Water Table (C2)   |
| Vetland Hyd<br>rimary Indica<br>Surface W<br>High Wate<br>Saturatior<br>Water Ma<br>Sediment   | Irology Indicators<br>ators (minimum of<br>Vater (A1)<br>er Table (A2)<br>n (A3)<br>rks (B1)<br>: Deposits (B2)  |   | red; che    | <ul> <li>Water-Sta</li> <li>1, 2, 4</li> <li>Salt Crust</li> <li>Aquatic In</li> <li>Hydrogen</li> </ul>  | ined Leave<br><b>A, and 4B)</b><br>(B11)<br>vertebrates<br>Sulfide Od  | s (B13)<br>or (C1)  | -                              |              |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b><br><b>4A, and 4B)</b><br>Prainage Patterns (B10)<br>Pry-Season Water Table (C2)<br>Paturation Visible on Aerial Imagery   |
| Vetland Hyd<br>rimary Indica<br>Surface W<br>High Wate<br>Saturatior<br>Water Ma<br>Sediment<br>Drift Depo   | Irology Indicators<br>ators (minimum of<br>Vater (A1)<br>er Table (A2)<br>n (A3)<br>urks (B1)<br>Deposits (B2)<br>osits (B3)   |   | red; che    | <ul> <li>Water-Sta</li> <li>1, 2, 4.</li> <li>Salt Crust</li> <li>Aquatic In</li> <li>Hydrogen</li> <li>Oxidized F</li> </ul>                                       | ined Leave<br><b>A, and 4B)</b><br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizosphere   | s (B13)<br>or (C1)<br>es along  | Living Roo                     |              |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b><br><b>4A, and 4B)</b><br>Irainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>aturation Visible on Aerial Imagery<br>Geomorphic Position (D2)  |
| Vetland Hyd<br>rimary Indica<br>Surface W<br>High Wate<br>Saturation<br>Water Ma<br>Sediment<br>Drift Depo<br>Algal Mat  | Irology Indicators<br>ators (minimum of<br>Vater (A1)<br>er Table (A2)<br>n (A3)<br>nrks (B1)<br>Deposits (B2)<br>osits (B3)<br>or Crust (B4)  |   | red; che    | <ul> <li>Water-Sta</li> <li>1, 2, 4.</li> <li>Salt Crust</li> <li>Aquatic In</li> <li>Hydrogen</li> <li>Oxidized F</li> <li>Presence</li> </ul>                     | ined Leave<br><b>A, and 4B)</b><br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizosphere<br>of Reduced   | s (B13)<br>or (C1)<br>es along<br>d Iron (C4  | Living Roo                     | ts (C3)      |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b><br><b>4A, and 4B)</b><br>Prainage Patterns (B10)<br>Pry-Season Water Table (C2)<br>Praturation Visible on Aerial Imagery (<br>Seomorphic Position (D2)<br>Phallow Aquitard (D3)   |
| Vetland Hyd<br>rimary Indica<br>Surface W<br>High Wate<br>Saturation<br>Water Ma<br>Sediment<br>Drift Depo<br>Algal Mat<br>Iron Depo   | Irology Indicators<br>ators (minimum of<br>Vater (A1)<br>er Table (A2)<br>n (A3)<br>rks (B1)<br>Deposits (B2)<br>osits (B3)<br>or Crust (B4)<br>osits (B5)   |   | red; che    | <ul> <li>Water-Sta</li> <li>1, 2, 4.</li> <li>Salt Crust</li> <li>Aquatic In</li> <li>Hydrogen</li> <li>Oxidized F</li> <li>Presence</li> <li>Recent Iro</li> </ul> | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizosphere<br>of Reduced<br>on Reductio                                 | s (B13)<br>or (C1)<br>es along<br>d Iron (C4<br>on in Tilleo                        | Living Roo<br>)<br>d Soils (C6 | ts (C3)<br>) |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b><br><b>4A, and 4B)</b><br>Prainage Patterns (B10)<br>Pry-Season Water Table (C2)<br>Faturation Visible on Aerial Imagery<br>Geomorphic Position (D2)<br>Ihallow Aquitard (D3)<br>AC-Neutral Test (D5)  |
| Vetland Hyd<br>rimary Indica<br>Surface V<br>High Wate<br>Saturatior<br>Water Ma<br>Sediment<br>Drift Depo<br>Algal Mat<br>Iron Depo<br>Surface S  | Irology Indicators<br>ators (minimum of<br>Vater (A1)<br>er Table (A2)<br>n (A3)<br>rks (B1)<br>Deposits (B2)<br>osits (B3)<br>or Crust (B4)<br>osits (B5)<br>Goil Cracks (B6)   | one requir                              |             | Water-Sta<br>1, 2, 4.<br>Salt Crust<br>Aquatic Im<br>Hydrogen<br>Oxidized F<br>Presence<br>Recent Iro<br>Stunted or   | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>on Reductio<br>r Stressed F                  | s (B13)<br>or (C1)<br>es along<br>d Iron (C4<br>on in Tilleo<br>Plants (D           | Living Roo<br>)<br>d Soils (C6 | ts (C3)<br>) |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b><br><b>4A, and 4B)</b><br>Prainage Patterns (B10)<br>Pry-Season Water Table (C2)<br>aturation Visible on Aerial Imagery<br>Geomorphic Position (D2)<br>shallow Aquitard (D3)<br>AC-Neutral Test (D5)<br>caised Ant Mounds (D6) ( <b>LRR A</b> )  |
| Vetland Hyd<br>rimary Indica<br>Surface V<br>High Wate<br>Saturatior<br>Water Ma<br>Sediment<br>Drift Depo<br>Algal Mat<br>Iron Depo<br>Surface S<br>Inundation                              | Irology Indicators<br>ators (minimum of<br>Vater (A1)<br>er Table (A2)<br>n (A3)<br>urks (B1)<br>Deposits (B2)<br>osits (B3)<br>or Crust (B4)<br>osits (B5)<br>Soil Cracks (B6)<br>n Visible on Aerial   | <u>one requir</u><br>Imagery (I         | B7)         | Water-Sta<br>1, 2, 4.<br>Salt Crust<br>Aquatic Im<br>Hydrogen<br>Oxidized F<br>Presence<br>Recent Iro<br>Stunted or   | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizosphere<br>of Reduced<br>on Reductio                                 | s (B13)<br>or (C1)<br>es along<br>d Iron (C4<br>on in Tilleo<br>Plants (D           | Living Roo<br>)<br>d Soils (C6 | ts (C3)<br>) |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b><br><b>4A, and 4B)</b><br>Prainage Patterns (B10)<br>Pry-Season Water Table (C2)<br>Faturation Visible on Aerial Imagery<br>Geomorphic Position (D2)<br>Ihallow Aquitard (D3)<br>AC-Neutral Test (D5)  |
| Vetland Hyd<br>rimary Indica<br>Surface W<br>High Wate<br>Saturation<br>Water Ma<br>Sediment<br>Drift Depo<br>Algal Mat<br>Iron Depo<br>Surface S<br>Inundation<br>Sparsely                  | Irology Indicators<br>ators (minimum of<br>Vater (A1)<br>er Table (A2)<br>n (A3)<br>irks (B1)<br>Deposits (B2)<br>or Crust (B4)<br>osits (B5)<br>Soil Cracks (B6)<br>n Visible on Aerial<br>Vegetated Concar   | <u>one requir</u><br>Imagery (I         | B7)         | Water-Sta<br>1, 2, 4.<br>Salt Crust<br>Aquatic Im<br>Hydrogen<br>Oxidized F<br>Presence<br>Recent Iro<br>Stunted or   | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>on Reductio<br>r Stressed F                  | s (B13)<br>or (C1)<br>es along<br>d Iron (C4<br>on in Tilleo<br>Plants (D           | Living Roo<br>)<br>d Soils (C6 | ts (C3)<br>) |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b><br><b>4A, and 4B)</b><br>Prainage Patterns (B10)<br>Pry-Season Water Table (C2)<br>aturation Visible on Aerial Imagery<br>Geomorphic Position (D2)<br>shallow Aquitard (D3)<br>AC-Neutral Test (D5)<br>caised Ant Mounds (D6) ( <b>LRR A</b> )  |
| Vetland Hyd<br>rimary Indica<br>Surface W<br>High Wate<br>Saturation<br>Water Ma<br>Sediment<br>Drift Depo<br>Algal Mat<br>Iron Depo<br>Surface S<br>Inundation<br>Sparsely V<br>ield Observ | Irology Indicators<br>ators (minimum of<br>Vater (A1)<br>er Table (A2)<br>n (A3)<br>rks (B1)<br>Deposits (B2)<br>or Crust (B4)<br>osits (B5)<br>Soil Cracks (B6)<br>n Visible on Aerial<br>Vegetated Concar<br>rations:  | ione requir<br>Imagery (l<br>ve Surface | B7)<br>(B8) | Water-Sta<br>1, 2, 4.<br>Salt Crust<br>Aquatic Im<br>Hydrogen<br>Oxidized F<br>Presence<br>Recent Iro<br>Stunted or   | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>on Reductio<br>r Stressed F                  | s (B13)<br>or (C1)<br>es along<br>d Iron (C4<br>on in Tilleo<br>Plants (D           | Living Roo<br>)<br>d Soils (C6 | ts (C3)<br>) |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b><br><b>4A, and 4B)</b><br>Prainage Patterns (B10)<br>Pry-Season Water Table (C2)<br>aturation Visible on Aerial Imagery<br>Geomorphic Position (D2)<br>challow Aquitard (D3)<br>AC-Neutral Test (D5)<br>claised Ant Mounds (D6) ( <b>LRR A</b> ) |
| Vetland Hyd<br>rimary Indica<br>Surface W<br>High Wate<br>Saturation<br>Water Ma<br>Sediment<br>Drift Depo<br>Algal Mat<br>Iron Depo<br>Surface S<br>Inundation<br>Sparsely V<br>ield Observ | Irology Indicators<br>ators (minimum of<br>Vater (A1)<br>er Table (A2)<br>n (A3)<br>rks (B1)<br>Deposits (B2)<br>or Crust (B4)<br>osits (B5)<br>Soil Cracks (B6)<br>n Visible on Aerial<br>Vegetated Concar<br>rations:  | ione requir<br>Imagery (l<br>ve Surface | B7)         | Water-Sta<br>1, 2, 4.<br>Salt Crust<br>Aquatic Im<br>Hydrogen<br>Oxidized F<br>Presence<br>Recent Iro<br>Stunted or   | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizosphere<br>of Reduced<br>on Reductio<br>r Stressed F<br>plain in Rer | s (B13)<br>or (C1)<br>es along<br>d Iron (C4<br>on in Tilled<br>Plants (D<br>marks) | Living Roo<br>)<br>d Soils (C6 | ts (C3)<br>) |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b><br><b>4A, and 4B)</b><br>Prainage Patterns (B10)<br>Pry-Season Water Table (C2)<br>aturation Visible on Aerial Imagery<br>Geomorphic Position (D2)<br>challow Aquitard (D3)<br>AC-Neutral Test (D5)<br>claised Ant Mounds (D6) ( <b>LRR A</b> ) |
| Primary Indica<br>Surface W<br>High Wate<br>Saturation<br>Water Ma<br>Sediment<br>Drift Depo<br>Algal Mat<br>Iron Depo<br>Surface S<br>Inundation  | Irology Indicators<br>ators (minimum of<br>Vater (A1)<br>er Table (A2)<br>n (A3)<br>rks (B1)<br>Deposits (B2)<br>or Crust (B4)<br>osits (B3)<br>or Crust (B4)<br>osits (B5)<br>Soil Cracks (B6)<br>n Visible on Aerial<br>Vegetated Conca<br>rations:<br>er Present? | Imagery (l<br>ve Surface                | B7)<br>(B8) | Water-Sta<br>1, 2, 4.<br>Salt Crust<br>Aquatic Im<br>Hydrogen<br>Oxidized F<br>Presence<br>Recent Iro<br>Stunted or<br>Other (Exp                                   | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizosphere<br>of Reduced<br>on Reductio<br>r Stressed R<br>plain in Rer | s (B13)<br>or (C1)<br>es along<br>d Iron (C4<br>on in Tilled<br>Plants (D<br>marks) | Living Roo<br>)<br>d Soils (C6 | ts (C3)<br>) |         | Vater-Stained Leaves (B9) ( <b>MLRA 1</b><br><b>4A, and 4B)</b><br>Prainage Patterns (B10)<br>Pry-Season Water Table (C2)<br>aturation Visible on Aerial Imagery<br>Geomorphic Position (D2)<br>challow Aquitard (D3)<br>AC-Neutral Test (D5)<br>claised Ant Mounds (D6) ( <b>LRR A</b> ) |

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

Remarks: No prominent field indicators of wetland hydrology. See spring 2020 monitoring data

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

| Project/Site: Western Portion of Parcel 0420351003                     | City/County: City of Puyallup, Pierce County    | Sampling Date: <u>16 APR 2020</u> |
|--|---|-----------------------------------|
| Applicant/Owner: Cascade Development                                   | State: WA                                       | _ Sampling Point: <u>SP2</u>      |
| Investigator(s): Habitat Technologies                                  | Section, Township, Range: Sec 35                | T20N R04E QT 12                   |
| Landform (hillslope, terrace, etc.): valley                            | Local relief (concave, convex, none): flat      | Slope (%): <u>&lt;1%</u>          |
| Subregion (LRR): A Lat   | t: Long:  | Datum: USGS                       |
| Soil Map Unit Name: Briscot loam                                       | NWI classific                                   | cation: somewhat poorly drained   |
| Are climatic / hydrologic conditions on the site typical for this time | of year? Yes 🛛 No 🗌 (If no, explain in Remarks. | .)                                |
| Are Vegetation, Soil, or Hydrology significan                          | ntly disturbed? Are "Normal Circumstances" pre  | esent? Yes 🛛 No 🗌                 |
| Are Vegetation, Soil, or Hydrology naturally p                         | problematic? (If needed, explain any answers    | in Remarks.)                      |
| SUMMARY OF FINDINGS – Attach site map show                             | wing sampling point locations, transects        | s, important features, etc.       |
| Hydrophytic Vegetation Present? Yes No                                 | In the Demoked Area                             |                                   |

| Hydrophytic Vegetation Present?<br>Hydric Soil Present?<br>Wetland Hydrology Present? | Yes 🗌       | No 🖸<br>No 🖾            | Is the Sampled Area within a Wetland? | Yes 🗌 No 🛛 |
|---|-------------|-------------------------|---------------------------------------|------------|
| Remarks: managed for annual agricultu   | iral crop p | production and harvest. |                                       |            |

#### **VEGETATION – Use scientific names of plants.**

|  | Absolute       | Dominant Indicator      | Dominance Test worksheet:                                   |                     |
|--|----------------|-------------------------|---|---------------------|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )     | <u>% Cover</u> | Species? Status         | Number of Dominant Species                                  | <i>(</i> <b>1</b> ) |
| 1  |                | · ·                     | That Are OBL, FACW, or FAC:                                 | (A)                 |
| 2  |                |                         | Total Number of Dominant                                    |                     |
| 3  |                | · ·                     | Species Across All Strata:                                  | (B)                 |
| 4  |                | · ·                     | Percent of Dominant Species                                 |                     |
|  |                | = Total Cover           | That Are OBL, FACW, or FAC:                                 | (A/B)               |
| Sapling/Shrub Stratum (Plot size: <u>15ft radius</u> )   |                |                         |   |                     |
| 1  |                |                         | Prevalence Index worksheet:                                 |                     |
| 2  |                | · ·                     | Total % Cover of:Multiply by                                |                     |
| 3  |                | · ·                     | OBL species x 1 =   |                     |
| 4  |                | · ·                     | FACW species x 2 =  |                     |
| 5  |                |                         | FAC species x 3 =   |                     |
|  |                | = Total Cover           | FACU species x 4 =  |                     |
| Herb Stratum (Plot size: <u>15ft radius</u> )            |                |                         | UPL species x 5 =   |                     |
| 1  |                | · ·                     | Column Totals: (A)  |                     |
| 2  |                | · ·                     |   |                     |
| 3  |                |                         | Prevalence Index = B/A =                                    | _                   |
| 4  |                |                         | Hydrophytic Vegetation Indicators:                          |                     |
| 5  |                |                         | Rapid Test for Hydrophytic Vegetation                       |                     |
| 6  |                |                         | Dominance Test is >50%                                      |                     |
| 7  |                |                         | ☐ Prevalence Index is ≤3.0 <sup>1</sup>                     |                     |
| 8  |                |                         | Morphological Adaptations <sup>1</sup> (Provide supp        |                     |
| 9  |                |                         | data in Remarks or on a separate she                        | et)                 |
| 10   |                |                         | Wetland Non-Vascular Plants <sup>1</sup>                    |                     |
| 11   |                | ·                       | Problematic Hydrophytic Vegetation <sup>1</sup> (Exp        | olain)              |
| ····   |                | = Total Cover           | <sup>1</sup> Indicators of hydric soil and wetland hydrolog | gy must             |
| Woody Vine Stratum (Plot size: <u>15ft radius)</u>       | 100            |                         | be present, unless disturbed or problematic.                |                     |
| 1  |                |                         |   |                     |
| 2  |                |                         | Hydrophytic<br>Vegetation                                   |                     |
|  | 0              | = Total Cover           | Present? Yes No   |                     |
| % Bare Ground in Herb Stratum                            | <u></u>        |                         |   |                     |
| Remarks: managed for annual agricultural crop production | and harves     | st. plant community pri | or to spring plowing a mixture of cover crop, he            | rbs, and            |
| grasses.   |                |                         |   |                     |

#### SOIL

Sampling Point: SP2

| Depth   | Matri  | х   |   | Redo   | ox Features  | 6  |  |   |  |
|---|--|---|---|--|--|--|--|---|--|
| (inches)  |  | %   | Colo  | or (moist)   |  |  | Loc <sup>2</sup>                                     | Texture   | Remarks  |
| 0-12  | 10YR 3/3   | 100   |   |  |  |  |  | SL  | mixed sandy loam   |
| 12-24   | <u>10YR 3/3</u>  | <u>100</u>  |   |  |  |  |  | GSL   | mixed sandy loam with gravel fill  |
|   |  |   |   |  |  |  |  |   |  |
|   |  |   |   |  |  | ·  |  |   |  |
|   |  |   |   |  |  |  |  |   |  |
|   |  |   |   |  |  |  |  |   |  |
| <sup>1</sup> Type: C=(  | Concentration, D=I   | Depletion   | <br>RM=Rer                                    | duced Matrix C   | <br>S=Covered  | l or Coate   |  | rains <sup>2</sup> l (  | <br>ocation: PL=Pore Lining, M=Matrix.   |
|   | I Indicators: (Ap  |   |   |  |  |  |  |   | tors for Problematic Hydric Soils <sup>3</sup> :   |
| _<br>Histoso  |  |   |   | Sandy Redox (S   |  |  |  | ∏ 2 c   | m Muck (A10)   |
|   | Epipedon (A2)  |   |   | Stripped Matrix  |  |  |  |   | d Parent Material (TF2)  |
| Black H   |  |   |   | Loamy Mucky N  | ,<br>/lineral (F1  | ) (except  | MLRA 1)  |   | ry Shallow Dark Surface (TF12)   |
| ] Hydrog  | en Sulfide (A4)  |   |   | Loamy Gleyed I   | Matrix (F2)  | )  |  | 🗌 Oth   | ner (Explain in Remarks)   |
|   | ed Below Dark Sur  |   |   | Depleted Matrix  |  |  |  |   |  |
|   | ark Surface (A12)  |   |   | Redox Dark Su  | · · ·  |  |  |   | tors of hydrophytic vegetation and   |
| •   | Mucky Mineral (S1  | ,   |   | Depleted Dark S  | •  | 7)   |  |   | land hydrology must be present,  |
|   | Gleyed Matrix (S4)   |   |   | Redox Depress  | ions (F8)  |  |  | unle  | ess disturbed or problematic.  |
| octrictivo  |  |   |   |  |  |  |  |   |  |
|   | e Layer (if present  | •   |   |  |  |  |  |   |  |
| Type:   |  |   |   |  |  |  |  |   |  |
| Type:<br>Depth (i   |  |   |   | -  |  |  |  | Hydric So   | il Present? Yes 🗌 No 🛛   |
| Type:<br>Depth (i   | nches):  |   |   | -  |  |  |  | Hydric So   | il Present? Yes 🗌 No 🛛   |
| Type:<br>Depth (i<br>Remarks: N   | nches):<br>NO prominent indic  | cators of hy  |   | -  |  |  |  | Hydric So   | il Present? Yes 🗌 No 🛛   |
| Type:<br>Depth (i<br>Remarks: N<br>DROLO  | nches):<br>NO prominent indic<br>NO prominent indic<br>NO prominent indic<br>NO prominent indic  | ators of hy   | ydric soil:                                   | -<br>S   |  |  |  |   |  |
| Type:<br>Depth (i<br>Remarks: N<br>DROLO<br>Vetland H   | nches):<br>NO prominent indic<br>GY<br>ydrology Indicato   | ators of hy   | ydric soil:                                   | -<br>s<br>neck all that appl   |  |  |  | <u>Seco</u>   | ondary Indicators (2 or more required)   |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland H<br>Primary Ind<br>Surface  | nches):<br>NO prominent indic<br>GY<br>ydrology Indicato<br>dicators (minimum<br>e Water (A1)  | ators of hy   | ydric soil:                                   | s<br>neck all that appl  | ined Leave   |  | xcept MLI  | <u>Seco</u>   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b>   |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland H<br>Irimary Ind<br>Surface<br>High W  | nches):<br>NO prominent indic<br>GY<br>ydrology Indicato<br>dicators (minimum<br>e Water (A1)<br>dater Table (A2)  | ators of hy   | ydric soil:                                   | s<br>eck all that appl<br>Water-Stai<br>1, 2, 4/   | ined Leave<br>A, and 4B)   |  | xcept MLI  | <u>Secc</u><br>RA □ \   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b>   |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland H<br>Primary Ind<br>Surface<br>High W<br>Saturat   | AND prominent indic<br>NO prominent indic<br>GY<br>ydrology Indicato<br>dicators (minimum<br>Water (A1)<br>vater Table (A2)<br>ion (A3)  | ators of hy   | ydric soil:                                   | s<br>eeck all that appl<br>Water-Stai<br>1, 2, 4/<br>Salt Crust  | ined Leave<br><b>A, and 4B)</b><br>(B11)   | )  | xcept MLI  | <u>Secc</u><br>RA [] \  | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)  |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland H<br>Surface<br>High W<br>Saturat<br>Water N   | nches):<br>NO prominent indic<br>GY<br>ydrology Indicato<br>dicators (minimum<br>e Water (A1)<br>dater Table (A2)<br>ion (A3)<br>Marks (B1)  | ators of hy   | ydric soil:                                   | s<br>eck all that appl<br>Water-Stai<br>1, 2, 4/<br>Salt Crust<br>Aquatic Inv  | ined Leave<br><b>A, and 4B)</b><br>(B11)<br>vertebrates  | s (B13)  | xcept MLI  | <u>Secc</u><br>RA \\<br>\\<br>\\  | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)   |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland H<br>Primary Ind<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime  | GY<br>ydrology Indicator<br>dicators (minimum<br>water (A1)<br>vater Table (A2)<br>ion (A3)<br>Marks (B1)<br>ent Deposits (B2)   | ators of hy   | ydric soil:                                   | s<br>eck all that appl<br>Water-Stai<br>1, 2, 4<br>Salt Crust<br>Aquatic Inv<br>Hydrogen   | ined Leave<br><b>A, and 4B)</b><br>(B11)<br>vertebrates<br>Sulfide Od  | s (B13)<br>or (C1)   |  | <u>Secc</u><br>RA □ \<br>□ [<br>□ [<br>□ 5  | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C  |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland Hy<br>rimary Ind<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De  | GY<br>ydrology Indicator<br>water (A1)<br>vater Table (A2)<br>ion (A3)<br>warks (B1)<br>ent Deposits (B2)<br>eposits (B3)  | ators of hy   | ydric soil:                                   | s<br>eck all that appl<br>Water-Stai<br>1, 2, 4,<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F  | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher   | s (B13)<br>lor (C1)<br>es along  | Living Roc   | RA Seco<br>RA \<br>C<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S<br>S   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)  |
| Type:<br>Depth (ii<br>remarks: N<br>DROLO<br>Vetland H<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De<br>Algal M  | A prominent indices of the second sec | ators of hy   | ydric soil:                                   | s<br>eck all that appl<br>Water-Stai<br>1, 2, 4/<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence of   | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced   | )<br>or (C1)<br>es along<br>d Iron (C4   | Living Roc   |   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1</b> ,<br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)  |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland H<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De<br>Algal M<br>Iron De   | GY<br>ydrology Indicato<br>dicators (minimum<br>e Water (A1)<br>dater Table (A2)<br>ion (A3)<br>Marks (B1)<br>ent Deposits (B2)<br>eposits (B3)<br>lat or Crust (B4)<br>eposits (B5)   | ators of hy   | ydric soil:                                   | eck all that appl<br>Water-Stai<br>1, 2, 4<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence o<br>Recent Iro                                    | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reductio                               | s (B13)<br>lor (C1)<br>es along<br>d Iron (C4<br>on in Tilleo                        | Living Roc<br>I)<br>d Soils (C6                      | Seccent         RA       N         I       I         I      | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)  |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland H<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De<br>Algal M<br>Iron De<br>Surface  | GY<br>ydrology Indicato<br>dicators (minimum<br>e Water (A1)<br>dater Table (A2)<br>ion (A3)<br>Marks (B1)<br>ent Deposits (B2)<br>eposits (B3)<br>lat or Crust (B4)<br>eposits (B5)<br>e Soil Cracks (B6)   | ors:<br>of one req  | /dric soil:<br>uired; ch                      | s<br>week all that appl<br>Water-Stain<br>1, 2, 4<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence of<br>Recent Iro<br>Stunted or              | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reductio<br>Stressed                   | (B13)<br>for (C1)<br>res along<br>d Iron (C4<br>on in Tilled<br>Plants (D            | Living Roc<br>I)<br>d Soils (C6                      | Secc         RA       N         □       □   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> ) |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland H<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De<br>Algal M<br>Iron De<br>Surface<br>Surface   | GY<br>ydrology Indicator<br>dicators (minimum<br>e Water (A1)<br>vater Table (A2)<br>ion (A3)<br>Warks (B1)<br>ent Deposits (B2)<br>eposits (B3)<br>lat or Crust (B4)<br>eposits (B5)<br>e Soil Cracks (B6)<br>tion Visible on Aeri  | sators of hy<br>ors:<br>of one req                                    | /dric soils                                   | eck all that appl<br>Water-Stai<br>1, 2, 4<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence o<br>Recent Iro                                    | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reductio<br>Stressed                   | (B13)<br>for (C1)<br>res along<br>d Iron (C4<br>on in Tilled<br>Plants (D            | Living Roc<br>I)<br>d Soils (C6                      | Secc         RA       N         □       □   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)  |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland H<br>Primary Ind<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De<br>Drift De<br>Algal M<br>Iron De<br>Surface<br>Surface<br>Surface   | GY<br>ydrology Indicator<br>dicators (minimum<br>e Water (A1)<br>/ater Table (A2)<br>ion (A3)<br>Marks (B1)<br>ent Deposits (B2)<br>eposits (B3)<br>lat or Crust (B4)<br>eposits (B5)<br>e Soil Cracks (B6)<br>tion Visible on Aeri<br>ly Vegetated Conc   | sators of hy<br>ors:<br>of one req                                    | /dric soils                                   | s<br>week all that appl<br>Water-Stain<br>1, 2, 4<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence of<br>Recent Iro<br>Stunted or              | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reductio<br>Stressed                   | (B13)<br>for (C1)<br>res along<br>d Iron (C4<br>on in Tilled<br>Plants (D            | Living Roc<br>I)<br>d Soils (C6                      | Secc         RA       N         □       □   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> ) |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland H<br>Primary Ind<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De<br>Algal M<br>Iron De<br>Surface<br>Inundat<br>Sparsel<br>Wield Obse | GY<br>ydrology Indicato<br>dicators (minimum<br>e Water (A1)<br>/ater Table (A2)<br>ion (A3)<br>Marks (B1)<br>ent Deposits (B2)<br>eposits (B3)<br>lat or Crust (B4)<br>eposits (B5)<br>e Soil Cracks (B6)<br>tion Visible on Aeri<br>ly Vegetated Conc<br>ervations:  | sators of hy<br>ors:<br>of one req                                    | /dric soils<br>uired; ch<br>/ (B7)<br>ce (B8) | s<br>eck all that appl<br>Water-Stai<br>1, 2, 4/<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence of<br>Recent Iro<br>Stunted or<br>Other (Exp | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reductio<br>Stressed I<br>olain in Rer | s (B13)<br>lor (C1)<br>es along<br>d Iron (C4<br>on in Tilleo<br>Plants (D<br>marks) | Living Roc<br>I)<br>d Soils (C6                      | Secc         RA       N         □       □   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> ) |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland H<br>Primary Ind<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De<br>Algal M<br>Iron De<br>Surface<br>Inundat<br>Sparsel<br>Field Obse | GY<br>ydrology Indicator<br>dicators (minimum<br>e Water (A1)<br>/ater Table (A2)<br>ion (A3)<br>Marks (B1)<br>ent Deposits (B2)<br>eposits (B3)<br>lat or Crust (B4)<br>eposits (B5)<br>e Soil Cracks (B6)<br>tion Visible on Aeri<br>ly Vegetated Conc   | sators of hy<br>ors:<br>of one req                                    | /dric soils                                   | s<br>week all that appl<br>Water-Stain<br>1, 2, 4<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence of<br>Recent Iro<br>Stunted or              | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reductio<br>Stressed I<br>olain in Rer | s (B13)<br>lor (C1)<br>es along<br>d Iron (C4<br>on in Tilleo<br>Plants (D<br>marks) | Living Roc<br>I)<br>d Soils (C6                      | Secc         RA       N         □       □   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> ) |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland H<br>Crimary Ind<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Algal M<br>Iron De<br>Surface<br>Inundat<br>Sparsel<br>Field Obse             | GY<br>ydrology Indicato<br>dicators (minimum<br>e Water (A1)<br>/ater Table (A2)<br>ion (A3)<br>Marks (B1)<br>ent Deposits (B2)<br>eposits (B3)<br>lat or Crust (B4)<br>eposits (B5)<br>e Soil Cracks (B6)<br>tion Visible on Aeri<br>ly Vegetated Conc<br>ervations:  | ators of hy<br>ors:<br>of one req<br>ial Imagery<br>ave Surfac        | /dric soils<br>uired; ch<br>/ (B7)<br>ce (B8) | -<br>s<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-  | (B11)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reductic<br>Stressed I<br>olain in Rer<br>s):<br>s):      | s (B13)<br>or (C1)<br>es along<br>d Iron (C4<br>on in Tilled<br>Plants (D<br>marks)  | Living Roc<br>I)<br>d Soils (C6                      | Secc         RA       N         □       □   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> ) |
| Type:<br>Depth (ii<br>Remarks: N<br>DROLO<br>Vetland Hy<br>Primary Ind<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De<br>Surface<br>Surface<br>Surface Wa<br>Nater Table<br>Saturation    | GY<br>ydrology Indicator<br>dicators (minimum<br>e Water (A1)<br>/ater Table (A2)<br>ion (A3)<br>Marks (B1)<br>ent Deposits (B2)<br>eposits (B3)<br>lat or Crust (B4)<br>eposits (B5)<br>e Soil Cracks (B6)<br>tion Visible on Aeri<br>ly Vegetated Conc<br>ervations:<br>ater Present?<br>e Present?  | ators of hy<br>ors:<br>of one req<br>ial Imagery<br>ave Surfac<br>Yes | /dric soil:<br>uired; ch<br>/ (B7)<br>ce (B8) | -<br>s<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-  | (B11)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reductic<br>Stressed I<br>olain in Rer<br>s):<br>s):      | s (B13)<br>or (C1)<br>es along<br>d Iron (C4<br>on in Tilled<br>Plants (D<br>marks)  | Living Roc<br>I)<br>d Soils (C6<br>1) ( <b>LRR A</b> | Secc         RA       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       < | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> ) |

Remarks: No prominent field indicators of wetland hydrology. See spring 2020 monitoring data

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

| Project/Site: Western Portion of Parcel 0420351003                    | City/County: <u>City of Puyallup, Pierce C</u> | County Sampling Date: <u>16 APR 2020</u>  |
|---|--|---|
| Applicant/Owner: Cascade Development                                  | State: WA                                      | Sampling Point: SP3                       |
| Investigator(s): Habitat Technologies                                 | Section, Township, Range                       | : Sec 35 T20N R04E QT 12                  |
| Landform (hillslope, terrace, etc.): valley                           | Local relief (concave, convex, none):          | <u>flat</u> Slope (%): <u>&lt;1%</u>      |
| Subregion (LRR): A  | Lat: Long:                                     | Datum: USGS                               |
| Soil Map Unit Name: Briscot loam                                      | NW   | I classification: somewhat poorly drained |
| Are climatic / hydrologic conditions on the site typical for this tir | ne of year? Yes 🛛 🛛 No 🗌 (If no, explain in f  | Remarks.)                                 |
| Are Vegetation, Soil, or Hydrology signific                           | antly disturbed? Are "Normal Circumsta         | inces" present? Yes 🛛 No 🗌                |
| Are Vegetation, Soil, or Hydrology natural                            | y problematic? (If needed, explain any         | answers in Remarks.)                      |
| SUMMARY OF FINDINGS – Attach site map sh                              | owing sampling point locations, tra            | ansects, important features, etc.         |
| Hydrophytic Vegetation Present? Yes No                                |  |   |

| Hydrophytic Vegetation Present?<br>Hydric Soil Present?<br>Wetland Hydrology Present? | Yes 🗌       | No 🖸<br>No 🖾            | Is the Sampled Area within a Wetland? | Yes 🗌 No 🛛 |
|---|-------------|-------------------------|---------------------------------------|------------|
| Remarks: managed for annual agricultu   | iral crop p | production and harvest. |                                       |            |

#### **VEGETATION – Use scientific names of plants.**

|  | Absolute       | Dominant Indicator      | Dominance Test worksheet:                                   |          |  |  |  |  |
|--|----------------|-------------------------|---|----------|--|--|--|--|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )     | <u>% Cover</u> | Species? Status         | Number of Dominant Species                                  |          |  |  |  |  |
| 1  |                | · ·                     | That Are OBL, FACW, or FAC:                                 | (A)      |  |  |  |  |
| 2  |                |                         | Total Number of Dominant                                    |          |  |  |  |  |
| 3  |                | ·                       | Species Across All Strata:                                  | (B)      |  |  |  |  |
| 4  |                | · ·                     | Percent of Dominant Species                                 |          |  |  |  |  |
|  |                | = Total Cover           | That Are OBL, FACW, or FAC:                                 | (A/B)    |  |  |  |  |
| Sapling/Shrub Stratum (Plot size: <u>15ft radius</u> )   |                |                         |   |          |  |  |  |  |
| 1  |                |                         | Prevalence Index worksheet:                                 |          |  |  |  |  |
| 2  |                | · ·                     | Total % Cover of: Multiply by                               |          |  |  |  |  |
| 3  |                | · ·                     | OBL species x 1 =   |          |  |  |  |  |
| 4  |                |                         | FACW species x 2 =  |          |  |  |  |  |
| 5  |                |                         | FAC species x 3 =   |          |  |  |  |  |
|  |                | = Total Cover           | FACU species x 4 =  |          |  |  |  |  |
| Herb Stratum (Plot size: <u>15ft radius</u> )            |                |                         | UPL species x 5 =   |          |  |  |  |  |
| 1  |                | · ·                     | Column Totals: (A)  | (B)      |  |  |  |  |
| 2  |                | · ·                     |   |          |  |  |  |  |
| 3  |                |                         | Prevalence Index = B/A =                                    |          |  |  |  |  |
| 4  |                |                         | Hydrophytic Vegetation Indicators:                          |          |  |  |  |  |
| · · ·  |                |                         | Rapid Test for Hydrophytic Vegetation                       |          |  |  |  |  |
| 6  |                |                         | □ Dominance Test is >50%                                    |          |  |  |  |  |
| 7  |                |                         | Prevalence Index is ≤3.0 <sup>1</sup>                       |          |  |  |  |  |
| 8  |                |                         | Morphological Adaptations <sup>1</sup> (Provide sup         |          |  |  |  |  |
| 9  |                |                         | data in Remarks or on a separate she                        | eet)     |  |  |  |  |
| 10   |                |                         | ☐ Wetland Non-Vascular Plants <sup>1</sup>                  |          |  |  |  |  |
| 11   |                | ·                       | Problematic Hydrophytic Vegetation <sup>1</sup> (Ex         | plain)   |  |  |  |  |
| ····   |                | = Total Cover           | <sup>1</sup> Indicators of hydric soil and wetland hydrolog | gy must  |  |  |  |  |
| Woody Vine Stratum (Plot size: <u>15ft radius</u> )      | 100            |                         | be present, unless disturbed or problematic.                |          |  |  |  |  |
| 1  |                |                         |   |          |  |  |  |  |
| 2  |                | · ·                     | Hydrophytic   |          |  |  |  |  |
|  | 0              | = Total Cover           | Vegetation<br>Present? Yes □ No □                           |          |  |  |  |  |
| % Bare Ground in Herb Stratum                            | <u>v</u>       |                         |   |          |  |  |  |  |
| Remarks: managed for annual agricultural crop production | and harves     | st. plant community pri | or to spring plowing a mixture of cover crop, he            | rbs, and |  |  |  |  |
| grasses.   |                |                         |   |          |  |  |  |  |

Sampling Point: SP3

| Depth  | Matrix  | x  |   | Redo   | x Features   | <u>s</u>  |                                 |   |  |
|--|---|--|---|--|--|---|---------------------------------|---|--|
| (inches)   | Color (moist)   | %  | Colo  | or (moist)   |  |   | Loc <sup>2</sup>                | Texture   | Remarks  |
| )-9  | <u>10YR 3/3</u>   | 100  |   |  |  |   |                                 | SL  | mixed sandy loam   |
| )-24   | <u>10YR 3/3</u>   | 90   |   |  |  |   |                                 | GSL   | mixed sandy loam with gravel fill  |
|  |   |  |   |  |  | ·   |                                 |   |  |
| <u> </u>   |   |  |   |  |  |   |                                 |   |  |
|  |   |  |   |  |  |   |                                 |   |  |
|  |   |  |   |  |  | ·   |                                 |   |  |
| Type: C=C  | Concentration, D=[  | Depletion.   | <br>RM=Rec                                    | luced Matrix. C  | S=Covered  | d or Coate  | ed Sand G                       | rains. <sup>2</sup> Lo  | -<br>ocation: PL=Pore Lining, M=Matrix.  |
|  | Indicators: (App  |  |   |  |  |   |                                 |   | tors for Problematic Hydric Soils <sup>3</sup> :   |
| ] Histosol   | (A1)  |  |   | Sandy Redox (S   | S5)  |   |                                 | ☐ 2 c   | m Muck (A10)   |
|  | pipedon (A2)  |  |   | Stripped Matrix  |  |   |                                 |   | d Parent Material (TF2)  |
| Black H  | istic (A3)  |  |   | Loamy Mucky N  |  |   | MLRA 1)                         |   | ry Shallow Dark Surface (TF12)   |
|  | en Sulfide (A4)   |  |   | Loamy Gleyed I   | . ,  | )   |                                 | 🗌 Oth   | ner (Explain in Remarks)   |
|  | d Below Dark Surf   |  |   | Depleted Matrix  |  |   |                                 |   |  |
|  | ark Surface (A12)   |  |   | Redox Dark Su  | · · ·  | _`  |                                 |   | tors of hydrophytic vegetation and   |
| •  | Aucky Mineral (S1   | ,  |   | Depleted Dark S  |  | ()  |                                 |   | land hydrology must be present,  |
|  | Bleyed Matrix (S4)  |  |   | Redox Depress  | ions (F8)  |   |                                 | unie  | ess disturbed or problematic.  |
| estrictive   | Layer (II present   | 1.   |   |  |  |   |                                 |   |  |
| Type   |   |  |   |  |  |   |                                 |   |  |
|  | nches):<br>O prominent indic  |  |   | -  |  |   |                                 | Hydric So   | il Present? Yes 🗌 No 🛛   |
| Depth (ir  | nches):   |  |   | -  |  |   |                                 | Hydric So   | il Present? Yes 🗌 No 🛛   |
| Depth (ir<br>Remarks: N  | o prominent indic   |  |   | -  |  |   |                                 | Hydric So   | il Present? Yes 🗌 No 🛛   |
| Depth (ir<br>Remarks: N<br>DROLO(<br>Vetland Hy  | O prominent indic   | ators of hy  | ydric soil                                    | -<br>S   |  |   |                                 | Hydric So   | il Present? Yes □ No ⊠   |
| Depth (ir<br>Remarks: N<br>DROLO(<br>Vetland Hy  | O prominent indic   | ators of hy  | ydric soil                                    | -<br>s<br>eck all that appl  |  |   |                                 | <u>Sec</u>  | il Present? Yes ☐ No ⊠<br>ondary Indicators (2 or more required)   |
| Depth (ir<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface   | O prominent indic<br>O prominent indic<br>GY<br>/drology Indicato<br>icators (minimum of<br>Water (A1)  | ators of hy  | ydric soil                                    | -<br>S   |  | es (B9) ( <b>e</b>  | xcept MLI                       | <u>Sec</u>  |  |
| Depth (ir<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Irimary Indi<br>Surface   | O prominent indic<br>O prominent indic<br>GY<br>/drology Indicato   | ators of hy  | ydric soil                                    | s<br>eck all that appl   |  |   | xcept MLF                       | <u>Secc</u><br>RA   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b> 1<br><b>4A, and 4B)</b>   |
| Depth (ir<br>Remarks: N<br>DROLO(<br>Vetland Hy<br>Primary Indi<br>] Surface<br>] High Wa  | O prominent indic<br>O prominent indic<br>GY<br>vdrology Indicato<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)   | ators of hy  | ydric soil                                    | s<br>eck all that appl   | ined Leave<br>A, and 4B)   |   | xcept MLI                       | <u>Secc</u><br>RA   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b>   |
| Depth (ir<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturati  | O prominent indic<br>O prominent indic<br>GY<br>rdrology Indicato<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)  | ators of hy  | ydric soil                                    | eck all that appl<br>Water-Stai<br>1, 2, 4/<br>Salt Crust  | ined Leave<br><b>A, and 4B</b> )<br>(B11)<br>vertebrates   | )<br>s (B13)  | xcept MLI                       | RA 0  | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)   |
| Depth (ir<br>Remarks: N<br>DROLOO<br>Vetland Hy<br>Irimary Indi<br>Surface<br>High Wa<br>Saturati<br>Water M   | O prominent indic<br>O prominent indic<br>GY<br>rdrology Indicato<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)  | ators of hy  | ydric soil                                    | eck all that appl water-Stai 1, 2, 4 Salt Crust Aquatic Inv Hydrogen   | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od   | )<br>s (B13)<br>lor (C1)  |                                 |   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C  |
| Depth (ir<br>lemarks: N<br>DROLOC<br>Vetland Hy<br>rimary Indi<br>Surface<br>High Wa<br>Saturati<br>Saturati<br>Water M<br>Sedimei<br>Drift De   | O prominent indic<br>O prominent indic<br>GY<br>drology Indicato<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>larks (B1)<br>nt Deposits (B2)<br>posits (B3)  | ators of hy  | ydric soil                                    | eck all that appl water-Stai U Water-Stai 1, 2, 4, Salt Crust Aquatic Inv Hydrogen Oxidized F  | ined Leave<br><b>A, and 4B</b> )<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher   | )<br>s (B13)<br>lor (C1)<br>res along   | Living Roc                      | RA Seco<br>RA 1   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)  |
| Depth (ir<br>Remarks: N<br>DROLO(<br>Vetland Hy<br>Irimary Indi<br>Surface<br>High Wa<br>Saturati<br>Water M<br>Saturati<br>Drift Dej<br>Algal Ma  | O prominent indic<br>O prominent indic<br>GY<br>rdrology Indicato<br>icators (minimum<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>farks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)  | ators of hy  | ydric soil                                    | eck all that appl Water-Stai U Water-Stai 1, 2, 4/ Salt Crust Aquatic Inv Hydrogen Oxidized F Presence of  | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced   | )<br>lor (C1)<br>res along<br>d Iron (C4  | Living Roc                      |   | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1</b> , 1<br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)  |
| Depth (ir<br>Temarks: N<br>DROLOO<br>Vetland Hy<br>Surface<br>High Wa<br>Saturati<br>Water M<br>Sedimer<br>Sedimer<br>Algal Ma<br>Iron Dep   | O prominent indic<br>O prominent indic<br>GY<br>vdrology Indicato<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>farks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)<br>posits (B5)  | ators of hy  | ydric soil                                    | eck all that appl<br>Water-Stai<br>1, 2, 4<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence o<br>Recent Iro  | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reduction                            | s (B13)<br>lor (C1)<br>res along<br>d Iron (C4<br>on in Tilleo                  | Living Roc<br>I)<br>d Soils (C6 | Seccent         RA       N         □       0  | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1</b> , 1<br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)   |
| Depth (ir<br>Temarks: N<br>DROLOC<br>Vetland Hy<br>rimary Indi<br>Surface<br>High Wa<br>Saturati<br>Water M<br>Sedimel<br>Drift Dep<br>Algal Ma<br>Iron Dep<br>Surface   | O prominent indic<br>O prominent indic<br>GY<br>/drology Indicato<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>flarks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)<br>posits (B5)<br>Soil Cracks (B6)   | ators of hy  | ydric soil:                                   | eck all that appl<br>Water-Stai<br>1, 2, 4/<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence of<br>Recent Iro<br>Stunted or                                | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reductio<br>Stressed                 | )<br>lor (C1)<br>res along<br>d Iron (C4<br>on in Tilleo<br>Plants (D           | Living Roc<br>I)<br>d Soils (C6 | Security         RA       N         I       I | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> ) |
| Depth (ir<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>'rimary Indi<br>Surface<br>High Wa<br>Saturati<br>Saturati<br>Water M<br>Sedimei<br>Drift Dej<br>Algal Ma<br>Iron Deg<br>Surface<br>Surface                                     | O prominent indic<br>O prominent indic<br>GY<br>/drology Indicato<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>farks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)<br>posits (B5)<br>Soil Cracks (B6)<br>on Visible on Aeria   | ators of hy<br>rs:<br>of one req   | ydric soils<br>uired; ch                      | eck all that appl<br>Water-Stai<br>1, 2, 4<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence o<br>Recent Iro  | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reductio<br>Stressed                 | )<br>lor (C1)<br>res along<br>d Iron (C4<br>on in Tilleo<br>Plants (D           | Living Roc<br>I)<br>d Soils (C6 | Security         RA       N         I       I | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1</b> , 1<br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)   |
| Depth (ir<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturati<br>Saturati<br>Drift De<br>Algal Ma<br>Iron Dep<br>Surface<br>Inundati<br>Sparsel  | O prominent indic<br>O prominent indic<br>GY<br>rdrology Indicato<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>farks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)<br>posits (B5)<br>Soil Cracks (B6)<br>on Visible on Aeria<br>y Vegetated Conc                               | ators of hy<br>rs:<br>of one req   | ydric soils<br>uired; ch                      | eck all that appl<br>Water-Stai<br>1, 2, 4/<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence of<br>Recent Iro<br>Stunted or                                | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reductio<br>Stressed                 | )<br>lor (C1)<br>res along<br>d Iron (C4<br>on in Tilleo<br>Plants (D           | Living Roc<br>I)<br>d Soils (C6 | Security         RA       N         I       I | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> ) |
| Depth (ir<br>Remarks: N<br>DROLOO<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturati<br>Water M<br>Sedimer<br>Drift Dej<br>Algal Ma<br>Drift Dej<br>Algal Ma<br>Iron Dep<br>Surface<br>Surface<br>Inundati<br>Sparsel | O prominent indic<br>O prominent indic<br>GY<br>rdrology Indicato<br>icators (minimum<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>farks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)<br>posits (B5)<br>Soil Cracks (B6)<br>on Visible on Aeria<br>y Vegetated Conca<br>rvations:                    | ators of hy<br>rs:<br>of one req   | ydric soils<br>uired; ch<br>(B7)<br>ce (B8)   | eck all that appl<br>Water-Stai<br>1, 2, 4/<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence o<br>Recent Iro<br>Stunted or<br>Other (Exp                   | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduce<br>n Reductic<br>Stressed<br>blain in Rer  | )<br>lor (C1)<br>res along<br>d Iron (C4<br>on in Tilleo<br>Plants (D<br>marks) | Living Roc<br>I)<br>d Soils (C6 | Security         RA       N         I       I | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> ) |
| Depth (ir<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturati<br>Water M<br>Sedimei<br>Algal Ma<br>Iron Dep<br>Algal Ma<br>Iron Dep<br>Surface<br>Inundati<br>Sparsel<br>Surface Wa            | O prominent indic<br>O prominent indic<br>GY<br>vdrology Indicato<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>farks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)<br>posits (B5)<br>Soil Cracks (B6)<br>on Visible on Aeria<br>y Vegetated Conce<br>rvations:<br>ter Present? | ators of hy ators of hy ators of hy ators of hy ars: <u>of one req</u> al Imagery ave Surfac | ydric soil:<br>uired; ch<br>y (B7)<br>ce (B8) | eck all that appl<br>Water-Stai<br>1, 2, 4<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence of<br>Recent Iro<br>Stunted or<br>Other (Exp<br>Depth (inchest | ined Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reductio<br>Stressed<br>blain in Rer | )<br>lor (C1)<br>res along<br>d Iron (C4<br>on in Tilled<br>Plants (D<br>marks) | Living Roc<br>I)<br>d Soils (C6 | Security         RA       N         I       I | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> ) |
| Depth (ir<br>Remarks: N<br>DROLOO<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturati<br>Saturati<br>Drift Dej<br>Algal Ma<br>Drift Dej<br>Algal Ma<br>Iron Dep<br>Surface<br>Surface                                  | O prominent indic<br>O prominent indic<br>GY<br>vdrology Indicato<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>farks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)<br>posits (B5)<br>Soil Cracks (B6)<br>on Visible on Aeria<br>y Vegetated Conce<br>rvations:<br>ter Present? | ators of hy<br>rs:<br>of one req<br>al Imagery<br>ave Surface                                | ydric soils<br>uired; ch<br>(B7)<br>ce (B8)   | eck all that appl<br>Water-Stai<br>1, 2, 4/<br>Salt Crust<br>Aquatic Inv<br>Hydrogen<br>Oxidized F<br>Presence o<br>Recent Iro<br>Stunted or<br>Other (Exp                   | A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>Rhizospher<br>of Reduced<br>n Reductio<br>Stressed<br>blain in Rer<br>s):<br>s): | )<br>lor (C1)<br>res along<br>d Iron (C4<br>on in Tilled<br>Plants (D<br>marks) | Living Roc<br>I)<br>d Soils (C6 | Security         RA       N         I       I | ondary Indicators (2 or more required)<br>Water-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> ) |

Remarks: No prominent field indicators of wetland hydrology. See spring 2020 monitoring data

| Project/Site: Western Portion of Parcel 0420351003  | City/County: <u>City of Puyallup, Pierce County</u> | Sampling Date: <u>16 APR 2020</u> |  |  |  |  |  |
|---|---|-----------------------------------|--|--|--|--|--|
| Applicant/Owner: Cascade Development  | State: WA   | Sampling Point: <u>SP4</u>        |  |  |  |  |  |
| Investigator(s): Habitat Technologies   | Section, Township, Range: Sec 35                    | T20N R04E QT 12                   |  |  |  |  |  |
| Landform (hillslope, terrace, etc.): valley   | Local relief (concave, convex, none): flat          | Slope (%): <u>&lt;1%</u>          |  |  |  |  |  |
| Subregion (LRR): A La   | at: Long:   | Datum: USGS                       |  |  |  |  |  |
| Soil Map Unit Name: Briscot loam  | NWI classifi  | cation: somewhat poorly drained   |  |  |  |  |  |
| Are climatic / hydrologic conditions on the site typical for this time                                      | e of year? Yes 🛛 No 🗌 (If no, explain in Remarks    | s.)                               |  |  |  |  |  |
| Are Vegetation, Soil, or Hydrology significant  | ntly disturbed? Are "Normal Circumstances" pr       | esent? Yes 🛛 No 🗌                 |  |  |  |  |  |
| Are Vegetation, Soil, or Hydrology naturally  | problematic? (If needed, explain any answers        | in Remarks.)                      |  |  |  |  |  |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. |   |                                   |  |  |  |  |  |
| Hydrophytic Vegetation Present? Yes No  |   |                                   |  |  |  |  |  |

| Hydrophytic Vegetation Present?<br>Hydric Soil Present?<br>Wetland Hydrology Present? | Yes 🗌       | No 🖸<br>No 🖾            | Is the Sampled Area within a Wetland? | Yes 🗌 No 🛛 |
|---|-------------|-------------------------|---------------------------------------|------------|
| Remarks: managed for annual agricultu   | iral crop p | production and harvest. |                                       |            |

|   | Absolute   | Dominant Indicator            | Dominance Test worksheet:                                    |            |
|---|------------|-------------------------------|--|------------|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )<br>1 |            | <u>Species?</u> <u>Status</u> | Number of Dominant Species That Are OBL, FACW, or FAC:       | (A)        |
| 2   |            |                               | Total Number of Dominant                                     |            |
| 3   |            |                               | Species Across All Strata:                                   | (B)        |
| 4   |            |                               |  | . ,        |
|   |            |                               | Percent of Dominant Species That Are OBL, FACW, or FAC:      | (A/B)      |
| Sapling/Shrub Stratum (Plot size: <u>15ft radius</u> )    |            |                               |  | _ (,,,,,,) |
| 1   |            | · ·                           | Prevalence Index worksheet:                                  |            |
| 2   |            |                               | Total % Cover of: Multiply by:                               |            |
| 3   |            |                               | OBL species x 1 =  |            |
| 4   |            |                               | FACW species x 2 =   |            |
| 5   |            |                               | FAC species x 3 =  |            |
|   |            |                               | FACU species x 4 =   |            |
| Herb Stratum (Plot size: <u>15ft radius</u> )             |            |                               | UPL species x 5 =  |            |
| 1   |            | · ·                           | Column Totals: (A)   |            |
| 2   |            |                               | ()   | ( )        |
| 3   |            |                               | Prevalence Index = B/A =                                     |            |
| 4   |            |                               | Hydrophytic Vegetation Indicators:                           |            |
| 5   |            |                               | Rapid Test for Hydrophytic Vegetation                        |            |
| 6   |            |                               | □ Dominance Test is >50%                                     |            |
| 7   |            |                               | □ Prevalence Index is ≤3.0 <sup>1</sup>                      |            |
| 8   |            |                               | Morphological Adaptations <sup>1</sup> (Provide suppo        | orting     |
|   |            |                               | data in Remarks or on a separate shee                        |            |
| 9   |            |                               | Wetland Non-Vascular Plants <sup>1</sup>                     |            |
| 10  |            | · ·                           | Problematic Hydrophytic Vegetation <sup>1</sup> (Expl        | ain)       |
| 11  |            |                               | <sup>1</sup> Indicators of hydric soil and wetland hydrology | / must     |
| Woody Vine Stratum (Plot size: <u>15ft radius</u> )       | <u>100</u> | = Total Cover                 | be present, unless disturbed or problematic.                 |            |
|   |            |                               |  |            |
| 1   |            | · ·                           | Hydrophytic  |            |
| 2   | 0          | = Total Cover                 | Vegetation Present? Yes No                                   |            |
| % Bare Ground in Herb Stratum                             | 0          |                               |  |            |
| Remarks: managed for annual agricultural crop production  | and harves | st. plant community pri       | or to spring plowing a mixture of cover crop, herl           | os, and    |
| grasses.  |            |                               | · - · ·  |            |

#### Sampling Point: SP4

| Profile Des            | cription: (Describe  | to the dep   | oth needed to docu    | ument the   | indicator           | or confirm       | n the absenc                     | e of indicators.)                                |  |
|------------------------|----------------------|--------------|-----------------------|-------------|---------------------|------------------|----------------------------------|--|--|
| Depth                  | Matrix               |              |                       | lox Feature |                     |                  |                                  |  |  |
| (inches)               | Color (moist)        | %            | Color (moist)         | %           | Type <sup>1</sup>   | Loc <sup>2</sup> | Texture                          | Remarks  |  |
| 0-13                   | <u>10YR 3/3</u>      | 100          |                       |             |                     |                  | SL                               | mixed sandy loam                                 |  |
| <u>13-24</u>           | 10YR 3/3             | 90           | <u>10YR 4/2</u>       | 10          | <u>D</u>            | M                | SL                               | mixed sandy loam                                 |  |
|                        |                      |              |                       |             |                     |                  |                                  |  |  |
|                        |                      |              |                       |             |                     |                  |                                  |  |  |
|                        |                      |              |                       |             |                     |                  |                                  |  |  |
|                        |                      |              |                       |             |                     |                  |                                  |  |  |
|                        |                      |              |                       |             |                     |                  |                                  |  |  |
|                        |                      |              |                       |             |                     |                  |                                  |  |  |
| <sup>1</sup> Type: C=0 | Concentration, D=De  | letion RM    | =Reduced Matrix (     | CS=Covere   | ed or Coat          | ed Sand G        | rains <sup>2</sup> l (           | ocation: PL=Pore Lining, M=Matrix.               |  |
|                        | Indicators: (Applie  |              |                       |             |                     |                  |                                  | tors for Problematic Hydric Soils <sup>3</sup> : |  |
| Histoso                | (A1)                 |              | Sandy Redox           | (S5)        |                     |                  | 🗌 2 c                            | m Muck (A10)                                     |  |
| Histic E               | pipedon (A2)         |              | Stripped Matrix       |             |                     |                  | 🗌 Re                             | Red Parent Material (TF2)                        |  |
| Black H                | istic (A3)           |              | Loamy Mucky           | Mineral (F  | 1) ( <b>excep</b>   | t MLRA 1)        | Very Shallow Dark Surface (TF12) |  |  |
| Hydrog                 | en Sulfide (A4)      |              | Loamy Gleyed          | Matrix (F2  | <u>2)</u>           |                  | 🗌 Oth                            | ner (Explain in Remarks)                         |  |
|                        | d Below Dark Surfac  | e (A11)      | Depleted Matr         |             | ,                   |                  | _                                |  |  |
| — ·                    | ark Surface (A12)    | ( )          | Redox Dark S          | . ,         | )                   |                  | <sup>3</sup> Indica              | tors of hydrophytic vegetation and               |  |
|                        | Aucky Mineral (S1)   |              | Depleted Dark         | • • •       | •                   |                  |                                  | land hydrology must be present,                  |  |
| •                      | Gleyed Matrix (S4)   |              | Redox Depres          | · ·         | ,                   |                  |                                  | ess disturbed or problematic.                    |  |
|                        | Layer (if present):  |              |                       |             |                     |                  |                                  |  |  |
| Type:                  |                      |              |                       |             |                     |                  |                                  |  |  |
| Depth (ir              | nches):              |              |                       |             |                     |                  | Hydric So                        | il Present? Yes 🗌 No 🖂                           |  |
| Remarks: N             | O prominent indicato | ors of hydri | c soils               |             |                     |                  |                                  |  |  |
|                        |                      |              |                       |             |                     |                  |                                  |  |  |
|                        |                      |              |                       |             |                     |                  |                                  |  |  |
|                        |                      |              |                       |             |                     |                  |                                  |  |  |
|                        |                      |              |                       |             |                     |                  |                                  |  |  |
| YDROLO                 | GY                   |              |                       |             |                     |                  |                                  |  |  |
| Wetland Hy             | /drology Indicators  |              |                       |             |                     |                  |                                  |  |  |
| Primary Ind            | icators (minimum of  | one require  | ed; check all that ap | ply)        |                     |                  | Seco                             | ondary Indicators (2 or more required)           |  |
| Surface                | Water (A1)           |              | Water-Sta             | ained Leav  | ves (B9) ( <b>e</b> | xcept MLI        | RA 🗌 \                           | Water-Stained Leaves (B9) (MLRA 1, 2,            |  |
| High W                 | ater Table (A2)      |              | 1, 2, 4               | 4A, and 4E  | 3)                  |                  |                                  | 4A, and 4B)                                      |  |
| Saturati               | on (A3)              |              | Salt Crus             | t (B11)     |                     |                  |                                  | Drainage Patterns (B10)                          |  |

| Drv-Season     | Wotor. | Toblo | (C2) |  |
|----------------|--------|-------|------|--|
| <br>DIV-Season | vvaler | Iable |      |  |

| Saturation | Visihle | on Aerial | Imagery | (C9) |
|------------|---------|-----------|---------|------|
| Jaturation | VISIDIC | UII Achai | mayery  | 103  |

| Oxidized Rhizo | spheres alo  | na Livina Ro | oots (C3) | ☐ Geomor | phic Position | (2D |
|----------------|--------------|--------------|-----------|----------|---------------|-----|
|                | spricies ale |              |           |          |               | 021 |

- □ FAC-Neutral Test (D5)
- Raised Ant Mounds (D6) (LRR A)
- Frost-Heave Hummocks (D7)

| <ul> <li>Inundation Visible on Ae</li> <li>Sparsely Vegetated Con</li> </ul> | , _ (1   | in in Remarks)  |  |
|--|----------|-----------------|--|
| Field Observations:  |          |                 |  |
| Surface Water Present?   | Yes 🗌 No | Depth (inches): |  |

| Surface Water Present?                             | Yes 🗌    | No 🗌      | Depth (inches):                         |                            |       |      |
|--|----------|-----------|---|----------------------------|-------|------|
| Water Table Present?                               | Yes 🗌    | No 🖂      | Depth (inches):                         |                            |       |      |
| Saturation Present?<br>(includes capillary fringe) | Yes 🗌    | No 🛛      | Depth (inches):                         | Wetland Hydrology Present? | Yes 🗌 | No 🛛 |
| Describe Recorded Data (stre                       | am gauge | , monitor | ng well, aerial photos, previous inspec | tions), if available:      |       |      |
|  |          |           |   |                            | -     |      |

Aquatic Invertebrates (B13)

Hydrogen Sulfide Odor (C1)

Presence of Reduced Iron (C4)

Recent Iron Reduction in Tilled Soils (C6)

Stunted or Stressed Plants (D1) (LRR A)

Remarks: No prominent field indicators of wetland hydrology. See spring 2020 monitoring data

U Water Marks (B1)

Drift Deposits (B3)

□ Iron Deposits (B5)

Sediment Deposits (B2)

Algal Mat or Crust (B4)

Surface Soil Cracks (B6)

| Project/Site: Western Portion of Parcel 0420351003  | City/County: City of F    | Puyallup, Pierce County           | Sampling Date: <u>16 APR 2020</u> |  |  |  |  |
|---|---------------------------|-----------------------------------|-----------------------------------|--|--|--|--|
| Applicant/Owner: Cascade Development  |                           | State: WA                         | Sampling Point: <u>SP5</u>        |  |  |  |  |
| Investigator(s): Habitat Technologies   | Section, 7                | Fownship, Range: <u>Sec 35 T2</u> | 20N R04E QT 12                    |  |  |  |  |
| Landform (hillslope, terrace, etc.): valley   | Local relief (concav      | e, convex, none): <u>flat</u>     | Slope (%): <u>&lt;1%</u>          |  |  |  |  |
| Subregion (LRR): A  | Lat:                      | Long:                             | Datum: USGS                       |  |  |  |  |
| Soil Map Unit Name: Briscot loam  |                           | NWI classificat                   | tion: somewhat poorly drained     |  |  |  |  |
| Are climatic / hydrologic conditions on the site typical for this   | time of year? Yes 🛛 No 🗌  | (If no, explain in Remarks.)      |                                   |  |  |  |  |
| Are Vegetation, Soil, or Hydrology signi  | icantly disturbed? Are "N | Normal Circumstances" pres        | ent? Yes 🛛 No 🗌                   |  |  |  |  |
| Are Vegetation, Soil, or Hydrology natura   | ally problematic? (If nee | ded, explain any answers in       | Remarks.)                         |  |  |  |  |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. |                           |                                   |                                   |  |  |  |  |
| Hydrophytic Vegetation Present? Yes No  | In the One                |                                   |                                   |  |  |  |  |

| Hydric Soil Present?<br>Wetland Hydrology Present? | Yes □ No ⊠<br>Yes □ No ⊠     | is the Sampled Area<br>within a Wetland? | Yes 🗌 No 🖂 |  |
|--|------------------------------|--|------------|--|
| Remarks: managed for annual agricultu              | iral crop production and har | vest.                                    |            |  |

|  | Absolute       | Dominant Indicator      | Dominance Test worksheet:   |
|--|----------------|-------------------------|---|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )     | <u>% Cover</u> | Species? Status         | Number of Dominant Species  |
| 1  |                | · ·                     | That Are OBL, FACW, or FAC: (A)                                   |
| 2  |                | · ·                     | Total Number of Dominant  |
| 3  |                |                         | Species Across All Strata: (B)                                    |
| 4  |                |                         |   |
|  |                | = Total Cover           | Percent of Dominant Species<br>That Are OBL, FACW, or FAC: (A/B)  |
| Sapling/Shrub Stratum (Plot size: 15ft radius)           |                |                         |   |
| 1  |                |                         | Prevalence Index worksheet:                                       |
| 2  |                |                         | Total % Cover of:Multiply by:                                     |
| 3  |                |                         | OBL species x 1 =   |
| 4  |                |                         | FACW species x 2 =  |
| 5  |                |                         | FAC species x 3 =   |
|  |                | = Total Cover           | FACU species x 4 =  |
| Herb Stratum (Plot size: <u>15ft radius</u> )            |                |                         | UPL species x 5 =   |
| 1  |                | · ·                     | Column Totals: (A) (B)  |
| 2  |                |                         |   |
| 3  |                |                         | Prevalence Index = B/A =  |
| 4  |                |                         | Hydrophytic Vegetation Indicators:                                |
| 5  |                |                         | Rapid Test for Hydrophytic Vegetation                             |
| 6  |                |                         | □ Dominance Test is >50%  |
| 7  |                |                         | □ Prevalence Index is ≤3.0 <sup>1</sup>                           |
| 8  |                |                         | Morphological Adaptations <sup>1</sup> (Provide supporting        |
| 9  |                |                         | data in Remarks or on a separate sheet)                           |
| 10   |                |                         | Wetland Non-Vascular Plants <sup>1</sup>                          |
|  |                | · ·                     | Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)         |
| 11   |                | = Total Cover           | <sup>1</sup> Indicators of hydric soil and wetland hydrology must |
| Woody Vine Stratum (Plot size: 15ft radius)              | 100            | = Total Cover           | be present, unless disturbed or problematic.                      |
|  |                |                         |   |
| 1  |                | · ·                     | Hydrophytic   |
| <u>ــــــــــــــــــــــــــــــــــــ</u>              | 0              | = Total Cover           | Vegetation Present? Yes No  |
| % Bare Ground in Herb Stratum                            | <u>U</u>       |                         |   |
| Remarks: managed for annual agricultural crop production | and harves     | st. plant community pri | ior to spring plowing a mixture of cover crop, herbs, and         |
| grasses.   |                | . ,                     |   |

Sampling Point: SP5

| Depth   | Matrix  |   |                            |   | x Features   | <u>s</u>   |  |   |  |  |
|---|---|---|----------------------------|---|--|--|--|---|--|--|
| (inches)  | Color (moist)   | %   | Cold                       | or (moist)  | %  | Type <sup>1</sup>  | Loc <sup>2</sup>                                       | Texture   | R  | emarks   |
| )-24  | 10YR 3/3  | 100   |                            |   |  |  |  | SL  | mixed sandy l  | loam   |
|   |   |   |                            |   |  |  |  |   |  |  |
|   |   |   |                            |   |  |  |  |   |  |  |
|   |   |   |                            |   |  | · <u> </u>   |  |   |  |  |
|   |   |   |                            |   |  | ·  | <u> </u>   |   |  |  |
|   |   |   |                            |   |  |  |  |   |  |  |
|   |   |   |                            |   |  |  |  |   |  |  |
|   |   |   |                            |   |  |  |  |   |  |  |
|   |   |   |                            |   |  | · <u> </u>   |  |   |  |  |
|   |   |   |                            |   |  |  | . <u></u>  |   |  |  |
|   | oncentration, D=D   |   |                            |   |  |  | ed Sand Gr   |   |  | re Lining, M=Matrix.   |
| ydric Soil  | Indicators: (App  | licable to  | all LRR                    | ts, unless othe   | rwise note   | ed.)   |  | Indio   | ators for Problen  | natic Hydric Soils <sup>3</sup> :  |
| ] Histosol  | · · ·   |   |                            | Sandy Redox (S  |  |  |  |   | cm Muck (A10)  |  |
|   | oipedon (A2)  |   |                            | Stripped Matrix   | . ,  |  |  |   | Red Parent Materia   | · · ·  |
| ] Black Hi  |   |   |                            | Loamy Mucky M   |  |  | MLRA 1)  |   | /ery Shallow Dark  | . ,  |
|   | en Sulfide (A4)   | (444)   |                            | Loamy Gleyed N  |  |  |  |   | Other (Explain in R  | emarks)  |
| •   | d Below Dark Surfa<br>ark Surface (A12)   | ace (ATT)   |                            | Depleted Matrix<br>Redox Dark Sur   | . ,  |  |  | <sup>3</sup> Indi                               | cators of hydrophy   | tic vogotation and   |
|   | lucky Mineral (S1)  |   |                            | Depleted Dark Sul   | . ,  | 7)   |  |   | etland hydrology n   |  |
| •   | Gleyed Matrix (S4)  |   |                            | Redox Depressi  | · ·  | , )  |  |   | nless disturbed or   |  |
|   |   |   |                            | Redex Beprees   |  |  |  | u .   |  | problemade.  |
| Restrictive   | Laver (if present)  | :   |                            |   |  |  |  |   |  |  |
|   | Layer (if present)  |   |                            |   |  |  |  |   |  |  |
| Type:   |   |   |                            |   |  |  |  | Hydric  | Soil Present? V  | ″as □ No ⊠   |
| Type:<br>Depth (in  |   |   |                            | -   |  |  |  | Hydric \$                                       | Soil Present? Y  | ′es □ No ⊠   |
| Type:<br>Depth (in  | iches):   |   |                            | -   |  |  |  | Hydric S  | Soil Present? Y  | res 🗌 No 🛛   |
| Type:<br>Depth (in<br>Remarks: N  | O prominent indica  | ators of hyd  |                            | -   |  |  |  | Hydric S  | Soil Present? Y  | ies 🗌 No 🛛   |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy  | O prominent indica  | ators of hyd  | Iric soil:                 | S   |  |  |  |   |  |  |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi  | O prominent indica O prominent indica O prominent indica O prominent indica O prominent indicator Cators (minimum o   | ators of hyd  | Iric soil:                 | -<br>s<br>eck all that appl   |  |  |  | <u>S</u> e                                      | econdary Indicators  | s (2 or more required)   |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface   | O prominent indica O prominent indica O prominent indica O prominent indica O prominent indicator Cators (minimum o Water (A1)  | ators of hyd  | Iric soil:                 | s<br>eck all that appl  | ned Leave  |  | xcept MLF  | <u>S</u> e                                      | econdary Indicators  |  |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa  | O prominent indica  | ators of hyd  | Iric soil:                 | eck all that appl   | ned Leave<br>A, and 4B)  |  | xcept MLF  | <u>S</u>  | econdary Indicators<br>Water-Stained Lo<br><b>4A, and 4B)</b>  | <u>s (2 or more required)</u><br>eaves (B9) ( <b>MLRA 1</b> ,  |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturatio   | O prominent indica  | ators of hyd  | Iric soil:                 | eck all that appl eck all that appl Water-Stai 1, 2, 44 Salt Crust  | ned Leave<br><b>A, and 4B)</b><br>(B11)  |  | xcept MLF  | <u>Se</u>                                       | econdary Indicators<br>Water-Stained Le<br><b>4A, and 4B)</b><br>Drainage Pattern  | <u>s (2 or more required)</u><br>eaves (B9) ( <b>MLRA 1,</b><br>ns (B10)   |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturatio<br>Water M  | O prominent indica<br>O prominent indica<br>GY<br>rdrology Indicator<br>cators (minimum o<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>larks (B1)   | ators of hyd  | Iric soil:                 |   | ned Leave<br><b>A, and 4B)</b><br>(B11)<br>vertebrates   | s (B13)  | xcept MLF  | <u>Sa</u>                                       | econdary Indicators<br>Water-Stained Le<br><b>4A, and 4B)</b><br>Drainage Pattern<br>Dry-Season Wat  | <u>s (2 or more required)</u><br>eaves (B9) ( <b>MLRA 1,</b><br>ns (B10)<br>er Table (C2)  |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturatio<br>Water M<br>Sedimer   | O prominent indica<br>O prominent indica<br>GY<br>rdrology Indicator<br>cators (minimum o<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>larks (B1)<br>nt Deposits (B2)   | ators of hyd  | Iric soil:                 | eck all that appl s Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen   | ned Leave<br><b>A, and 4B</b> )<br>(B11)<br>vertebrates<br>Sulfide Od  | s (B13)<br>or (C1)   | -  | <u>Sa</u>                                       | econdary Indicators<br>Water-Stained Le<br><b>4A, and 4B)</b><br>Drainage Pattern<br>Dry-Season Wat<br>Saturation Visible  | <u>s (2 or more required)</u><br>eaves (B9) ( <b>MLRA 1,</b><br>ns (B10)<br>er Table (C2)<br>e on Aerial Imagery ((  |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturatio<br>Water M<br>Sedimer<br>Drift Dep  | GY<br>drology Indicator<br>cators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>larks (B1)<br>nt Deposits (B2)<br>posits (B3)  | ators of hyd  | Iric soil:                 | eck all that appl water-Stai U Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen 3 Oxidized R   | ned Leave<br><b>A, and 4B</b> )<br>(B11)<br>vertebrates<br>Sulfide Od<br>chizospher  | s (B13)<br>lor (C1)<br>es along  | Living Roo   | <u>Se</u><br><b>2A</b>                          | econdary Indicators<br>Water-Stained Lo<br><b>4A, and 4B)</b><br>Drainage Pattern<br>Dry-Season Wate<br>Saturation Visible<br>Geomorphic Pos   | s (2 or more required)<br>eaves (B9) ( <b>MLRA 1,</b><br>ns (B10)<br>er Table (C2)<br>e on Aerial Imagery (C<br>ition (D2)   |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturatio<br>Water M<br>Sedimer<br>Drift Dep  | O prominent indica<br>O prominent indica<br>GY<br>rdrology Indicator<br>cators (minimum o<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>larks (B1)<br>nt Deposits (B2)   | ators of hyd  | Iric soil:                 | eck all that appl s Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen   | ned Leave<br><b>A, and 4B</b> )<br>(B11)<br>vertebrates<br>Sulfide Od<br>chizospher  | s (B13)<br>lor (C1)<br>es along  | Living Roo   | <u>Se</u><br><b>2A</b>                          | econdary Indicators<br>Water-Stained Le<br><b>4A, and 4B)</b><br>Drainage Pattern<br>Dry-Season Wat<br>Saturation Visible  | s (2 or more required)<br>eaves (B9) ( <b>MLRA 1,</b><br>ns (B10)<br>er Table (C2)<br>e on Aerial Imagery (C<br>ition (D2)   |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturatio<br>Water M<br>Sedimer<br>Drift Dep<br>Algal Ma  | GY<br>drology Indicator<br>cators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>larks (B1)<br>nt Deposits (B2)<br>posits (B3)  | ators of hyd  | Iric soil:                 | eck all that appl water-Stai U Water-Stai 1, 2, 44 Salt Crust Aquatic Inv Hydrogen 3 Oxidized R   | ned Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>thizospher<br>of Reduce   | s (B13)<br>lor (C1)<br>es along<br>d Iron (C4  | Living Roo   | <u>S</u><br><b>2A</b> □<br>ts (C3) □            | econdary Indicators<br>Water-Stained Lo<br><b>4A, and 4B)</b><br>Drainage Pattern<br>Dry-Season Wate<br>Saturation Visible<br>Geomorphic Pos   | s (2 or more required)<br>eaves (B9) ( <b>MLRA 1</b> ,<br>ns (B10)<br>er Table (C2)<br>e on Aerial Imagery (C<br>iition (D2)<br>I (D3)   |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturatio<br>Saturatio<br>Water M<br>Sedimer<br>Drift Dep<br>Algal Ma<br>Iron Dep   | O prominent indica<br>O prominent indica<br>GY<br>rdrology Indicator<br>cators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>larks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)   | ators of hyd  | Iric soil:                 | eck all that appl Water-Stai U Water-Stai Aquatic Inv Hydrogen S Oxidized R Presence o  | ned Leave<br>(A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>thizospher<br>of Reduced<br>n Reductio   | s (B13)<br>lor (C1)<br>es along<br>d Iron (C4<br>on in Tilleo                        | Living Roo<br>)<br>d Soils (C6                         | <u>Se</u><br><b>RA</b> []<br>ts (C3) []<br>) [] | econdary Indicators<br>Water-Stained Lo<br><b>4A, and 4B)</b><br>Drainage Pattern<br>Dry-Season Wat<br>Saturation Visible<br>Geomorphic Pos<br>Shallow Aquitard  | s (2 or more required)<br>eaves (B9) ( <b>MLRA 1</b> ,<br>as (B10)<br>er Table (C2)<br>e on Aerial Imagery (C<br>ition (D2)<br>I (D3)<br>st (D5)   |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturatio<br>Water M<br>Sedimer<br>Drift Dep<br>Algal Ma<br>Iron Dep<br>Surface<br>Inundati                                       | O prominent indica<br>O prominent i | ators of hyd<br>rs:<br>f one requ   | ired; ch                   | eck all that appl<br>Water-Stai<br>U Water-Stai<br>1, 2, 44<br>Salt Crust<br>Aquatic Inv<br>Hydrogen S<br>Oxidized R<br>Presence c<br>Recent Iro                                | ned Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>thizospher<br>of Reduced<br>n Reductio<br>Stressed  | s (B13)<br>or (C1)<br>es along<br>d Iron (C4<br>on in Tilleo<br>Plants (D            | Living Roo<br>)<br>d Soils (C6                         | <u>Sa</u><br>ts (C3)                            | econdary Indicators<br>Water-Stained Lo<br><b>4A, and 4B)</b><br>Drainage Pattern<br>Dry-Season Wat<br>Saturation Visible<br>Geomorphic Pos<br>Shallow Aquitard<br>FAC-Neutral Tes                     | s (2 or more required)<br>eaves (B9) ( <b>MLRA 1,</b><br>ns (B10)<br>er Table (C2)<br>e on Aerial Imagery (C<br>ition (D2)<br>I (D3)<br>st (D5)<br>nds (D6) ( <b>LRR A</b> )                 |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturatio<br>Water M<br>Sedimer<br>Drift Dep<br>Algal Ma<br>Iron Dep<br>Surface<br>Inundati                                       | O prominent indica<br>O prominent indica<br>GY<br>rdrology Indicator<br>cators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>larks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)<br>posits (B5)<br>Soil Cracks (B6)  | ators of hyd<br>rs:<br>f one requ   | ired; ch                   | eck all that appl Water-Stai U Vater-Stai Salt Crust Aquatic Inv Aquatic Inv Oxidized R Presence c Recent Iroi Stunted or   | ned Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>thizospher<br>of Reduced<br>n Reductio<br>Stressed  | s (B13)<br>or (C1)<br>es along<br>d Iron (C4<br>on in Tilleo<br>Plants (D            | Living Roo<br>)<br>d Soils (C6                         | <u>Sa</u><br>ts (C3)                            | econdary Indicators<br>Water-Stained Le<br><b>4A, and 4B)</b><br>Drainage Pattern<br>Dry-Season Wate<br>Saturation Visible<br>Geomorphic Pos<br>Shallow Aquitard<br>FAC-Neutral Tes<br>Raised Ant Mour | s (2 or more required)<br>eaves (B9) ( <b>MLRA 1,</b><br>ns (B10)<br>er Table (C2)<br>e on Aerial Imagery (C<br>ition (D2)<br>I (D3)<br>st (D5)<br>nds (D6) ( <b>LRR A</b> )                 |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturatio<br>Water M<br>Sedimer<br>Drift Dep<br>Algal Ma<br>Iron Dep<br>Surface<br>Inundati                                       | O prominent indica<br>O prominent i | ators of hyd<br>rs:<br>f one requ   | ired; ch                   | eck all that appl Water-Stai U Vater-Stai Salt Crust Aquatic Inv Aquatic Inv Oxidized R Presence c Recent Iroi Stunted or   | ned Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>thizospher<br>of Reduced<br>n Reductio<br>Stressed  | s (B13)<br>or (C1)<br>es along<br>d Iron (C4<br>on in Tilleo<br>Plants (D            | Living Roo<br>)<br>d Soils (C6                         | <u>Sa</u><br>ts (C3)                            | econdary Indicators<br>Water-Stained Le<br><b>4A, and 4B)</b><br>Drainage Pattern<br>Dry-Season Wate<br>Saturation Visible<br>Geomorphic Pos<br>Shallow Aquitard<br>FAC-Neutral Tes<br>Raised Ant Mour | s (2 or more required)<br>eaves (B9) ( <b>MLRA 1,</b><br>ns (B10)<br>er Table (C2)<br>e on Aerial Imagery (C<br>ition (D2)<br>I (D3)<br>st (D5)<br>nds (D6) ( <b>LRR A</b> )                 |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturatio<br>Water M<br>Sedimer<br>Drift Dep<br>Algal Ma<br>Iron Dep<br>Surface<br>Surface<br>Inundati<br>Sparsely<br>Field Obser | O prominent indica<br>O prominent i | ators of hyd<br>rs:<br>f one requ   | ired; ch                   | eck all that appl Water-Stai U Vater-Stai Salt Crust Aquatic Inv Aquatic Inv Oxidized R Presence c Recent Iroi Stunted or   | ned Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>thizospher<br>of Reduce<br>n Reductio<br>Stressed<br>lain in Rer  | s (B13)<br>lor (C1)<br>es along<br>d Iron (C4<br>on in Tilleo<br>Plants (D<br>marks) | Living Roo<br>)<br>d Soils (C6                         | <u>Sa</u><br>ts (C3)                            | econdary Indicators<br>Water-Stained Le<br><b>4A, and 4B)</b><br>Drainage Pattern<br>Dry-Season Wate<br>Saturation Visible<br>Geomorphic Pos<br>Shallow Aquitard<br>FAC-Neutral Tes<br>Raised Ant Mour | s (2 or more required)<br>eaves (B9) ( <b>MLRA 1,</b><br>ns (B10)<br>er Table (C2)<br>e on Aerial Imagery (C<br>ition (D2)<br>I (D3)<br>st (D5)<br>nds (D6) ( <b>LRR A</b> )                 |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOC<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturatio<br>Water M<br>Sedimer<br>Drift Dep<br>Algal Ma<br>Iron Dep<br>Surface<br>Surface<br>Inundati<br>Sparsely<br>Field Obser | O prominent indica<br>O prominent indica<br>GY<br>rdrology Indicator<br>cators (minimum of<br>Water (A1)<br>ater Table (A2)<br>on (A3)<br>larks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)<br>posits (B5)<br>Soil Cracks (B6)<br>on Visible on Aeria<br>y Vegetated Conca<br>rvations:<br>ter Present?   | ators of hyd<br>rs:<br><u>f one requ</u><br>il Imagery<br>ive Surface             | ired; ch<br>(B7)<br>⇒ (B8) | eck all that appl<br>Water-Stai<br>1, 2, 44<br>Salt Crust<br>Aquatic Inv<br>Hydrogen S<br>Oxidized R<br>Presence o<br>Recent Iron<br>Stunted or<br>Other (Exp                   | ned Leave<br>A, and 4B)<br>(B11)<br>vertebrates<br>Sulfide Od<br>thizospher<br>of Reduced<br>n Reductio<br>Stressed<br>lain in Rer   | s (B13)<br>lor (C1)<br>es along<br>d Iron (C4<br>on in Tilled<br>Plants (D<br>marks) | Living Roo<br>)<br>d Soils (C6                         | <u>Sa</u><br>ts (C3)                            | econdary Indicators<br>Water-Stained Le<br><b>4A, and 4B)</b><br>Drainage Pattern<br>Dry-Season Wate<br>Saturation Visible<br>Geomorphic Pos<br>Shallow Aquitard<br>FAC-Neutral Tes<br>Raised Ant Mour | s (2 or more required)<br>eaves (B9) ( <b>MLRA 1,</b><br>ns (B10)<br>er Table (C2)<br>e on Aerial Imagery (C<br>ition (D2)<br>I (D3)<br>st (D5)<br>nds (D6) ( <b>LRR A</b> )                 |
| Type:<br>Depth (in<br>Remarks: N<br>DROLOO<br>Vetland Hy<br>Primary Indi<br>Surface<br>High Wa<br>Saturatio<br>Saturatio<br>Saturatio<br>Algal Ma<br>Iron Dep<br>Algal Ma<br>Iron Dep<br>Surface<br>Inundati<br>Sparsely            | O prominent indica<br>O prom  | ators of hyd<br>rs:<br>f one requ<br>I Imagery<br>we Surface<br>Yes<br>Yes<br>Yes | (B7)<br>(B7)<br>(B8)       | eck all that appl<br>Water-Stai<br>1, 2, 44<br>Salt Crust<br>Aquatic Inv<br>Hydrogen 3<br>Oxidized R<br>Presence of<br>Recent Iron<br>Stunted or<br>Other (Exp<br>Depth (inches | ned Leave<br><b>A, and 4B</b> )<br>(B11)<br>vertebrates<br>Sulfide Od<br>thizospher<br>of Reduced<br>n Reductio<br>Stressed<br>Iain in Rer<br>(a):<br>(b):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c):<br>(c): | s (B13)<br>or (C1)<br>es along<br>d Iron (C4<br>on in Tilleo<br>Plants (D<br>marks)  | Living Roo<br>.)<br>1 Soils (C6<br>1) (L <b>RR A</b> ) | ts (C3)   | econdary Indicators<br>Water-Stained Le<br><b>4A, and 4B)</b><br>Drainage Pattern<br>Dry-Season Wate<br>Saturation Visible<br>Geomorphic Pos<br>Shallow Aquitard<br>FAC-Neutral Tes<br>Raised Ant Mour | s (2 or more required)<br>eaves (B9) ( <b>MLRA 1</b> ,<br>ns (B10)<br>er Table (C2)<br>e on Aerial Imagery (C<br>ition (D2)<br>I (D3)<br>st (D5)<br>nds (D6) ( <b>LRR A</b> )<br>nmocks (D7) |

Remarks: No prominent field indicators of wetland hydrology. See spring 2020 monitoring data

| Project/Site: Western Portion of Parcel 0420351003                     | City/County: City of Puyallup, Pierce County      | Sampling Date: <u>16 APR 2020</u> |
|--|---|-----------------------------------|
| Applicant/Owner: Cascade Development                                   | State: WA   | _ Sampling Point: <u>SP6</u>      |
| Investigator(s): Habitat Technologies                                  | Section, Township, Range: Sec 35                  | T20N R04E QT 12                   |
| Landform (hillslope, terrace, etc.): valley                            | Local relief (concave, convex, none): flat        | Slope (%): <u>&lt;1%</u>          |
| Subregion (LRR): A Lat   | t: Long:  | Datum: USGS                       |
| Soil Map Unit Name: Briscot loam                                       | NWI classific                                     | cation: somewhat poorly drained   |
| Are climatic / hydrologic conditions on the site typical for this time | e of year? Yes 🛛 No 🗌 (If no, explain in Remarks. | .)                                |
| Are Vegetation, Soil, or Hydrology significan                          | ntly disturbed? Are "Normal Circumstances" pre    | esent? Yes 🛛 No 🗌                 |
| Are Vegetation, Soil, or Hydrology naturally p                         | problematic? (If needed, explain any answers      | in Remarks.)                      |
| SUMMARY OF FINDINGS – Attach site map show                             | wing sampling point locations, transects          | s, important features, etc.       |
| Hydrophytic Vegetation Present? Yes 🗌 No 🗍                             | In the Demode d Area                              |                                   |

| Hydrophytic Vegetation Present?<br>Hydric Soil Present?<br>Wetland Hydrology Present? | Yes 🗌       | No 🖸<br>No 🖾            | Is the Sampled Area within a Wetland? | Yes 🗌 No 🛛 |
|---|-------------|-------------------------|---------------------------------------|------------|
| Remarks: managed for annual agricultu   | iral crop p | production and harvest. |                                       |            |

|  | Absolute       | Dominant Indicator      | Dominance Test worksheet:                                   |                     |
|--|----------------|-------------------------|---|---------------------|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )     | <u>% Cover</u> | Species? Status         | Number of Dominant Species                                  | <i>(</i> <b>1</b> ) |
| 1  |                | · ·                     | That Are OBL, FACW, or FAC:                                 | (A)                 |
| 2  |                |                         | Total Number of Dominant                                    |                     |
| 3  |                | · ·                     | Species Across All Strata:                                  | (B)                 |
| 4  |                | · ·                     | Percent of Dominant Species                                 |                     |
|  |                | = Total Cover           | That Are OBL, FACW, or FAC:                                 | (A/B)               |
| Sapling/Shrub Stratum (Plot size: <u>15ft radius</u> )   |                |                         |   |                     |
| 1  |                |                         | Prevalence Index worksheet:                                 |                     |
| 2  |                | · ·                     | Total % Cover of:Multiply by                                |                     |
| 3  |                | · ·                     | OBL species x 1 =   |                     |
| 4  |                | · ·                     | FACW species x 2 =  |                     |
| 5  |                |                         | FAC species x 3 =   |                     |
|  |                | = Total Cover           | FACU species x 4 =  |                     |
| Herb Stratum (Plot size: <u>15ft radius</u> )            |                |                         | UPL species x 5 =   |                     |
| 1  |                | · ·                     | Column Totals: (A)  |                     |
| 2  |                | · ·                     |   |                     |
| 3  |                |                         | Prevalence Index = B/A =                                    | _                   |
| 4  |                |                         | Hydrophytic Vegetation Indicators:                          |                     |
| 5  |                |                         | Rapid Test for Hydrophytic Vegetation                       |                     |
| 6  |                |                         | Dominance Test is >50%                                      |                     |
| 7  |                |                         | ☐ Prevalence Index is ≤3.0 <sup>1</sup>                     |                     |
| 8  |                |                         | Morphological Adaptations <sup>1</sup> (Provide supp        |                     |
| 9  |                |                         | data in Remarks or on a separate she                        | et)                 |
| 10   |                |                         | Wetland Non-Vascular Plants <sup>1</sup>                    |                     |
| 11   |                | ·                       | Problematic Hydrophytic Vegetation <sup>1</sup> (Exp        | olain)              |
| ····   |                | = Total Cover           | <sup>1</sup> Indicators of hydric soil and wetland hydrolog | gy must             |
| Woody Vine Stratum (Plot size: <u>15ft radius)</u>       | 100            |                         | be present, unless disturbed or problematic.                |                     |
| 1  |                |                         |   |                     |
| 2  |                |                         | Hydrophytic<br>Vegetation                                   |                     |
|  | 0              | = Total Cover           | Present? Yes No   |                     |
| % Bare Ground in Herb Stratum                            | <u></u>        |                         |   |                     |
| Remarks: managed for annual agricultural crop production | and harves     | st. plant community pri | or to spring plowing a mixture of cover crop, he            | rbs, and            |
| grasses.   |                |                         |   |                     |

#### Sampling Point: SP6

| Profile Des     | cription: (Describ  | e to the de  | pth needed to doc                          | ument the   | indicato            | r or confirn     | n the absen | ce of indicators.)   |
|-----------------|---------------------|--------------|--|-------------|---------------------|------------------|-------------|--|
| Depth           | Matrix              |              | Red  | dox Feature |                     |                  |             |  |
| <u>(inches)</u> | Color (moist)       | %            | Color (moist)                              | %           | Type <sup>1</sup>   | Loc <sup>2</sup> | Texture     | Remarks  |
| <u>0-16</u>     | <u>10YR 3/3</u>     | 100          |  |             |                     |                  | SL          | mixed sandy loam   |
| 16-24           | <u>10YR 4/3</u>     | 95           | 10YR 4/6                                   | 5           | D                   | Μ                | SL          | mixed loam   |
|                 |                     |              |  |             |                     |                  |             |  |
|                 |                     |              |  |             |                     |                  |             |  |
|                 |                     |              |  |             |                     |                  |             |  |
|                 |                     |              |  |             |                     |                  |             |  |
|                 |                     |              |  |             |                     |                  |             |  |
|                 |                     |              |  |             |                     |                  |             |  |
|                 |                     |              |  |             |                     |                  |             |  |
| 1Turney 0-0     |                     |              |  |             |                     |                  | 21          |  |
|                 |                     |              | M=Reduced Matrix, (<br>II LRRs, unless oth |             |                     | ed Sand G        |             | Location: PL=Pore Lining, M=Matrix.<br>ators for Problematic Hydric Soils <sup>3</sup> : |
|                 |                     |              | Sandy Redox                                |             |                     |                  |             | cm Muck (A10)  |
|                 | pipedon (A2)        |              | Stripped Matri                             |             |                     |                  |             | ed Parent Material (TF2)   |
| Black Hi        |                     |              | Loamy Mucky                                | ( )         | 1) ( <b>exce</b> p  | t MLRA 1)        |             | ery Shallow Dark Surface (TF12)  |
|                 | en Sulfide (A4)     |              | Loamy Gleyed                               |             |                     |                  |             | ther (Explain in Remarks)  |
|                 | d Below Dark Surfa  | ce (A11)     | Depleted Matr                              |             | ,<br>,              |                  |             |  |
| Thick Date      | ark Surface (A12)   |              | Redox Dark S                               | urface (F6  | )                   |                  |             | ators of hydrophytic vegetation and  |
| _ ,             | lucky Mineral (S1)  |              | Depleted Dark                              | Surface (I  | F7)                 |                  | we          | tland hydrology must be present,   |
|                 | Bleyed Matrix (S4)  |              | Redox Depres                               | sions (F8)  |                     |                  | unl         | less disturbed or problematic.   |
|                 | Layer (if present): |              |  |             |                     |                  |             |  |
| Туре:           |                     |              |  |             |                     |                  |             |  |
| Depth (in       | iches):             |              |  |             |                     |                  | Hydric So   | oil Present? Yes 🗌 No 🖾  |
| Remarks: N      | O prominent indica  | tors of hydr | ic soils                                   |             |                     |                  |             |  |
|                 |                     |              |  |             |                     |                  |             |  |
|                 |                     |              |  |             |                     |                  |             |  |
|                 |                     |              |  |             |                     |                  |             |  |
|                 | GY                  |              |  |             |                     |                  |             |  |
| Wetland Hy      | drology Indicator   | s:           |  |             |                     |                  |             |  |
| -               |                     |              | ed; check all that ap                      | (vla        |                     |                  | Sec         | condary Indicators (2 or more required)  |
| Surface         |                     | •            | ☐ Water-St                                 |             | /es (B9) ( <b>(</b> | except MLF       |             | Water-Stained Leaves (B9) (MLRA 1, 2,  |
|                 | ater Table (A2)     |              |  | 4A, and 4E  |                     |                  |             | 4A, and 4B)  |
| Saturatio       | ( )                 |              | ☐ Salt Crus                                | •           | -,                  |                  | П           | Drainage Patterns (B10)  |
| Water M         | ( )                 |              | Aquatic I                                  | . ,         | es (B13)            |                  |             | Dry-Season Water Table (C2)  |
|                 | nt Deposits (B2)    |              | Hydrogei                                   |             | . ,                 |                  |             | Saturation Visible on Aerial Imagery (C9)  |
| Drift Dep       | ,                   |              | ☐ Oxidized                                 |             | . ,                 | Livina Roo       |             | Geomorphic Position (D2)   |
|                 | et or Crust (B4)    |              |  |             | -                   | -                | . ,         | Shallow Aquitard (D3)  |

#### Н

| Wetland Hydrology Indicato                         | rs:        |           |   |   |   |  |
|--|------------|-----------|---|---|---|--|
| Primary Indicators (minimum                        | of one req | uired; ch |   | Secondary Indicators (2 or more required) |   |  |
| Surface Water (A1)                                 |            |           | □ Water-Stained Leaves (B9) (exce         | pt MLRA                                   | □ Water-Stained Leaves (B9) (MLRA 1, 2,   |  |
| High Water Table (A2)                              |            |           | 1, 2, 4A, and 4B)                         |   | 4A, and 4B)                               |  |
| Saturation (A3)                                    |            |           | Salt Crust (B11)                          |   | Drainage Patterns (B10)                   |  |
| Water Marks (B1)                                   |            |           | Aquatic Invertebrates (B13)               |   | Dry-Season Water Table (C2)               |  |
| Sediment Deposits (B2)                             |            |           | Hydrogen Sulfide Odor (C1)                |   | Saturation Visible on Aerial Imagery (C9) |  |
| Drift Deposits (B3)                                |            |           | Oxidized Rhizospheres along Livin         | ng Roots (C3)                             | Geomorphic Position (D2)                  |  |
| Algal Mat or Crust (B4)                            |            |           | Presence of Reduced Iron (C4)             |   | Shallow Aquitard (D3)                     |  |
| Iron Deposits (B5)                                 |            |           | Recent Iron Reduction in Tilled Sc        | oils (C6)                                 | FAC-Neutral Test (D5)                     |  |
| Surface Soil Cracks (B6)                           |            |           | Stunted or Stressed Plants (D1) (I        | RR A)                                     | Raised Ant Mounds (D6) (LRR A)            |  |
| Inundation Visible on Aeria                        | al Imagery | ′ (B7)    | Other (Explain in Remarks)                |   | Frost-Heave Hummocks (D7)                 |  |
| Sparsely Vegetated Conce                           | ave Surfac | ce (B8)   |   |   |   |  |
| Field Observations:                                |            |           |   |   |   |  |
| Surface Water Present?                             | Yes 🗌      | No 🗌      | Depth (inches):                           |   |   |  |
| Water Table Present?                               | Yes 🗌      | No 🖂      | Depth (inches):                           |   |   |  |
| Saturation Present?<br>(includes capillary fringe) | Yes 🗌      | No 🖂      | Depth (inches):                           | Wetland Hy                                | drology Present? Yes 🗌 No 🛛               |  |
| Describe Recorded Data (stre                       | am gauge   | , monito  | ring well, aerial photos, previous inspec | tions), if availa                         | able:                                     |  |
|  |            |           |   |   |   |  |
| Remarks: No prominent field i                      | ndicators  | of wetlan | d hydrology. See spring 2020 monitor      | ng data                                   |   |  |
|  |            |           |   |   |   |  |
|  |            |           |   |   |   |  |
|  |            |           |   |   |   |  |
|  |            |           |   |   |   |  |

| Project/Site: Western Portion of Parcel 0420351003                        | City/County: City of Puyallup, Pierce County | Sampling Date: <u>16 APR 2020</u> |
|---|--|-----------------------------------|
| Applicant/Owner: Cascade Development                                      | State: WA                                    | _ Sampling Point: <u>SP7</u>      |
| Investigator(s): Habitat Technologies                                     | Section, Township, Range: Sec 35             | T20N R04E QT 12                   |
| Landform (hillslope, terrace, etc.): valley                               | Local relief (concave, convex, none): flat   | Slope (%): <1%                    |
| Subregion (LRR): A Lat:   | Long:  | Datum: USGS                       |
| Soil Map Unit Name: Briscot loam  | NWI classifie                                | cation: somewhat poorly drained   |
| Are climatic / hydrologic conditions on the site typical for this time of | year? Yes 🛛 No 🗌 (If no, explain in Remarks  | .)                                |
| Are Vegetation, Soil, or Hydrology significantly                          | disturbed? Are "Normal Circumstances" pro    | esent? Yes 🛛 No 🗌                 |
| Are Vegetation, Soil, or Hydrology naturally pro                          | blematic? (If needed, explain any answers    | in Remarks.)                      |
| SUMMARY OF FINDINGS – Attach site map showi                               | ng sampling point locations, transect        | s, important features, etc.       |
| Hydrophytic Vegetation Present? Yes 🗌 No 🗌                                | Is the Sampled Area                          |                                   |

| Hydrophytic Vegetation Present?<br>Hydric Soil Present?<br>Wetland Hydrology Present? | Yes 🛛 N<br>Yes 🗌 N | No 🗌                  | Is the Sampled Area within a Wetland? | Yes 🗌 No 🖾 |
|---|--------------------|-----------------------|---------------------------------------|------------|
| Remarks: managed for annual agricultu   | ral crop pro       | oduction and harvest. |                                       |            |

|  | Absolute       | Dominant Indicator      | Dominance Test worksheet:                                   |                     |
|--|----------------|-------------------------|---|---------------------|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )     | <u>% Cover</u> | Species? Status         | Number of Dominant Species                                  | <i>(</i> <b>1</b> ) |
| 1  |                | · ·                     | That Are OBL, FACW, or FAC:                                 | (A)                 |
| 2  |                |                         | Total Number of Dominant                                    |                     |
| 3  |                | ·                       | Species Across All Strata:                                  | (B)                 |
| 4  |                | · ·                     | Percent of Dominant Species                                 |                     |
|  |                | = Total Cover           | That Are OBL, FACW, or FAC:                                 | (A/B)               |
| Sapling/Shrub Stratum (Plot size: <u>15ft radius</u> )   |                |                         |   |                     |
| 1  |                |                         | Prevalence Index worksheet:                                 |                     |
| 2  |                | · ·                     | Total % Cover of:Multiply by                                |                     |
| 3  |                | · ·                     | OBL species x 1 =   |                     |
| 4  |                | · ·                     | FACW species x 2 =  |                     |
| 5  |                |                         | FAC species x 3 =   |                     |
|  |                | = Total Cover           | FACU species x 4 =  |                     |
| Herb Stratum (Plot size: <u>15ft radius</u> )            |                |                         | UPL species x 5 =   |                     |
| 1  |                | · ·                     | Column Totals: (A)  |                     |
| 2  |                | · ·                     |   |                     |
| 3  |                |                         | Prevalence Index = B/A =                                    | _                   |
| 4  |                |                         | Hydrophytic Vegetation Indicators:                          |                     |
| 5  |                |                         | Rapid Test for Hydrophytic Vegetation                       |                     |
| 6  |                |                         | Dominance Test is >50%                                      |                     |
| 7  |                |                         | ☐ Prevalence Index is ≤3.0 <sup>1</sup>                     |                     |
| 8  |                |                         | Morphological Adaptations <sup>1</sup> (Provide supp        |                     |
| 9  |                |                         | data in Remarks or on a separate she                        | et)                 |
| 10   |                |                         | Wetland Non-Vascular Plants <sup>1</sup>                    |                     |
| 11   |                | ·                       | Problematic Hydrophytic Vegetation <sup>1</sup> (Exp        | olain)              |
| ····   |                | = Total Cover           | <sup>1</sup> Indicators of hydric soil and wetland hydrolog | gy must             |
| Woody Vine Stratum (Plot size: <u>15ft radius)</u>       | 100            |                         | be present, unless disturbed or problematic.                |                     |
| 1  |                |                         |   |                     |
| 2  |                |                         | Hydrophytic<br>Vegetation                                   |                     |
|  | 0              | = Total Cover           | Present? Yes No   |                     |
| % Bare Ground in Herb Stratum                            | <u></u>        |                         |   |                     |
| Remarks: managed for annual agricultural crop production | and harves     | st. plant community pri | or to spring plowing a mixture of cover crop, he            | rbs, and            |
| grasses.   |                |                         |   |                     |

#### Sampling Point: SP7

| (inches)   | Color (moist)  | %           | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> | Texture                                      | Remarks  |
|--|--|-------------|--|--|-------------------|------------------|--|--|
| 0-13   | <u>10YR 3/3</u>  | 100         |  |  |                   |                  | SL   | mixed sandy loam   |
| 13-24  | <u>10YR 4/2</u>  | 90          | 10YR 4/6   | 10   | <u>D</u>          | <u>M</u>         | <u>SL</u>                                    | mixed loam   |
|  |  |             |  |  | - <u></u>         |                  |  |  |
| Type: C=0  | Concentration, D=De  | pletion, R  | M=Reduced Matrix   | , CS=Covere  | d or Coat         | ed Sand Gra      | ains. 2                                      | 2<br>2 Cocation: PL=Pore Lining, M=Matrix.   |
|  | Indicators: (Appli   |             |  |  |                   | -                |  | ators for Problematic Hydric Soils <sup>3</sup> :  |
| Black H<br>Hydrogo<br>Deplete<br>Thick D<br>Sandy I<br>Sandy ( | pipedon (A2)<br>istic (A3)<br>en Sulfide (A4)<br>d Below Dark Surfa<br>ark Surface (A12)<br>Mucky Mineral (S1)<br>Gleyed Matrix (S4) |             | <ul> <li>Sandy Redo</li> <li>Stripped Ma</li> <li>Loamy Much</li> <li>Loamy Gleys</li> <li>Depleted Ma</li> <li>Redox Dark</li> <li>Depleted Da</li> <li>Redox Depreted</li> </ul> | trix (S6)<br>ky Mineral (F<br>ed Matrix (F2<br>atrix (F3)<br>Surface (F6)<br>rk Surface (F | )                 | t MLRA 1)        | ☐ F<br>☐ V<br>☐ C<br><sup>3</sup> India<br>W | cm Muck (A10)<br>Red Parent Material (TF2)<br>/ery Shallow Dark Surface (TF12)<br>Other (Explain in Remarks)<br>cators of hydrophytic vegetation and<br>etland hydrology must be present,<br>nless disturbed or problematic. |
|  | Layer (if present):  |             |  |  |                   |                  |  |  |
|  | nches):  |             |  |  |                   |                  | Undain C                                     | Soil Present? Yes 🛛 No 🗌   |
| Remarks <sup>-</sup> r   | prominent indicators   | of hydric s | soils located outside  | e of shallow o   | lepressio         | า                |  |  |
| DROLO  | GY   |             |  |  |                   |                  |  |  |
| Netland Hy   | drology Indicators   | 5:          |  |  |                   |                  |  |  |
| Primary Ind  | icators (minimum of  | one requi   | red; check all that a  | apply)   |                   |                  | <u>Se</u>                                    | econdary Indicators (2 or more required)   |
|  | Water (A1)   |             |  | Stained Leav   |                   | xcept MLR        | A 🗆  | Water-Stained Leaves (B9) (MLRA 1, 2   |
| -  | ater Table (A2)  |             | •  | , 4A, and 4B   | )                 |                  | _  | 4A, and 4B)  |
| Saturati Water N Sedime  |  |             |  | ust (B11)<br>: Invertebrate<br>en Sulfide Oo   | . ,               |                  |  | Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (C  |
| Algal M  | posits (B3)<br>at or Crust (B4)  |             | Presen   | d Rhizosphe<br>ce of Reduce  | d Iron (C4        | 4)               |  | Geomorphic Position (D2)<br>Shallow Aquitard (D3)  |
| Iron De  | Soil Cracks (B6)<br>ion Visible on Aerial  |             | B7) Dther (  | Iron Reducti<br>I or Stressed<br>Explain in Re   | Plants (D         | ( )              |  | FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> )<br>Frost-Heave Hummocks (D7)  |
|  | y Vegetated Concav   | e Surface   | (00)   |  |                   |                  |  |  |
| Sparsel  |  | e Surface   | (60)   |  |                   |                  |  |  |
| Sparsel Field Obse   | rvations:<br>iter Present?   | Yes 🗌 🛛     | No Depth (inc  | thes):<br>thes):   |                   |                  |  |  |

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

Remarks: No prominent field indicators of wetland hydrology. See spring 2020 monitoring data

| Project/Site: Western Portion of Parcel 0420351003                    | City/County: City of    | Puyallup, Pierce County          | Sampling Date: <u>16 APR 2020</u> |
|---|-------------------------|----------------------------------|-----------------------------------|
| Applicant/Owner: Cascade Development                                  |                         | State: WA                        | Sampling Point: <u>SP8</u>        |
| Investigator(s): Habitat Technologies                                 | Section,                | Township, Range: <u>Sec 35 T</u> | 20N R04E QT 12                    |
| Landform (hillslope, terrace, etc.): valley                           | Local relief (concav    | /e, convex, none): <u>flat</u>   | Slope (%): <1%                    |
| Subregion (LRR): A  | Lat:                    | Long:                            | Datum: USGS                       |
| Soil Map Unit Name: Briscot loam                                      |                         | NWI classifica                   | ation: somewhat poorly drained    |
| Are climatic / hydrologic conditions on the site typical for this tir | ne of year? Yes 🛛 No 🗌  | (If no, explain in Remarks.)     | )                                 |
| Are Vegetation, Soil, or Hydrology signific                           | antly disturbed? Are "  | Normal Circumstances" pres       | sent? Yes 🛛 No 🗌                  |
| Are Vegetation, Soil, or Hydrology natural                            | ly problematic? (If nee | eded, explain any answers i      | n Remarks.)                       |
| SUMMARY OF FINDINGS – Attach site map sh                              | owing sampling point    | locations, transects             | , important features, etc.        |
| Hydrophytic Vegetation Present? Yes 🗌 No 🗍                            |                         |                                  |                                   |

| Hydrophylic vegetation Present?       |                         | Is the Sampled Area                  |                  |  |  |  |  |  |
|---------------------------------------|-------------------------|--------------------------------------|------------------|--|--|--|--|--|
| Hydric Soil Present?                  | Yes 🛛 No 🗌              | within a Wetland?                    | Yes 🖂            |  |  |  |  |  |
| Wetland Hydrology Present?            | Yes 🛛 No 🗌              |                                      |                  |  |  |  |  |  |
| Remarks: managed for annual agricultu | Iral crop production an | nd harvest. shallow depression sease | onally saturated |  |  |  |  |  |
|                                       |                         |                                      |                  |  |  |  |  |  |
|                                       |                         |                                      |                  |  |  |  |  |  |

|  | Absolute       | Dominant Indicator                      | Dominance Test worksheet:   |
|--|----------------|---|---|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )     | <u>% Cover</u> | Species? Status                         | Number of Dominant Species  |
| 1  |                |   | That Are OBL, FACW, or FAC: (A)                                   |
| 2  |                |   | Total Number of Dominant  |
| 3  |                |   | Species Across All Strata: (B)                                    |
| 4  |                |   |   |
|  |                | <b>T</b> ( ) <b>O</b>                   | Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)      |
| Sapling/Shrub Stratum (Plot size: 15ft radius)           |                |   |   |
| 1  |                |   | Prevalence Index worksheet:                                       |
| 2  |                |   | Total % Cover of:Multiply by:                                     |
| 3  |                |   | OBL species x 1 =   |
| 4  |                |   | FACW species x 2 =  |
| 5  |                |   | FAC species x 3 =   |
|  |                | = Total Cover                           | FACU species x 4 =  |
| Herb Stratum (Plot size: 15ft radius)                    |                |   | UPL species x 5 =   |
| 1  |                |   | Column Totals: (A) (B)  |
| 2  |                |   |   |
| 3  |                |   | Prevalence Index = B/A =  |
| 4  |                |   | Hydrophytic Vegetation Indicators:                                |
| 5  |                |   | Rapid Test for Hydrophytic Vegetation                             |
| 6  |                |   | □ Dominance Test is >50%  |
| 7  |                |   | □ Prevalence Index is ≤3.0 <sup>1</sup>                           |
| 8  |                |   | Morphological Adaptations <sup>1</sup> (Provide supporting        |
| 9  |                |   | data in Remarks or on a separate sheet)                           |
|  |                |   | Wetland Non-Vascular Plants <sup>1</sup>                          |
| 10   |                |   | Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)         |
| 11   |                | = Total Cover                           | <sup>1</sup> Indicators of hydric soil and wetland hydrology must |
| Woody Vine Stratum (Plot size: 15ft radius)              | 100            | = Total Cover                           | be present, unless disturbed or problematic.                      |
| <u> </u>   |                |   |   |
| 2  |                |   | Hydrophytic   |
| 2  | 0              | = Total Cover                           | Vegetation Present? Yes 🗌 No 🗌                                    |
| % Bare Ground in Herb Stratum                            | 0              |   |   |
| Remarks: managed for annual agricultural crop production | and harves     | t. plant community pri                  | or to spring plowing a mixture of cover crop, herbs, and          |
| grasses.   |                | . , , , , , , , , , , , , , , , , , , , |   |

#### Sampling Point: SP8

| L6       10/R 3/2       100       SL       mixed sandy loam         L3       10/R 3/2       90       10/R 4/6       10       D       M       SL       mixed sandy loam         3/24       10/R 4/2       80       10/R 4/6       20       D       M       SL       mixed sandy loam         3/24       10/R 4/2       80       10/R 4/6       20       D       M       SL       mixed sandy loam         3/24       10/R 4/2       80       10/R 4/6       20       D       M       SL       mixed sandy loam         3/24       10/R 4/2       80       10/R 4/6       20       D       M       SL       mixed sandy loam         3/24       10/R 4/2       80       10/R 4/6       20       M       SL       mixed sandy loam         1/2       Connentration  | (inches)                                  | <u>Matrix</u><br>Color (moist)   | <u>%</u> C    | olor (moist)   | lox Feature<br>%         |                             | Loc <sup>2</sup> | Textur          | e Remarks   |
|--|---|--|---------------|--|--------------------------|-----------------------------|------------------|-----------------|---|
| 10YR 3/2       90       10YR 4/6       10       M       SL       mixed sandy loam         13:24       10YR 4/2       80       10YR 4/6       20       D       M       SL       mixed sandy loam         13:24       10YR 4/2       80       10YR 4/6       20       D       M       SL       mixed sandy loam         13:24       10YR 4/2       80       10YR 4/6       20       D       M       SL       mixed sandy loam         13:24       10YR 4/2       80       10YR 4/6       20       D       M       SL       mixed sandy loam         13:24       10YR 4/2       0       DYR 4/6       10       D       M       SL       mixed sandy loam         13:24       10YR 4/6       10       Delpeted fairs       "Location: PL=Pore Lining, M=Matix.         14:05016       10       Sandy Redvo (S5)       10       2 or Muker (A10)       10       10         1+listic Epipedon (A2)       10 Sandy Redvo (S5)       10 Certer (F12)       10 Certer (F12)       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>  |   |  |               |  |                          |                             |                  |                 |   |
| 3.24       10YR 4/2       80       10YR 4/5       20       D       M       SL       mixed sandy loam         3.24       10YR 4/2       80       10YR 4/5       20       D       M       SL       mixed sandy loam         3.24       10YR 4/2       80       10YR 4/5       20       D       M       SL       mixed sandy loam         3.24       10YR 4/2       80       20       D       M       SL       mixed sandy loam         3.25       10YR 4/2       20       D       M       SL       mixed sandy loam         3.25       10YR 4/5       30       Sandy Redox (S5)       2 cm Muck (A10)       Slabad Histic F(2)       D Redox Cark Surface (F1)       D Carm Muck (A10)       D Carmy Muck (Mineral (F1)       D Core (Explain in Remarks)         2       Depleted Dark Surface (A11)       D Depleted Dark Surface (F7)       wetland hydrology must be present, unless disturbed or problematic.         Sandy Mucky Mineral (F1)       Depleted Dark Surface (F1)       wetland hydrology must be present, unless disturbed or problematic.       Wetland Hydrology must be present, unless disturbed or problematic.         Type:   |   |  |               | 0VD 4/6  | 10                       |                             |                  |                 |   |
| Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       *Location: PL=Pore Lining, M=Matrix, Ydric Soils*         Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       *Location: PL=Pore Lining, M=Matrix, Ydric Soils*         Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS       Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils*         Histos (A1)       Sandy Redox (S5)       2 cm Muck (A10)       Very Shallow Dark Surface (TF12)         Hydrogen Sulfde (A4)       Loamy Olevyed Matrix (F3)       Depleted Matrix (F3)       Other (Explain in Remarks)         Sendy Mucky Mineral (S1)       Depleted Matrix (F3)       *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       unless disturbed or problematic.         Experitive Larger (If present):       Type.       Hydric Soil Present? Yes No       No         Remarks: prominent indicators of hydric soils located outside of shallow depression       Water-Stained Leaves (B9) (MLRA 1       4A, and 4B)         Staturation (A3)       Satt Crust (B11)       Derinage Patterns (B10)       Dry-Season Water Table (C2)         High Water Table (A2)       Hydrogen Sulfde Odor (C1)       Saturation Visite on Arati Imagery       Saturation Visite on Arati Imagery         Sediment Depos |   |  |               |  |                          |                             |                  |                 |   |
| tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils <sup>1</sup> Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10)   Histosol (A2) Stripped Matrix (S6) Red Parent Material (TF2)   Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12)   Depleted Below Dark Surface (A11) Depleted Matrix (F2) Other (Explain in Remarks)   Depleted Below Dark Surface (A12) Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.   Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic.   Restrictive Layer (If present): Type:   Type:  | 13-24                                     | <u>10YR 4/2</u>  | <u>80 1</u>   | 0YR 4/6  | 20                       | <u>D</u>                    | <u>M</u>         | <u>SL</u>       | mixed sandy loam  |
| type:       Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Solis <sup>1</sup> Histoscol (A1)       Sandy Redox (S5)       2 cm Muck (A10)         Histoscol (A1)       Stripped Matrix (S6)       Red Parent Material (TF2)         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (TF12)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Other (Explain in Remarks)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       unless disturbed or problematic.         Very :   |   |  |               |  |                          |                             |                  |                 |   |
| tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>1</sup> Histoscol (A1)       Sandy Redox (S5)       2 cm Muck (A10)         Histoscol (A1)       Stripped Matrix (S6)       Red Parent Material (TF2)         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (TF12)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Other (Explain in Remarks)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       unless disturbed or problematic.         Vertric Soil Present?       Yes No       No         Popth (inches):       Hydrology Indicators of hydric soils located outside of shallow depression       Secondary Indicators (2 or more required)         Primary Indicators (Minimum of one required; check all that apply)       Secondary Indicators (2 or more required)       High Water Table (A2)       1, 2, 4A, and 4B)         Saturation (A3)       Sati Crust (B11)       Drainage Patterns (B10)       Preseason Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomo                                       |   |  |               |  |                          |                             |                  |                 |   |
| tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>1</sup> Histoscol (A1)       Sandy Redox (S5)       2 cm Muck (A10)         Histoscol (A1)       Stripped Matrix (S6)       Red Parent Material (TF2)         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (TF12)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Other (Explain in Remarks)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       unless disturbed or problematic.         Vertric Soil Present?       Yes No       No         Popth (inches):       Hydrology Indicators of hydric soils located outside of shallow depression       Secondary Indicators (2 or more required)         Primary Indicators (Minimum of one required; check all that apply)       Secondary Indicators (2 or more required)       High Water Table (A2)       1, 2, 4A, and 4B)         Saturation (A3)       Sati Crust (B11)       Drainage Patterns (B10)       Preseason Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomo                                       |   | Concentration D=De   | plation PM-P  | Poducod Matrix (   |                          |                             |                  | raine           | 21 acation: PL-Para Lining M-Matrix   |
| I Histosol (A1)       Sandy Redox (S5)       2 cm Muck (A10)         I Histic Epipedon (A2)       Stripped Matrix (S6)       Red Parent Material (TF2)         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (TF12)         I Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F2)       Other (Explain in Remarks)         I Depleted Below Dark Surface (A11)       Depleted Matrix (F3) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present, unless disturbed or problematic.         Setrictive Layer (if present):       Type:   |   |  |               |  |                          |                             |                  |                 |   |
| Histic Epipedon (A2)       Stripped Matrix (S6)       Red Parent Material (TF2)         Biack Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (TF12)         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)       Very Shallow Dark Surface (TF12)         Biack Histic (A3)       Depleted Matrix (F2)       Image Patterns (F12)         Thick Dark Surface (A12)       Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       unless disturbed or problematic.         Betrictive Layer (if present):       Type:   | -   |  |               |  |                          | ,                           |                  |                 | -   |
| Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       ○ Very Shallow Dark Surface (TF12)         Hydrogen Suffice (A4)       Loamy Gleyed Matrix (F2)       ○ Other (Explain in Remarks)         Depleted Below Dark Surface (A12)       Redox Dark Surface (F6)       ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       unless disturbed or problematic.         Setrictive Layer (if present):       Type:  |   | . ,  |               |  |                          |                             |                  |                 |   |
| 3 Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         3 Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present, unless disturbed or problematic.         estrictive Layer (if present):       Type:   |   |  |               |  | · · ·                    | 1) ( <b>excep</b>           | t MLRA 1)        |                 |   |
| ☐ Thick Dark Surface (A12)       ☐ Redox Dark Surface (F6)       ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         ☐ Sandy Gleyed Matrix (S4)       ☐ Redox Depressions (F8)       unless disturbed or problematic.         ☐ Sandy Gleyed Matrix (S4)       ☐ Redox Depressions (F8)       unless disturbed or problematic.         ☐ Sandy Gleyed Matrix (S4)       ☐ Redox Depressions (F8)       unless disturbed or problematic.         ☐ Type:  | ] Hydrog                                  | en Sulfide (A4)  |               | ] Loamy Gleyed   | Matrix (F2               | 2)                          |                  |                 | ] Other (Explain in Remarks)  |
| Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present, unless disturbed or problematic.         Stardy Gleyed Matrix (S4)       Redox Depressions (F8)       unless disturbed or problematic.         Restrictive Layer (if present):       Type:  | Deplete                                   | ed Below Dark Surfac   | ce (A11)      | Depleted Matr  | ix (F3)                  |                             |                  |                 |   |
| Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       unless disturbed or problematic.         testrictive Layer (if present):       Type:   |   |  |               | ] Redox Dark S   | urface (F6               | )                           |                  | <sup>3</sup> Ir | ndicators of hydrophytic vegetation and   |
| testrictive Layer (if present):       Type:  | •   | • • • •  |               | •  | •                        | ,                           |                  |                 |   |
| Type:  |   |  |               | Redox Depres   | sions (F8)               |                             |                  |                 | unless disturbed or problematic.  |
| Depth (inches):       Hydric Soil Present? Yes No         Remarks: prominent indicators of hydric soils located outside of shallow depression         DROLOGY         Vetland Hydrology Indicators:         rrimary Indicators (minimum of one required; check all that apply)       Secondary Indicators (2 or more required)         Surface Water (A1)       Water-Stained Leaves (B9) (except MLRA         High Water Table (A2)       1, 2, 4A, and 4B)         Saturation (A3)       Sati Crust (B11)         Water Marks (B1)       Aquatic Invertebrates (B13)         Water Marks (B1)       Aquatic Invertebrates (B13)         Drift Deposits (B2)       Hydrogen Sulfide Odor (C1)         Saturation (A3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)   |   | e Layer (if present):  |               |  |                          |                             |                  |                 |   |
| Provide Contraction       Injurie       Injurie <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>   |   |  |               |  |                          |                             |                  |                 |   |
| DROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (2 or more required;         Surface Water (A1)       Water-Stained Leaves (B9) (except MLRA         High Water Table (A2)       1, 2, 4A, and 4B)         Saturation (A3)       Salt Crust (B11)         Water Marks (B1)       Aquatic Invertebrates (B13)         Water Marks (B1)       Aquatic Invertebrates (B13)         Drift Deposits (B2)       Hydrogen Sulfide Odor (C1)         Stal At or Crust (B4)       Presence of Reduced Iron (C4)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)   | Depth (i                                  | nches):  |               |  |                          |                             |                  | Hydri           | ic Soil Present? 🛛 Yes 🖂 No 🗌   |
| Wetland Hydrology Indicators:       Secondary Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (2 or more required; check all that apply)         Surface Water (A1)       Water-Stained Leaves (B9) (except MLRA         High Water Table (A2)       1, 2, 4A, and 4B)         Saturation (A3)       Salt Crust (B11)         Water Marks (B1)       Aquatic Invertebrates (B13)         Drift Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)  |   | <u>ev</u>  |               |  |                          |                             |                  |                 |   |
| Surface Water (A1)       Water-Stained Leaves (B9) (except MLRA       Water-Stained Leaves (B9) (MLRA 1         High Water Table (A2)       1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)   |   |  | :             |  |                          |                             |                  |                 |   |
| High Water Table (A2)       1, 2, 4A, and 4B)       4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Stanta or Stressed Plants (D1) (LRR A)       Frost-Heave Hummocks (D7)  | Primary Inc                               | licators (minimum of   | one required; | check all that ap  | ply)                     |                             |                  |                 | Secondary Indicators (2 or more required)   |
| 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         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Starte Concave Surface (B8)       Starte Concave Surface (B8)   | Surface                                   | e Water (A1)   |               | Water-St   | ained Leav               | ves (B9) ( <b>e</b>         | except MLF       | RA              | U Water-Stained Leaves (B9) (MLRA 1,  |
| Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Hydrogen Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)  | ] High W                                  | /ater Table (A2)   |               | 1, 2, 4  | 4A, and 4E               | 3)                          |                  |                 | 4A, and 4B)   |
| Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Staturation Visible Visited Concave Surface (B8)       Staturation Visite Visited Concave Surface (B8)  | Saturat                                   | ion (A3)   |               | Salt Crus  | t (B11)                  |                             |                  |                 | Drainage Patterns (B10)   |
| Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       State Stressed Plants (D1) (LRR A)       State Stressed Plants (D1)  | Water M                                   | Varks (B1)   |               | Aquatic II   | nvertebrate              | es (B13)                    |                  |                 | Dry-Season Water Table (C2)   |
| Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Frost-Heave Hummocks (D7)       Frost-Heave Hummocks (D7)   | <b>–</b> • • • • • • •                    | ent Deposits (B2)  |               | Hydroger   | n Sulfide O              | dor (C1)                    |                  |                 | Saturation Visible on Aerial Imagery (0   |
| Iron Deposits (B5)       Recent Iron Reduction in Tilled Soils (C6)       FAC-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Inundation Visible on Aerial Imagery (B7)       Inundation Visible on Aerial Imagery (B7)   |   | eposits (B3)   |               | Oxidized   | Rhizosphe                | eres along                  | Living Roo       | ts (C3)         | Geomorphic Position (D2)  |
| Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Stanta Concave Surface (B8)       Stanta Concave Surface (B8)   |   |  |               |  |                          |                             | 4)               |                 | Shallow Aguitard (D3)   |
| ☐ Inundation Visible on Aerial Imagery (B7)       ☑ Other (Explain in Remarks)       ☐ Frost-Heave Hummocks (D7)         ☐ Sparsely Vegetated Concave Surface (B8)       ☐ Frost-Heave Hummocks (D7)   | Drift De                                  |  |               |  |                          | ed Iron (C                  | 4)               |                 |   |
| Sparsely Vegetated Concave Surface (B8)  | ☐ Drift De<br>☐ Algal M                   | lat or Crust (B4)  |               |  |                          |                             | -                | i)              |   |
|  | Drift De<br>Algal M<br>Iron De            | lat or Crust (B4)<br>posits (B5)   |               | Recent Ir  | on Reduct                | ion in Tille                | d Soils (C6      |                 | FAC-Neutral Test (D5)   |
| ield Observations:   | Drift De<br>Algal M<br>Iron De<br>Surface | lat or Crust (B4)<br>posits (B5)<br>e Soil Cracks (B6)                           | Imagery (B7)  | Recent Ir     Stunted c  | on Reduct<br>or Stressec | ion in Tille<br>I Plants (D | d Soils (C6      |                 | <ul> <li>FAC-Neutral Test (D5)</li> <li>Raised Ant Mounds (D6) (LRR A)</li> </ul> |
|  | Drift De<br>Algal M<br>Iron De<br>Surface | lat or Crust (B4)<br>posits (B5)<br>e Soil Cracks (B6)<br>tion Visible on Aerial |               | <ul> <li>☐ Recent Ir</li> <li>☐ Stunted of</li> <li>⊠ Other (E)</li> </ul> | on Reduct<br>or Stressec | ion in Tille<br>I Plants (D | d Soils (C6      |                 | <ul> <li>FAC-Neutral Test (D5)</li> <li>Raised Ant Mounds (D6) (LRR A)</li> </ul> |

| (includes capillary fringe)   |                       |
|---|-----------------------|
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec | tions), if available: |

Depth (inches):

Depth (inches):

Remarks: prominent field indicators of wetland hydrology documented early growing season. Dry on April 16, 2020. See spring 2020 monitoring data

Water Table Present?

Saturation Present?

Yes 🗌 No 🖾

Yes 🗌 No 🖾

Wetland Hydrology Present? Yes 🛛 No 🗌

| Project/Site: Western Portion of Parcel 0420351003                     | City/County: City of Puyallup, Pierce County     | Sampling Date: <u>16 APR 2020</u> |
|--|--|-----------------------------------|
| Applicant/Owner: Cascade Development                                   | State: WA  | Sampling Point: <u>SP9</u>        |
| Investigator(s): Habitat Technologies                                  | Section, Township, Range: Sec 35                 | T20N R04E QT 12                   |
| Landform (hillslope, terrace, etc.): valley                            | Local relief (concave, convex, none): flat       | Slope (%): < <u>1%</u>            |
| Subregion (LRR): A La  | at: Long:  | Datum: USGS                       |
| Soil Map Unit Name: Briscot loam                                       | NWI classifi                                     | cation: somewhat poorly drained   |
| Are climatic / hydrologic conditions on the site typical for this time | e of year? Yes 🛛 No 🗌 (If no, explain in Remarks | s.)                               |
| Are Vegetation, Soil, or Hydrology significa                           | ntly disturbed? Are "Normal Circumstances" pr    | resent? Yes 🛛 No 🗌                |
| Are Vegetation, Soil, or Hydrology naturally                           | problematic? (If needed, explain any answers     | in Remarks.)                      |
| SUMMARY OF FINDINGS – Attach site map sho                              | wing sampling point locations, transect          | s, important features, etc.       |
| Hydrophytic Vegetation Present? Yes No                                 | In the Denvelop Area                             |                                   |

| Hydrophytic Vegetation Present?<br>Hydric Soil Present?<br>Wetland Hydrology Present? | Yes 🗌      | No 🖂<br>No 🖾            | Is the Sampled Area within a Wetland? | Yes 🗌 No 🛛 |
|---|------------|-------------------------|---------------------------------------|------------|
| Remarks: managed for annual agricultu   | ral crop p | production and harvest. |                                       |            |

|   | Absolute       | Dominant Indicator      | Dominance Test worksheet:   |          |
|---|----------------|-------------------------|---|----------|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )          | <u>% Cover</u> | Species? Status         | Number of Dominant Species  | ( • )    |
| 1   |                | ·                       | That Are OBL, FACW, or FAC:                                       | (A)      |
| 2   |                |                         | Total Number of Dominant  |          |
| 3   |                | · ·                     | Species Across All Strata:  | (B)      |
| 4   |                | · ·                     | Percent of Dominant Species                                       |          |
|   |                | = Total Cover           | That Are OBL, FACW, or FAC:                                       | (A/B)    |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15ft radius</u> ) |                |                         | Developer of the development of the set                           |          |
| 1   |                |                         | Prevalence Index worksheet:                                       |          |
| 2   |                |                         | Total % Cover of: Multiply by                                     |          |
| 3   |                | · ·                     | OBL species x 1 =   |          |
| 4   |                |                         | FACW species x 2 =  |          |
| 5   |                |                         | FAC species x 3 =   |          |
|   |                | = Total Cover           | FACU species x 4 =  |          |
| Herb Stratum (Plot size: <u>15ft radius</u> )                 |                |                         | UPL species x 5 =   |          |
| 1   |                | · ·                     | Column Totals: (A)  | (B)      |
| 2   |                | · ·                     |   |          |
| 3   |                |                         | Prevalence Index = B/A =  | _        |
| 4   |                |                         | Hydrophytic Vegetation Indicators:                                |          |
| 5   |                |                         | Rapid Test for Hydrophytic Vegetation                             |          |
| 6   |                |                         | Dominance Test is >50%  |          |
| 7   |                |                         | □ Prevalence Index is ≤3.0 <sup>1</sup>                           |          |
| 8   |                |                         | Morphological Adaptations <sup>1</sup> (Provide supplementations) |          |
| 9   |                |                         | data in Remarks or on a separate she                              | eet)     |
| 10  |                |                         | ☐ Wetland Non-Vascular Plants <sup>1</sup>                        |          |
| 11  |                |                         | Problematic Hydrophytic Vegetation <sup>1</sup> (Exp              | plain)   |
|   |                | = Total Cover           | <sup>1</sup> Indicators of hydric soil and wetland hydrolog       | gy must  |
| Woody Vine Stratum (Plot size: <u>15ft radius</u> )           | 100            |                         | be present, unless disturbed or problematic.                      |          |
| 1   |                |                         |   |          |
| 2   |                |                         | Hydrophytic<br>Vegetation   |          |
|   | 0              | = Total Cover           | Present? Yes No   |          |
| % Bare Ground in Herb Stratum                                 | <u> </u>       |                         |   |          |
| Remarks: managed for annual agricultural crop production      | and harves     | st. plant community pri | or to spring plowing a mixture of cover crop, he                  | rbs, and |
| grasses.  |                |                         |   |          |

#### Sampling Point: SP9

| 0-16       10YR 3/3       100   | Remarks<br>mixed sandy loam<br>mixed sandy loam |
|---|---|
| 16-24       10YR 3/3       98       10YR 4/6       2       D       M       SL       mixed sandy loar         16-24       10YR 3/3       98       10YR 4/6       2       D       M       SL       mixed sandy loar         16-24       10YR 3/3       98       10YR 4/6       2       D       M       SL       mixed sandy loar         16-24       10YR 3/3       98       10YR 4/6       2       D       M       SL       mixed sandy loar         16-24       10YR 3/3       98       10YR 4/6       2       D       M       SL       mixed sandy loar         16-24       10YR 3/3       98       10YR 4/6       2       D       M       SL       mixed sandy loar         17       10 <td< th=""><th></th></td<> |   |
| 'Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore L         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problemat         Histosol (A1)       Sandy Redox (S5)       2 cm Muck (A10)         Histic Epipedon (A2)       Stripped Matrix (S6)       Red Parent Material (T         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Sur         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Rem         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       3Indicators of hydrophytic V   | mixed sandy loam                                |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problemat         Histosol (A1)       Sandy Redox (S5)       2 cm Muck (A10)         Histic Epipedon (A2)       Stripped Matrix (S6)       Red Parent Material (T         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Sur         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Rem         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Indicators of hydrophytic vertices  |   |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problemat         Histosol (A1)       Sandy Redox (S5)       2 cm Muck (A10)         Histic Epipedon (A2)       Stripped Matrix (S6)       Red Parent Material (T         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Sur         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Rem         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Indicators of hydrophytic vertices         Thick Dark Surface (A12)       Redox Dark Surface (F6)       3Indicators of hydrophytic vertices   |   |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problemat         Histosol (A1)       Sandy Redox (S5)       2 cm Muck (A10)         Histic Epipedon (A2)       Stripped Matrix (S6)       Red Parent Material (T         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Sur         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Rem         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Indicators of hydrophytic vertices         Thick Dark Surface (A12)       Redox Dark Surface (F6)       3Indicators of hydrophytic vertices   |   |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problemat         Histosol (A1)       Sandy Redox (S5)       2 cm Muck (A10)         Histic Epipedon (A2)       Stripped Matrix (S6)       Red Parent Material (T         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Sur         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Rem         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Indicators of hydrophytic vertices         Thick Dark Surface (A12)       Redox Dark Surface (F6)       3Indicators of hydrophytic vertices   |   |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problemat         Histosol (A1)       Sandy Redox (S5)       2 cm Muck (A10)         Histic Epipedon (A2)       Stripped Matrix (S6)       Red Parent Material (T         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Sur         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Rem         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Indicators of hydrophytic vertices  |   |
| Histosol (A1)       Sandy Redox (S5)       2 cm Muck (A10)         Histic Epipedon (A2)       Stripped Matrix (S6)       Red Parent Material (T         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Sur         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Rem         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Indicators of hydrophytic vertex   | ation: PL=Pore Lining, M=Matrix.                |
| Histic Epipedon (A2)       Stripped Matrix (S6)       Red Parent Material (T         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Sur         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Rem.         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Indicators of hydrophytic vertex   | s for Problematic Hydric Soils <sup>3</sup> :   |
| Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Sur         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Other (Explain in Rem.         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Indicators of hydrophytic version         Thick Dark Surface (A12)       Redox Dark Surface (F6)       3Indicators of hydrophytic version   | . ,   |
| <ul> <li>Hydrogen Sulfide (A4)</li> <li>Loamy Gleyed Matrix (F2)</li> <li>Other (Explain in Rem.</li> <li>Depleted Below Dark Surface (A11)</li> <li>Depleted Matrix (F3)</li> <li>Thick Dark Surface (A12)</li> <li>Redox Dark Surface (F6)</li> <li><sup>3</sup>Indicators of hydrophytic v</li> </ul>  | . ,   |
| Depleted Below Dark Surface (A11)       Depleted Matrix (F3)         Thick Dark Surface (A12)       Redox Dark Surface (F6)   | Shallow Dark Surface (TF12)                     |
| Thick Dark Surface (A12) Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic   | (Explain in Remarks)                            |
|   |   |
| Sandy Mucky Mineral (S1)     Depleted Dark Surface (F7)     wetland hydrology mus   | s of hydrophytic vegetation and                 |
|   | d hydrology must be present,                    |
| Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or pro   | disturbed or problematic.                       |
| Restrictive Layer (if present):   |   |
| Туре:   |   |
| Depth (inches): Hydric Soil Present? Yes  | Present? Yes 🗌 No 🛛                             |
| Remarks: NO prominent indicators of hydric soils  |   |

| Primary Indicators (minimum                                       | of one requ | uired; ch                   | eck all that apply)                       |                             | Secondary Indicators (2 or more required) |
|---|-------------|-----------------------------|---|-----------------------------|---|
| Surface Water (A1)  |             |                             | □ Water-Stained Leaves (B9) (exception)   | pt MLRA                     | □ Water-Stained Leaves (B9) (MLRA 1, 2,   |
| High Water Table (A2)   |             |                             | 1, 2, 4A, and 4B)                         |                             | 4A, and 4B)                               |
| Saturation (A3)   |             |                             | Salt Crust (B11)                          |                             | Drainage Patterns (B10)                   |
| Water Marks (B1)  |             |                             | Aquatic Invertebrates (B13)               |                             | Dry-Season Water Table (C2)               |
| Sediment Deposits (B2)  |             |                             | Hydrogen Sulfide Odor (C1)                |                             | Saturation Visible on Aerial Imagery (C9) |
| Drift Deposits (B3)   |             |                             | Oxidized Rhizospheres along Livir         | ng Roots (C3)               | Geomorphic Position (D2)                  |
| Algal Mat or Crust (B4)   |             |                             | Presence of Reduced Iron (C4)             |                             | Shallow Aquitard (D3)                     |
| Iron Deposits (B5)  |             |                             | Recent Iron Reduction in Tilled So        | ils (C6)                    | FAC-Neutral Test (D5)                     |
| Surface Soil Cracks (B6)  |             |                             | Stunted or Stressed Plants (D1) (L        | <b>.RR A</b> )              | Raised Ant Mounds (D6) (LRR A)            |
| Inundation Visible on Aeri  | al Imagery  | (B7)                        | Other (Explain in Remarks)                |                             | Frost-Heave Hummocks (D7)                 |
| Sparsely Vegetated Concave Surface (B8)                           |             |                             |   |                             |   |
| Field Observations:   |             |                             |   |                             |   |
| Surface Water Present?  | Yes 🗌       | No 🗌                        | Depth (inches):                           |                             |   |
| Water Table Present?  | Yes 🗌       | No 🛛                        | Depth (inches):                           |                             |   |
| Saturation Present? Yes 🗌 No 🛛 Dep<br>(includes capillary fringe) |             | Depth (inches): Wetland Hyd |   | drology Present? Yes 🗌 No 🛛 |   |
| Describe Recorded Data (stre                                      | am gauge    | , monitor                   | ring well, aerial photos, previous inspec | tions), if availa           | able:                                     |
|   |             |                             |   |                             |   |
| Remarks: NO prominent field                                       | indicators  | of wetlar                   | nd hydrology documented early growing     | g season. See               | e spring 2020 monitoring data             |
|   |             |                             |   |                             |   |
|   |             |                             |   |                             |   |
|   |             |                             |   |                             |   |
|   |             |                             |   |                             |   |

| Project/Site: Western Portion of Parcel 0420351003                    | City/County: City of Puyallup, Pierce County        | Sampling Date: <u>16 APR 2020</u> |
|---|---|-----------------------------------|
| Applicant/Owner: Cascade Development                                  | State: WA   | Sampling Point: <u>SP10</u>       |
| Investigator(s): Habitat Technologies                                 | Section, Township, Range: Sec 35                    | T20N R04E QT 12                   |
| Landform (hillslope, terrace, etc.): valley                           | Local relief (concave, convex, none): flat          | Slope (%): <u>&lt;1%</u>          |
| Subregion (LRR): AL   | at: Long:   | Datum: USGS                       |
| Soil Map Unit Name: Briscot loam                                      | NWI classifi  | ication: somewhat poorly drained  |
| Are climatic / hydrologic conditions on the site typical for this tim | ne of year? Yes 🛛 🛛 No 🗌 (If no, explain in Remarks | s.)                               |
| Are Vegetation, Soil, or Hydrology signification                      | antly disturbed? Are "Normal Circumstances" pr      | resent? Yes 🛛 No 🗌                |
| Are Vegetation, Soil, or Hydrology naturally                          | / problematic? (If needed, explain any answers      | s in Remarks.)                    |
| SUMMARY OF FINDINGS – Attach site map sho                             | owing sampling point locations, transect            | s, important features, etc.       |
| Hydrophytic Vegetation Present? Yes 🗌 No 🗍                            | In the Original Area                                |                                   |

| Hydrophytic Vegetation Present?<br>Hydric Soil Present?<br>Wetland Hydrology Present? | Yes 🗌      | No 🖂<br>No 🖾            | Is the Sampled Area within a Wetland? | Yes 🗌 No 🛛 |
|---|------------|-------------------------|---------------------------------------|------------|
| Remarks: managed for annual agricultu   | ral crop p | production and harvest. |                                       |            |

|   | Absolute       | Dominant Indicator      | Dominance Test worksheet:   |          |
|---|----------------|-------------------------|---|----------|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )          | <u>% Cover</u> | Species? Status         | Number of Dominant Species  | ( • )    |
| 1   |                | ·                       | That Are OBL, FACW, or FAC:                                       | (A)      |
| 2   |                |                         | Total Number of Dominant  |          |
| 3   |                |                         | Species Across All Strata:  | (B)      |
| 4   |                | · ·                     | Percent of Dominant Species                                       |          |
|   |                | = Total Cover           | That Are OBL, FACW, or FAC:                                       | (A/B)    |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15ft radius</u> ) |                |                         | Developer of the development of the set                           |          |
| 1   |                |                         | Prevalence Index worksheet:                                       |          |
| 2   |                |                         | Total % Cover of: Multiply by                                     |          |
| 3   |                | · ·                     | OBL species x 1 =   |          |
| 4   |                |                         | FACW species x 2 =  |          |
| 5   |                |                         | FAC species x 3 =   |          |
|   |                | = Total Cover           | FACU species x 4 =  |          |
| Herb Stratum (Plot size: <u>15ft radius</u> )                 |                |                         | UPL species x 5 =   |          |
| 1   |                | · ·                     | Column Totals: (A)  | (B)      |
| 2   |                | · ·                     |   |          |
| 3   |                |                         | Prevalence Index = B/A =  | _        |
| 4   |                |                         | Hydrophytic Vegetation Indicators:                                |          |
| 5   |                |                         | Rapid Test for Hydrophytic Vegetation                             |          |
| 6   |                |                         | Dominance Test is >50%  |          |
| 7   |                |                         | □ Prevalence Index is ≤3.0 <sup>1</sup>                           |          |
| 8   |                |                         | Morphological Adaptations <sup>1</sup> (Provide supplementations) |          |
| 9   |                |                         | data in Remarks or on a separate she                              | eet)     |
| 10  |                |                         | ☐ Wetland Non-Vascular Plants <sup>1</sup>                        |          |
| 11  |                |                         | Problematic Hydrophytic Vegetation <sup>1</sup> (Exp              | plain)   |
|   |                | = Total Cover           | <sup>1</sup> Indicators of hydric soil and wetland hydrolog       | gy must  |
| Woody Vine Stratum (Plot size: <u>15ft radius</u> )           | 100            |                         | be present, unless disturbed or problematic.                      |          |
| 1   |                |                         |   |          |
| 2   |                |                         | Hydrophytic<br>Vegetation   |          |
|   | 0              | = Total Cover           | Present? Yes No   |          |
| % Bare Ground in Herb Stratum                                 | <u> </u>       |                         |   |          |
| Remarks: managed for annual agricultural crop production      | and harves     | st. plant community pri | or to spring plowing a mixture of cover crop, he                  | rbs, and |
| grasses.  |                |                         |   |          |

#### Sampling Point: SP10

| Depth       | Matrix              |            |   | dox Featur |                        |                  | <b>-</b> .          | <b>-</b> .   |
|-------------|---------------------|------------|---|------------|------------------------|------------------|---------------------|--|
| (inches)    | Color (moist)       | %          | Color (moist)                             | %          | Type <sup>1</sup>      | Loc <sup>2</sup> | Texture             | Remarks  |
| 0-14        | <u>10YR 3/3</u>     | 100        | ·   |            |                        |                  | SL                  | mixed sandy loam   |
| 14-24       | <u>10YR 3/3</u>     | 98         | 10YR 4/6                                  | 2          | <u>D</u>               | М                | SL                  | mixed sandy loam   |
|             |                     |            |   |            |                        |                  |                     |  |
|             |                     |            |   |            |                        |                  |                     |  |
|             |                     |            |   |            |                        |                  |                     |  |
|             |                     |            |   |            |                        |                  |                     |  |
|             |                     |            |   |            |                        |                  |                     |  |
|             |                     |            |   |            |                        |                  |                     |  |
| 1= 0.0      |                     |            |   |            |                        |                  |                     |  |
|             |                     |            | M=Reduced Matrix,<br>all LRRs, unless oth |            |                        | ed Sand G        |                     | <pre>.ocation: PL=Pore Lining, M=Matrix. ators for Problematic Hydric Soils<sup>3</sup>:</pre> |
|             |                     |            | Sandy Redox                               |            | ,                      |                  |                     | cm Muck (A10)  |
|             | pipedon (A2)        |            | Stripped Matr                             | · · /      |                        |                  | _                   | ed Parent Material (TF2)   |
| Black H     | •••••               |            | Loamy Mucky                               | . ,        | -<br>1) ( <b>excep</b> | t MLRA 1         |                     | ery Shallow Dark Surface (TF12)  |
|             | en Sulfide (A4)     |            | Loamy Gleye                               | •          | , .                    |                  |                     | ther (Explain in Remarks)  |
|             | d Below Dark Surfa  | ce (A11)   | Depleted Mat                              | •          | _/                     |                  |                     |  |
| •           | ark Surface (A12)   | ()         | Redox Dark S                              | . ,        | )                      |                  | <sup>3</sup> Indica | ators of hydrophytic vegetation and  |
|             | Mucky Mineral (S1)  |            | Depleted Dar                              |            | ,                      |                  |                     | tland hydrology must be present,   |
| •           | Gleyed Matrix (S4)  |            | Redox Depres                              | •          | ,                      |                  |                     | ess disturbed or problematic.  |
| Restrictive | Layer (if present): |            |   | i          |                        |                  |                     | · · · · · · · · · · · · · · · · · · ·  |
| Type:       |                     |            |   |            |                        |                  |                     |  |
| Depth (ir   | nches):             |            |   |            |                        |                  | Hydric So           | oil Present? Yes 🗌 No 🖂  |
| Remarks: N  | O prominent indicat | ors of hvd | ric soils                                 |            |                        |                  | _                   |  |
|             | •                   | ,          |   |            |                        |                  |                     |  |
|             |                     |            |   |            |                        |                  |                     |  |
|             |                     |            |   |            |                        |                  |                     |  |
|             |                     |            |   |            |                        |                  |                     |  |
| DROLO       | GY                  |            |   |            |                        |                  |                     |  |
| Wetland Hy  | drology Indicators  |            |   |            |                        |                  |                     |  |
| •           |                     |            | red: check all that ar                    |            |                        |                  | 0                   | condary Indicators (2 or more required)  |

| Primary Indicators (minimum                        | of one required; c  | heck all that apply)  | Secondary Indicators (2 or more required)       |
|--|---------------------|---|---|
| Surface Water (A1)                                 |                     | ☐ Water-Stained Leaves (B9) (exce   | pt MLRA 🔲 Water-Stained Leaves (B9) (MLRA 1, 2, |
| High Water Table (A2)                              |                     | 1, 2, 4A, and 4B)   | 4A, and 4B)                                     |
| Saturation (A3)                                    |                     | Salt Crust (B11)  | Drainage Patterns (B10)                         |
| Water Marks (B1)                                   |                     | Aquatic Invertebrates (B13)   | Dry-Season Water Table (C2)                     |
| Sediment Deposits (B2)                             |                     | Hydrogen Sulfide Odor (C1)  | Saturation Visible on Aerial Imagery (C9)       |
| Drift Deposits (B3)                                |                     | Oxidized Rhizospheres along Livi  | ng Roots (C3) 🔲 Geomorphic Position (D2)        |
| Algal Mat or Crust (B4)                            |                     | Presence of Reduced Iron (C4)   | Shallow Aquitard (D3)                           |
| Iron Deposits (B5)                                 |                     | Recent Iron Reduction in Tilled Second Se | pils (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 Aeri                         | al Imagery (B7)     | Other (Explain in Remarks)  | Frost-Heave Hummocks (D7)                       |
| Sparsely Vegetated Conc                            | ave Surface (B8)    |   |   |
| Field Observations:                                |                     |   |   |
| Surface Water Present?                             | Yes 🗌 No 🗌          | Depth (inches):   |   |
| Water Table Present?                               | Yes 🗌 🛛 No 🛛        | Depth (inches):   |   |
| Saturation Present?<br>(includes capillary fringe) | Yes 🗌 No 🛛          | Depth (inches):   | Wetland Hydrology Present? Yes 🗌 No 🖂           |
| Describe Recorded Data (stre                       | eam gauge, monit    | oring well, aerial photos, previous inspe   | ctions), if available:                          |
|  |                     |   |   |
| Remarks: NO prominent field                        | indicators of wetla | and hydrology documented early growin   | g season. See spring 2020 monitoring data       |
|  |                     |   |   |
|  |                     |   |   |
|  |                     |   |   |
|  |                     |   |   |

| Project/Site: Western Portion of Parcel 0420351003                | City/County: City of I    | Puyallup, Pierce County           | Sampling Date: <u>16 APR 2020</u> |
|---|---------------------------|-----------------------------------|-----------------------------------|
| Applicant/Owner: Cascade Development                              |                           | State: WA                         | Sampling Point: <u>SP11</u>       |
| Investigator(s): Habitat Technologies                             | Section,                  | Township, Range: <u>Sec 35 T2</u> | 20N R04E QT 12                    |
| Landform (hillslope, terrace, etc.): valley                       | Local relief (concav      | ve, convex, none): <u>flat</u>    | Slope (%): <1%                    |
| Subregion (LRR): A  | Lat:                      | Long:                             | Datum: USGS                       |
| Soil Map Unit Name: Briscot loam                                  |                           | NWI classifica                    | tion: somewhat poorly drained     |
| Are climatic / hydrologic conditions on the site typical for this | time of year? Yes 🛛 No 🗌  | (If no, explain in Remarks.)      |                                   |
| Are Vegetation, Soil, or Hydrology signif                         | icantly disturbed? Are "  | Normal Circumstances" pres        | ent? Yes 🛛 No 🗌                   |
| Are Vegetation, Soil, or Hydrology natura                         | ally problematic? (If nee | eded, explain any answers in      | n Remarks.)                       |
| SUMMARY OF FINDINGS – Attach site map s                           | howing sampling point     | locations, transects,             | important features, etc.          |
| Hvdrophytic Vegetation Present? Yes I No I                        |                           |                                   |                                   |

| Hydric Soil Present?<br>Wetland Hydrology Present? | Yes □ No ⊠<br>Yes □ No ⊠          | is the Sampled Area within a Wetland? | Yes 🔲 No 🖾 |
|--|-----------------------------------|---------------------------------------|------------|
| Remarks: managed for annual agricultu              | ural crop production and harvest. |                                       |            |

|  | Absolute       | Dominant Indicator     | Dominance Test worksheet:                             |                |
|--|----------------|------------------------|---|----------------|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )     | <u>% Cover</u> | Species? Status        | Number of Dominant Species                            |                |
| 1  |                |                        | That Are OBL, FACW, or FAC:                           | (A)            |
| 2  |                |                        | Total Number of Dominant                              |                |
| 3  |                |                        | Species Across All Strata:                            | (B)            |
| 4  |                |                        |   | ( )            |
|  |                | = Total Cover          | Percent of Dominant Species                           |                |
| Sapling/Shrub Stratum (Plot size: <u>15ft radius</u> )   |                |                        | That Are OBL, FACW, or FAC:                           | (A/B)          |
| 1  |                |                        | Prevalence Index worksheet:                           |                |
| 2  |                |                        | Total % Cover of:Mult                                 | iply by:       |
| 3  |                |                        | OBL species x 1 =                                     |                |
| 4  |                |                        | FACW species x 2 =                                    |                |
| 5  |                |                        | FAC species x 3 =                                     |                |
|  |                | = Total Cover          | FACU species x 4 =                                    |                |
| Herb Stratum (Plot size: 15ft radius)                    |                |                        | UPL species x 5 =                                     |                |
| 1  |                |                        | Column Totals: (A)                                    |                |
| 2  |                |                        |   |                |
| 3  |                |                        | Prevalence Index = B/A =                              |                |
| 4  |                |                        | Hydrophytic Vegetation Indicators:                    |                |
| 5  |                |                        | Rapid Test for Hydrophytic Vegeta                     | tion           |
| 6  |                |                        | Dominance Test is >50%                                |                |
| 7  |                |                        | ☐ Prevalence Index is ≤3.0 <sup>1</sup>               |                |
| 8  |                |                        | Morphological Adaptations <sup>1</sup> (Provide)      |                |
| 9  |                |                        | data in Remarks or on a separa                        | ate sheet)     |
| 10   |                |                        | Wetland Non-Vascular Plants <sup>1</sup>              |                |
|  |                |                        | Problematic Hydrophytic Vegetatio                     | n¹ (Explain)   |
| 11   |                | = Total Cover          | <sup>1</sup> Indicators of hydric soil and wetland hy |                |
| Woody Vine Stratum (Plot size: 15ft radius)              | 100            |                        | be present, unless disturbed or probler               | natic.         |
| 1  |                |                        |   |                |
| 2  |                |                        | Hydrophytic   |                |
| £  | 0              | = Total Cover          | Vegetation Present? Yes  No                           |                |
| % Bare Ground in Herb Stratum                            | <u>u</u>       |                        |   |                |
| Remarks: managed for annual agricultural crop production | and harves     | t. plant community pri | ior to spring plowing a mixture of cover cr           | op, herbs, and |
| grasses.   |                | . ,                    |   | •              |

#### Sampling Point: SP11

| D-6       10YR 3/3       100         6-18       10YR 3/3       98       10YR         18-24       10YR 4/3       95       10YR | YR 4/6 2 [<br> R 4/6 5 [                             |                   | SL         mixe           SL         mise | Remarks<br>ed sandy loam<br>ed sandy loam<br>ed sandy loam               |
|---|--|-------------------|---|--|
| 3-18       10YR 3/3       98       10YF         18-24       10YR 4/3       95       10YF         Type:   | R 4/6 5 [  | D M<br>           | SL         mixe           SL         mise | ed sandy loam<br>ed sandy loam   |
| 18-24       10YR 4/3       95       10YR         19  | R 4/6 5 [  | D M<br>           | SL         mise                           | ed sandy loam  |
| Hydric Soil Indicators:       (Applicable to all LRRs         Histosol (A1)       S         Histic Epipedon (A2)       S         Black Histic (A3)       L         Hydrogen Sulfide (A4)       L         Depleted Below Dark Surface (A11)       D         Thick Dark Surface (A12)       R         Sandy Mucky Mineral (S1)       D         Sandy Gleyed Matrix (S4)       R         Restrictive Layer (if present):       Type:         Depth (inches):   | luced Matrix, CS=Covered                             |                   |   |  |
| Hydric Soil Indicators:       (Applicable to all LRRs         Histosol (A1)       S         Histic Epipedon (A2)       S         Black Histic (A3)       L         Hydrogen Sulfide (A4)       L         Depleted Below Dark Surface (A11)       D         Thick Dark Surface (A12)       R         Sandy Mucky Mineral (S1)       D         Sandy Gleyed Matrix (S4)       R         Restrictive Layer (if present):       Type:         Depth (inches):   | luced Matrix, CS=Covered                             |                   |   |  |
| Hydric Soil Indicators:       (Applicable to all LRRs         Histosol (A1)       S         Histic Epipedon (A2)       S         Black Histic (A3)       L         Hydrogen Sulfide (A4)       L         Depleted Below Dark Surface (A11)       D         Thick Dark Surface (A12)       R         Sandy Mucky Mineral (S1)       D         Sandy Gleyed Matrix (S4)       R         Restrictive Layer (if present):       Type:         Depth (inches):   | luced Matrix, CS=Covered                             |                   |   |  |
| Hydric Soil Indicators:       (Applicable to all LRRs         Histosol (A1)       S         Histic Epipedon (A2)       S         Black Histic (A3)       L         Hydrogen Sulfide (A4)       L         Depleted Below Dark Surface (A11)       D         Thick Dark Surface (A12)       R         Sandy Mucky Mineral (S1)       D         Sandy Gleyed Matrix (S4)       R         Restrictive Layer (if present):       Type:         Depth (inches):   | luced Matrix, CS=Covered                             |                   |   |  |
| Histic Epipedon (A2)       S         Black Histic (A3)       L         Hydrogen Sulfide (A4)       L         Depleted Below Dark Surface (A11)       D         Thick Dark Surface (A12)       R         Sandy Mucky Mineral (S1)       D         Sandy Gleyed Matrix (S4)       R         Restrictive Layer (if present):         Type:   | luced Matrix, CS=Covered                             |                   |   |  |
| Histosol (A1)       S         Histic Epipedon (A2)       S         Black Histic (A3)       L         Hydrogen Sulfide (A4)       L         Depleted Below Dark Surface (A11)       D         Thick Dark Surface (A12)       R         Sandy Mucky Mineral (S1)       D         Sandy Gleyed Matrix (S4)       R         Restrictive Layer (if present):       Type:         Depth (inches):   |  |                   |   | : PL=Pore Lining, M=Matrix.<br>r Problematic Hydric Soils <sup>3</sup> : |
| Black Histic (A3)       L         Hydrogen Sulfide (A4)       L         Depleted Below Dark Surface (A11)       D         Thick Dark Surface (A12)       R         Sandy Mucky Mineral (S1)       D         Sandy Gleyed Matrix (S4)       R         Restrictive Layer (if present):       Type:         Depth (inches):  | Sandy Redox (S5)<br>Stripped Matrix (S6)             | ,                 | 🗌 2 cm Muc                                | -  |
| Hydrogen Sulfide (A4)       L         Depleted Below Dark Surface (A11)       D         Thick Dark Surface (A12)       R         Sandy Mucky Mineral (S1)       D         Sandy Gleyed Matrix (S4)       R         Restrictive Layer (if present):       Type:         Depth (inches):       D  | Loamy Mucky Mineral (F1)                             | ) (except MLRA 1) |   | low Dark Surface (TF12)  |
| Thick Dark Surface (A12)       R         Sandy Mucky Mineral (S1)       D         Sandy Gleyed Matrix (S4)       R         Restrictive Layer (if present):       Type:         Depth (inches):  | Loamy Gleyed Matrix (F2)                             | • • •             | · ·                                       | plain in Remarks)  |
| Sandy Mucky Mineral (S1)       D         Sandy Gleyed Matrix (S4)       R         Restrictive Layer (if present):       Type:         Depth (inches):   | Depleted Matrix (F3)                                 |                   | <b>0</b>                                  |  |
| Sandy Gleyed Matrix (S4)  Restrictive Layer (if present):  Type: Depth (inches):  | Redox Dark Surface (F6)                              | 7)                |   | hydrophytic vegetation and   |
| Restrictive Layer (if present):<br>Type:<br>Depth (inches):   | Depleted Dark Surface (F7)<br>Redox Depressions (F8) | )                 |   | vdrology must be present,<br>turbed or problematic.                      |
| Type:<br>Depth (inches):  |  |                   |   |  |
| Depth (inches):   | _  |                   |   |  |
| Remarks: NO prominent indicators of hydric soils  |  |                   | Hydric Soil Pres                          | ent? Yes 🗌 No 🖂  |
|   | S  |                   | -   |  |
|   |  |                   |   |  |
|   |  |                   |   |  |
|   |  |                   |   |  |
| /DROLOGY  |  |                   |   |  |
| Wetland Hydrology Indicators:   |  |                   |   |  |

| Primary Indicators (minimum of one required; ch                             | neck all that apply)                            | Secondary Indicators (2 or more required)   |
|---|---|---|
| Surface Water (A1)  | □ Water-Stained Leaves (B9) (except ML          | .RA 🔲 Water-Stained Leaves (B9) (MLRA 1, 2, |
| High Water Table (A2)   | 1, 2, 4A, and 4B)                               | 4A, and 4B)                                 |
| Saturation (A3)   | ☐ Salt Crust (B11)                              | Drainage Patterns (B10)                     |
| Water Marks (B1)  | Aquatic Invertebrates (B13)                     | Dry-Season Water Table (C2)                 |
| Sediment Deposits (B2)  | Hydrogen Sulfide Odor (C1)                      | Saturation Visible on Aerial Imagery (C9)   |
| Drift Deposits (B3)   | Oxidized Rhizospheres along Living Ro           | ots (C3) 🔲 Geomorphic Position (D2)         |
| Algal Mat or Crust (B4)   | Presence of Reduced Iron (C4)                   | Shallow Aquitard (D3)                       |
| Iron Deposits (B5)  | Recent Iron Reduction in Tilled Soils (C        | 6) FAC-Neutral Test (D5)                    |
| Surface Soil Cracks (B6)  | Stunted or Stressed Plants (D1) (LRR A          | A) Raised Ant Mounds (D6) (LRR A)           |
| Inundation Visible on Aerial Imagery (B7)                                   | Other (Explain in Remarks)                      | Frost-Heave Hummocks (D7)                   |
| Sparsely Vegetated Concave Surface (B8)                                     |   |   |
| Field Observations:   |   |   |
| Surface Water Present? Yes 🗌 No 🗌   | Depth (inches):                                 |   |
| Water Table Present? Yes 🗌 No 🛛   | Depth (inches):                                 |   |
| Saturation Present? Yes No X (includes capillary fringe)                    | Depth (inches): Wet                             | tland Hydrology Present? Yes 🗌 No 🛛         |
| Describe Recorded Data (stream gauge, monito                                | ring well, aerial photos, previous inspections) | ), if available:                            |
|   |   |   |
| Remarks: NO prominent field indicators of wetla                             | nd hydrology documented early growing seas      | son. See spring 2020 monitoring data        |
|   |   |   |
|   |   |   |
|   |   |   |
| (includes capillary fringe)<br>Describe Recorded Data (stream gauge, monito | ring well, aerial photos, previous inspections) | ), if available:                            |

| Project/Site: Western Portion of Parcel 0420351003                | City/County: City o      | f Puyallup, Pierce County                     | Sampling Date: <u>16 APR 2020</u> |
|---|--------------------------|---|-----------------------------------|
| Applicant/Owner: Cascade Development                              |                          | State: WA                                     | _ Sampling Point: <u>SP12</u>     |
| Investigator(s): Habitat Technologies                             | Section                  | , Township, Range: <u>Sec 35 <sup>·</sup></u> | T20N R04E QT 12                   |
| Landform (hillslope, terrace, etc.): valley                       | Local relief (conca      | ave, convex, none): <u>flat</u>               | Slope (%): <u>&lt;1%</u>          |
| Subregion (LRR): A  | Lat:                     | Long:   | Datum: USGS                       |
| Soil Map Unit Name: Briscot loam                                  |                          | NWI classific                                 | ation: somewhat poorly drained    |
| Are climatic / hydrologic conditions on the site typical for this | time of year? Yes 🛛 No 🗌 | ] (If no, explain in Remarks.                 | )                                 |
| Are Vegetation, Soil, or Hydrology signi                          | ficantly disturbed? Are  | "Normal Circumstances" pre                    | esent? Yes 🛛 No 🗌                 |
| Are Vegetation, Soil, or Hydrology nature                         | ally problematic? (If no | eeded, explain any answers                    | in Remarks.)                      |
| SUMMARY OF FINDINGS – Attach site map s                           | howing sampling poir     | it locations, transects                       | s, important features, etc.       |
| Hvdrophytic Vegetation Present? Yes I No I                        |                          |   |                                   |

| Hydrophylic vegetation Present?       |                            | Is the Sampled Area               |                 |  |
|---------------------------------------|----------------------------|-----------------------------------|-----------------|--|
| Hydric Soil Present?                  | Yes 🛛 No 🗌                 | within a Wetland?                 | Yes 🖂           |  |
| Wetland Hydrology Present?            | Yes 🛛 No 🗌                 |                                   |                 |  |
| Remarks: managed for annual agricultu | ural crop production and h | narvest. shallow depression seaso | nally saturated |  |
|                                       |                            |                                   |                 |  |
|                                       |                            |                                   |                 |  |

|  | Absolute       | Dominant Indicator                      | Dominance Test worksheet:   |
|--|----------------|---|---|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )     | <u>% Cover</u> | Species? Status                         | Number of Dominant Species  |
| 1  |                |   | That Are OBL, FACW, or FAC: (A)                                   |
| 2  |                |   | Total Number of Dominant  |
| 3  |                |   | Species Across All Strata: (B)                                    |
| 4  |                |   |   |
|  |                | <b>T</b> ( ) <b>O</b>                   | Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)      |
| Sapling/Shrub Stratum (Plot size: 15ft radius)           |                |   |   |
| 1  |                |   | Prevalence Index worksheet:                                       |
| 2  |                |   | Total % Cover of:Multiply by:                                     |
| 3  |                |   | OBL species x 1 =   |
| 4  |                |   | FACW species x 2 =  |
| 5  |                |   | FAC species x 3 =   |
|  |                | = Total Cover                           | FACU species x 4 =  |
| Herb Stratum (Plot size: 15ft radius)                    |                |   | UPL species x 5 =   |
| 1  |                |   | Column Totals: (A) (B)  |
| 2  |                |   |   |
| 3  |                |   | Prevalence Index = B/A =  |
| 4  |                |   | Hydrophytic Vegetation Indicators:                                |
| 5  |                |   | Rapid Test for Hydrophytic Vegetation                             |
| 6  |                |   | □ Dominance Test is >50%  |
| 7  |                |   | □ Prevalence Index is ≤3.0 <sup>1</sup>                           |
| 8  |                |   | Morphological Adaptations <sup>1</sup> (Provide supporting        |
| 9  |                |   | data in Remarks or on a separate sheet)                           |
|  |                |   | Wetland Non-Vascular Plants <sup>1</sup>                          |
| 10   |                |   | Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)         |
| 11   |                | = Total Cover                           | <sup>1</sup> Indicators of hydric soil and wetland hydrology must |
| Woody Vine Stratum (Plot size: 15ft radius)              | 100            | = Total Cover                           | be present, unless disturbed or problematic.                      |
| <u> </u>   |                |   |   |
| 2  |                |   | Hydrophytic   |
| 2  | 0              | = Total Cover                           | Vegetation Present? Yes 🗌 No 🗌                                    |
| % Bare Ground in Herb Stratum                            | 0              |   |   |
| Remarks: managed for annual agricultural crop production | and harves     | t. plant community pri                  | or to spring plowing a mixture of cover crop, herbs, and          |
| grasses.   |                | . , , , , , , , , , , , , , , , , , , , |   |

#### Sampling Point: SP12

| Depth<br>(inches)   | <u>Matrix</u><br>Color (moist)   | %   | Colo        | r (moist)   | dox Featur  |   | $100^2$                                       | Textu                 | re  | Remarks   |
|---|--|---|-------------|---|---|---|---|-----------------------|---|---|
|   |  |   |             | (molot)   | /0  |   |   |                       |   |   |
| 0-4   | <u>10YR 3/2</u>  | <u>100</u>                                  |             |   |   |   |   | <u>SL</u>             |   | -   |
| 4-9   | <u>10YR 3/2</u>  | 90  | <u>10Y</u>  | R 4/6   | 10  | <u>D</u>  | M   |                       |   | -   |
| 9-24  | <u>10YR 4/2</u>  | <u>80</u>                                   | <u> </u>    | R 4/6   | 20  | <u>D</u>  | <u>M</u>                                      | <u>SL</u>             |   | mixed sandy loam  |
|   |  |   |             |   |   |   |   |                       |   |   |
|   |  |   |             |   |   |   |   |                       |   |   |
|   |  | _   |             |   |   |   |   |                       |   |   |
|   | Concentration, D=De  |   |             |   |   |   | ed Sand G                                     |                       |   | ocation: PL=Pore Lining, M=Matrix.<br>ors for Problematic Hydric Soils <sup>3</sup> :   |
| Histosol  |  |   |             |   |   | iteu.)  |   |                       |   | m Muck (A10)  |
|   | pipedon (A2)   |   |             | Sandy Redox<br>Stripped Matr  |   |   |   |                       |   | d Parent Material (TF2)   |
| Black H   |  |   |             | .oamy Mucky   | . ,   | 1) (excep   | t MLRA 1)                                     |                       |   | y Shallow Dark Surface (TF12)   |
|   | en Sulfide (A4)  |   |             | .oamy Gleye   |   |   | •   |                       |   | er (Explain in Remarks)   |
|   | d Below Dark Surfa   | ice (A11)                                   |             | Depleted Mat  |   | ,   |   |                       | -   | ( I )   |
| •   | ark Surface (A12)  | . ,   |             | Redox Dark S  |   | )   |   | <sup>3</sup> I        | ndicat  | ors of hydrophytic vegetation and   |
| Sandy N   | Mucky Mineral (S1)   |   |             | Depleted Dar  | k Surface (   | F7)   |   |                       | wetl  | and hydrology must be present,  |
| Sandy C   | Gleyed Matrix (S4)   |   | 🗆 F         | Redox Depre   | ssions (F8)   |   |   |                       | unle  | ss disturbed or problematic.  |
| Restrictive   | Layer (if present):  |   |             |   |   |   |   |                       |   |   |
|   |  |   |             |   |   |   |   |                       |   |   |
| Туре:   |  |   |             |   |   |   |   |                       |   |   |
| Type:<br>Depth (ir  | nches):  |   |             |   |   |   |   | Hydr                  | ic Soi  | il Present? Yes 🛛 No 🗌  |
| Type:<br>Depth (ir  |  |   |             |   | of shallow  | depressio   | n   | Hydr                  | ic Soi  | il Present? Yes 🛛 No 🗌  |
| Type:<br>Depth (ir  | nches):  |   |             |   | of shallow  | depressio   | n   | Hydr                  | ic Soi  | il Present? Yes 🛛 No 🗌  |
| Type:<br>Depth (ir  | nches):  |   |             |   | of shallow  | depressio   | n   | Hydr                  | ic Soi  | il Present? Yes ⊠ No 🗌  |
| Type:<br>Depth (ir  | nches):  |   |             |   | of shallow  | depressio   | n   | Hydr                  | ic So   | il Present? Yes ⊠ No 🗌  |
| Type:<br>Depth (ir<br>Remarks: p<br><b>/DROLO(</b>  | nches):<br>prominent indicators  | s of hydrid                                 |             |   | of shallow  | depressio   | n   | Hydr                  | ic Soi  | il Present? Yes ⊠ No 🗌  |
| Type:<br>Depth (ir<br>Remarks: p<br>//DROLO(<br>Wetland Hy  | nches):<br>prominent indicators<br>GY<br>ydrology Indicator  | s of hydrid                                 | c soils loc | ated outside  |   | depressio   | n   | Hydr                  |   |   |
| Type:<br>Depth (ir<br>Remarks: p<br>//DROLO(<br>Wetland Hy<br>Primary Ind   | nches):<br>prominent indicators<br>gr<br>gr<br>ydrology Indicator<br>icators (minimum of   | s of hydrid                                 | c soils loc | ated outside  | oply)   |   |   |                       | Seco  | ondary Indicators (2 or more required)  |
| Type:<br>Depth (ir<br>Remarks: p<br><b>DROLOO</b><br>Vetland Hy<br>Primary Ind<br>Surface   | GY<br>gydrology Indicators<br>icators (minimum of<br>Water (A1)  | s of hydrid                                 | c soils loc | ated outside  | oply)<br>tained Leav  | ves (B9) ( <b>c</b>   |   |                       | Seco  | ondary Indicators (2 or more required)<br>Vater-Stained Leaves (B9) ( <b>MLRA 1,</b>  |
| Type:<br>Depth (ir<br>Remarks: p<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO()))<br>//DROLO(<br>//DROLO()))<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROL  | GY<br>water (A1)<br>ater Table (A2)  | s of hydrid                                 | c soils loc | ated outside<br>eck all that ap<br>U Water-S<br>1, 2,   | oply)<br>tained Leav<br>4A, and 48  | ves (B9) ( <b>c</b>   |   |                       | Secc  | ondary Indicators (2 or more required)<br>Vater-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b>  |
| Type:<br>Depth (ir<br>Remarks: p<br>//DROLO(<br>Wetland Hy<br>Primary Ind<br>Surface<br>High Wa<br>Saturati   | GY<br>wdrology Indicators<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)<br>ion (A3)  | s of hydrid                                 | c soils loc | ated outside<br><u>eck all that ap</u><br>Water-S<br><b>1, 2,</b><br>Salt Cru   | oply)<br>tained Leav<br><b>4A, and 4</b><br>st (B11)  | /es (B9) (€<br><b>3)</b>  |   |                       |   | ondary Indicators (2 or more required)<br>Vater-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)   |
| Type:<br>Depth (ir<br>Remarks: p<br>//DROLO(<br>Wetland Hy<br>Primary Ind<br>Surface<br>High Wa<br>Saturati<br>Water M  | GY<br>ydrology Indicators<br>water (A1)<br>ater Table (A2)<br>ion (A3)<br>Marks (B1)   | s of hydrid                                 | c soils loc | ated outside<br><u>eck all that ap</u><br>Water-S<br>1, 2,<br>Salt Cru<br>Aquatic   | oply)<br>tained Leav<br><b>4A, and 4B</b><br>st (B11)<br>Invertebrate   | ves (B9) ( <b>e</b><br><b>3)</b><br>es (B13)  |   |                       |   | ondary Indicators (2 or more required)<br>Vater-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)  |
| Type:<br>Depth (ir<br>Remarks: p<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROL  | GY<br>ydrology Indicators<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)<br>ion (A3)<br>Marks (B1)<br>nt Deposits (B2)  | s of hydrid                                 | uired; che  | ated outside  | oply)<br>tained Leav<br><b>4A, and 4B</b><br>st (B11)<br>Invertebrate<br>en Sulfide C   | ves (B9) ( <b>€</b><br><b>3)</b><br>es (B13)<br>∂dor (C1)   | except ML                                     | RA                    |   | ondary Indicators (2 or more required)<br>Vater-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (G   |
| Type:<br>Depth (ir<br>Remarks: p<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROL  | GY<br>ydrology Indicators<br>water (A1)<br>ater Table (A2)<br>ion (A3)<br>Marks (B1)<br>nt Deposits (B2)<br>posits (B3)  | s of hydrid                                 | uired; che  | ated outside<br>ated outside<br>ack all that ap<br>Water-S<br>1, 2,<br>Salt Cru<br>Aquatic<br>Hydroge<br>Oxidized                                     | oply)<br>tained Leav<br><b>4A, and 4E</b><br>st (B11)<br>Invertebrate<br>on Sulfide C<br>B Rhizosphe  | /es (B9) ( <b>6</b><br><b>3)</b><br>es (B13)<br>edor (C1)<br>eres along   | except MLI                                    | RA                    |   | ondary Indicators (2 or more required)<br>Vater-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)  |
| Type:<br>Depth (ir<br>Remarks: p<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROL  | GY<br>ydrology Indicators<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)<br>ion (A3)<br>Marks (B1)<br>nt Deposits (B2)  | s of hydrid                                 | uired; che  | ated outside  | oply)<br>tained Leav<br><b>4A, and 4E</b><br>st (B11)<br>Invertebrate<br>on Sulfide C<br>B Rhizosphe  | /es (B9) ( <b>6</b><br><b>3)</b><br>es (B13)<br>edor (C1)<br>eres along   | except MLI                                    | RA                    |   | ondary Indicators (2 or more required)<br>Vater-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (G   |
| Type:<br>Depth (ir<br>Remarks: p<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLOO<br>/DROLO | GY<br>ydrology Indicators<br>water (A1)<br>ater Table (A2)<br>ion (A3)<br>Marks (B1)<br>nt Deposits (B2)<br>posits (B3)  | s of hydrid                                 | uired; che  | ated outside<br>ated outside<br>ack all that ap<br>Water-S<br>1, 2,<br>Salt Cru<br>Aquatic<br>Hydroge<br>Oxidized                                     | oply)<br>tained Leav<br><b>4A, and 4E</b><br>st (B11)<br>Invertebrate<br>en Sulfide C<br>d Rhizosphe<br>e of Reduce   | ves (B9) ( <b>c</b><br><b>3)</b><br>es (B13)<br>odor (C1)<br>eres along<br>ed Iron (C   | except MLI<br>Living Roc<br>4)                | RA<br>ots (C3)        |   | ondary Indicators (2 or more required)<br>Vater-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (G<br>Geomorphic Position (D2)   |
| Type:<br>Depth (ir<br>Remarks: p<br>/DROLO(<br>/DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO())<br>//DROLO(<br>//DROLO())<br>//DROLO()<br>//DROLO())<br>//DROLO()<br>//DROLO())<br>//DROLO()<br>//DROLO())<br>//DROLO()<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO   | GY<br>ydrology Indicators<br>Water (A1)<br>ater Table (A2)<br>ion (A3)<br>Marks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)  | s of hydrid                                 | uired; che  | ated outside<br>ack all that ap<br>Water-S<br>1, 2,<br>Salt Cru:<br>Aquatic<br>Hydroge<br>Oxidized<br>Presenc   | oply)<br>tained Leav<br><b>4A, and 4E</b><br>st (B11)<br>Invertebrate<br>on Sulfide C<br>I Rhizosphe<br>e of Reduce<br>ron Reduct                                 | ves (B9) ( <b>c</b><br><b>3)</b><br>Dotor (C1)<br>Peres along<br>ed Iron (C<br>ion in Tille                                     | Except MLI<br>Living Roo<br>4)<br>d Soils (C6 | <b>RA</b><br>0ts (C3) | Secc<br>V<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C | ondary Indicators (2 or more required)<br>Vater-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (G<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)  |
| Type:<br>Depth (ir<br>Remarks: p<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO(<br>//DROLO()))<br>//DROLO(<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO()<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO())<br>//DROLO   | GY<br>ydrology Indicators<br>Water (A1)<br>ater Table (A2)<br>ion (A3)<br>Marks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)<br>posits (B5)   | s of hydrid<br>s:<br>f one req              | uired; che  | ated outside<br>ated outside<br>ated outside<br>ated outside<br>Water-S<br>1, 2,<br>Salt Cru<br>Aquatic<br>Hydroge<br>Oxidizec<br>Presenc<br>Recent I | oply)<br>tained Leav<br><b>4A, and 4E</b><br>st (B11)<br>Invertebrate<br>en Sulfide C<br>d Rhizosphe<br>e of Reduct<br>ron Reduct<br>or Stressed                  | ves (B9) ( <b>6</b><br><b>3)</b><br>es (B13)<br>odor (C1)<br>eres along<br>ed Iron (C-<br>ion in Tille<br>d Plants (D           | Except MLI<br>Living Roo<br>4)<br>d Soils (C6 | <b>RA</b><br>0ts (C3) | Secc<br>V<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C | ondary Indicators (2 or more required)<br>Vater-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (G<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)   |
| Type:<br>Depth (ir<br>Remarks: p<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLO   | GY<br>ydrology Indicators<br>water (A1)<br>ater Table (A2)<br>ion (A3)<br>Marks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)<br>posits (B5)<br>Soil Cracks (B6)   | s of hydric<br>s:<br>f one req<br>I Imagery | uired; che  | ated outside  | oply)<br>tained Leav<br><b>4A, and 4E</b><br>st (B11)<br>Invertebrate<br>en Sulfide C<br>d Rhizosphe<br>e of Reduct<br>ron Reduct<br>or Stressed                  | ves (B9) ( <b>6</b><br><b>3)</b><br>es (B13)<br>odor (C1)<br>eres along<br>ed Iron (C-<br>ion in Tille<br>d Plants (D           | Except MLI<br>Living Roo<br>4)<br>d Soils (C6 | <b>RA</b><br>0ts (C3) | Secc<br>V<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C | ondary Indicators (2 or more required)<br>Vater-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> ) |
| Type:<br>Depth (ir<br>Remarks: p<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLOO<br>//DROLO   | GY<br>ydrology Indicators<br>icators (minimum of<br>Water (A1)<br>ater Table (A2)<br>ion (A3)<br>Marks (B1)<br>nt Deposits (B2)<br>posits (B3)<br>at or Crust (B4)<br>posits (B5)<br>Soil Cracks (B6)<br>ion Visible on Aeria<br>y Vegetated Conca | s of hydric<br>s:<br>f one req<br>I Imagery | uired; che  | ated outside  | oply)<br>tained Leav<br><b>4A, and 4E</b><br>st (B11)<br>Invertebrate<br>en Sulfide C<br>d Rhizosphe<br>e of Reduct<br>ron Reduct<br>or Stressed                  | ves (B9) ( <b>6</b><br><b>3)</b><br>es (B13)<br>odor (C1)<br>eres along<br>ed Iron (C-<br>ion in Tille<br>d Plants (D           | Except MLI<br>Living Roo<br>4)<br>d Soils (C6 | <b>RA</b><br>0ts (C3) | Secc<br>V<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C<br>C | ondary Indicators (2 or more required)<br>Vater-Stained Leaves (B9) ( <b>MLRA 1,</b><br><b>4A, and 4B)</b><br>Drainage Patterns (B10)<br>Dry-Season Water Table (C2)<br>Saturation Visible on Aerial Imagery (<br>Geomorphic Position (D2)<br>Shallow Aquitard (D3)<br>FAC-Neutral Test (D5)<br>Raised Ant Mounds (D6) ( <b>LRR A</b> ) |
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(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Depth (inches):

Yes 🗌 No 🖾

Remarks: prominent field indicators of wetland hydrology documented early growing season. Dry on April 16, 2020. See spring 2020 monitoring data

Saturation Present?

Wetland Hydrology Present? Yes 🛛 No 🗌

| Project/Site: Western Portion of Parcel 0420351003  | City/County: City of Puyallup, Pierce County        | Sampling Date: <u>16 APR 2020</u> |  |  |  |  |  |
|---|---|-----------------------------------|--|--|--|--|--|
| Applicant/Owner: Cascade Development  | State: WA   | Sampling Point: <u>SP13</u>       |  |  |  |  |  |
| Investigator(s): Habitat Technologies   | Section, Township, Range: Sec 35                    | T20N R04E QT 12                   |  |  |  |  |  |
| Landform (hillslope, terrace, etc.): valley   | Local relief (concave, convex, none): flat          | Slope (%): <u>&lt;1%</u>          |  |  |  |  |  |
| Subregion (LRR): AL   | at: Long:   | Datum: USGS                       |  |  |  |  |  |
| Soil Map Unit Name: Briscot loam  | NWI classifi  | ication: somewhat poorly drained  |  |  |  |  |  |
| Are climatic / hydrologic conditions on the site typical for this tim                                       | ne of year? Yes 🛛 🛛 No 🗌 (If no, explain in Remarks | s.)                               |  |  |  |  |  |
| Are Vegetation, Soil, or Hydrology significa  | antly disturbed? Are "Normal Circumstances" pr      | resent? Yes 🛛 No 🗌                |  |  |  |  |  |
| Are Vegetation, Soil, or Hydrology naturally  | / problematic? (If needed, explain any answers      | s in Remarks.)                    |  |  |  |  |  |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. |   |                                   |  |  |  |  |  |
| Hydrophytic Vegetation Present? Yes No  | In the Original Area                                |                                   |  |  |  |  |  |

| Hydrophytic Vegetation Present?<br>Hydric Soil Present?<br>Wetland Hydrology Present? | Yes 🗌      | No 🖂<br>No 🖾            | Is the Sampled Area within a Wetland? | Yes 🗌 No 🛛 |
|---|------------|-------------------------|---------------------------------------|------------|
| Remarks: managed for annual agricultu   | ral crop p | production and harvest. |                                       |            |

|  | Absolute       | Dominant Indicator                      | Dominance Test worksheet:                            |                 |
|--|----------------|---|--|-----------------|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )     | <u>% Cover</u> | Species? Status                         | Number of Dominant Species                           |                 |
| 1  |                |   | That Are OBL, FACW, or FAC:                          | (A)             |
| 2  |                |   | Total Number of Dominant                             |                 |
| 3  |                |   | Species Across All Strata:                           | (B)             |
| 4  |                |   |  | ( )             |
|  |                | = Total Cover                           | Percent of Dominant Species                          |                 |
| Sapling/Shrub Stratum (Plot size: <u>15ft radius</u> )   |                |   | That Are OBL, FACW, or FAC:                          | (A/B)           |
| 1  |                |   | Prevalence Index worksheet:                          |                 |
| 2  |                |   | Total % Cover of:Mu                                  | tiply by:       |
| 3  |                |   | OBL species x 1 =                                    |                 |
| 4  |                |   | FACW species x 2 =                                   |                 |
| 5  |                |   | FAC species x 3 =                                    |                 |
|  |                | = Total Cover                           | FACU species x 4 =                                   |                 |
| Herb Stratum (Plot size: 15ft radius)                    |                |   | UPL species x 5 =                                    |                 |
| 1  |                | · ·                                     | Column Totals: (A)                                   |                 |
| 2  |                |   |  |                 |
| 3  |                |   | Prevalence Index = B/A =                             |                 |
| 4  |                |   | Hydrophytic Vegetation Indicators:                   |                 |
| 5  |                |   | Rapid Test for Hydrophytic Vegeta                    | ation           |
| 6  |                |   | Dominance Test is >50%                               |                 |
| 7  |                |   | ☐ Prevalence Index is ≤3.0 <sup>1</sup>              |                 |
| 8  |                |   | Morphological Adaptations <sup>1</sup> (Provi        |                 |
| 9  |                |   | data in Remarks or on a separ                        | ate sheet)      |
| 10   |                |   | Wetland Non-Vascular Plants <sup>1</sup>             |                 |
|  |                |   | Problematic Hydrophytic Vegetation                   | on¹ (Explain)   |
| 11   |                | = Total Cover                           | <sup>1</sup> Indicators of hydric soil and wetland h |                 |
| Woody Vine Stratum (Plot size: 15ft radius)              | 100            |   | be present, unless disturbed or proble               | matic.          |
| 1  |                |   |  |                 |
| 2  |                | ·                                       | Hydrophytic  |                 |
| L  | 0              | = Total Cover                           | Vegetation Present? Yes INO                          |                 |
| % Bare Ground in Herb Stratum                            | <u>u</u>       |   |  |                 |
| Remarks: managed for annual agricultural crop production | and harves     | t. plant community pri                  | ior to spring plowing a mixture of cover o           | rop, herbs, and |
| grasses.   |                | . , , , , , , , , , , , , , , , , , , , |  | •               |

#### Sampling Point: SP13

| Depth       | Matrix              |             |   | dox Featu   |                    |                  |                     |  |
|-------------|---------------------|-------------|---|-------------|--------------------|------------------|---------------------|--|
| (inches)    | Color (moist)       | %           | Color (moist)                             | %           | Type <sup>1</sup>  | Loc <sup>2</sup> | Texture             | Remarks  |
| 0-11        | <u>10YR 3/3</u>     | 100         |   |             |                    |                  | SL                  | mixed sandy loam   |
| 11-24       | <u>10YR 3/3</u>     | 98          | 10YR 4/6                                  | 2           | D                  | M                | <u>SL</u>           | mixed sandy loam   |
|             |                     |             |   |             |                    |                  |                     |  |
|             |                     |             |   |             |                    |                  |                     |  |
|             |                     |             |   |             |                    |                  |                     |  |
| 21          |                     |             | M=Reduced Matrix,<br>all LRRs, unless oth |             |                    | ed Sand C        |                     | Location: PL=Pore Lining, M=Matrix.<br>ators for Problematic Hydric Soils <sup>3</sup> : |
|             |                     |             | Sandy Redox                               |             | oteu.)             |                  |                     | cm Muck (A10)  |
|             | pipedon (A2)        |             | Stripped Matr                             | . ,         |                    |                  |                     | ed Parent Material (TF2)   |
|             | istic (A3)          |             | Loamy Mucky                               | . ,         | F1) ( <b>excep</b> | t MLRA 1         |                     | ery Shallow Dark Surface (TF12)  |
| 🗌 Hydrog    | en Sulfide (A4)     |             | Loamy Gleye                               | d Matrix (F | 2)                 |                  |                     | ther (Explain in Remarks)  |
| Deplete     | d Below Dark Surfa  | ce (A11)    | Depleted Mat                              | rix (F3)    |                    |                  |                     |  |
| Thick D     | ark Surface (A12)   |             | Redox Dark S                              | Surface (F6 | 6)                 |                  | <sup>3</sup> Indica | ators of hydrophytic vegetation and  |
| 🗌 Sandy I   | Mucky Mineral (S1)  |             | Depleted Dar                              | k Surface   | (F7)               |                  | we                  | etland hydrology must be present,  |
| •           | Gleyed Matrix (S4)  |             | Redox Depres                              | ssions (F8  | )                  |                  | un                  | less disturbed or problematic.   |
|             | Layer (if present): |             |   |             |                    |                  |                     |  |
|             | 1ches):             |             |   |             |                    |                  | Hydric S            | oil Present? Yes 🗌 No 🛛  |
| Remarks: N  | O prominent indicat | tors of hvd | lric soils                                |             |                    |                  |                     |  |
|             |                     | ,           |   |             |                    |                  |                     |  |
|             |                     |             |   |             |                    |                  |                     |  |
|             |                     |             |   |             |                    |                  |                     |  |
| DROLO       | GY                  |             |   |             |                    |                  |                     |  |
| Wetland H   | drology Indicators  | s:          |   |             |                    |                  |                     |  |
| Primary Ind | icators (minimum of | one requi   | red; check all that ap                    | (ylq        |                    |                  | Sec                 | condary Indicators (2 or more required   |

| Primary Indicators (minimum of one required; check all that apply) |   |           |                                      |                   | Se                                    | condary Indicators (2 or more required)   |
|--|---|-----------|--------------------------------------|-------------------|---------------------------------------|---|
| Surface Water (A1)   | Surface Water (A1) Water-Stained Leaves (B9) (except MLRA |           |                                      |                   | Water-Stained Leaves (B9) (MLRA 1, 2, |   |
| High Water Table (A2)  |   |           | 1, 2, 4A, and 4B)                    |                   |                                       | 4A, and 4B)                               |
| Saturation (A3)  |   |           | Salt Crust (B11)                     |                   |                                       | Drainage Patterns (B10)                   |
| Water Marks (B1)   |   |           | Aquatic Invertebrates (B13)          |                   |                                       | Dry-Season Water Table (C2)               |
| Sediment Deposits (B2)   |   |           | Hydrogen Sulfide Odor (C1)           |                   |                                       | Saturation Visible on Aerial Imagery (C9) |
| Drift Deposits (B3)  |   |           | Oxidized Rhizospheres along Livin    | ng Roots (C3)     |                                       | Geomorphic Position (D2)                  |
| Algal Mat or Crust (B4)  |   |           | Presence of Reduced Iron (C4)        |                   |                                       | Shallow Aquitard (D3)                     |
| Iron Deposits (B5)   |   |           | Recent Iron Reduction in Tilled So   | ils (C6)          |                                       | FAC-Neutral Test (D5)                     |
| Surface Soil Cracks (B6)   |   |           | Stunted or Stressed Plants (D1) (L   | <b>.RR A</b> )    |                                       | Raised Ant Mounds (D6) (LRR A)            |
| Inundation Visible on Aeri   | al Imagery (B7  | ) 🗌       | Other (Explain in Remarks)           |                   |                                       | Frost-Heave Hummocks (D7)                 |
| Sparsely Vegetated Conc  | ave Surface (B  | 88)       |                                      |                   |                                       |   |
| Field Observations:  |   |           |                                      |                   |                                       |   |
| Surface Water Present?   | Yes 🗌 No  |           | epth (inches):                       |                   |                                       |   |
| Water Table Present?   | Yes 🗌 No  | D         | epth (inches):                       |                   |                                       |   |
| Saturation Present?<br>(includes capillary fringe)                 | Yes 🗌 No  | D         | epth (inches):                       | Wetland Hy        | drol                                  | ogy Present? Yes 🗌 No 🛛                   |
| Describe Recorded Data (stre                                       | eam gauge, mo   | onitoring | well, aerial photos, previous inspec | tions), if availa | able:                                 |   |
|  |   |           |                                      |                   |                                       |   |
| Remarks: NO prominent field  | indicators of w   | etland h  | ydrology documented early growing    | g season. See     | e spr                                 | ing 2020 monitoring data                  |
|  |   |           |                                      |                   |                                       |   |
|  |   |           |                                      |                   |                                       |   |
|  |   |           |                                      |                   |                                       |   |
|  |   |           |                                      |                   |                                       |   |

| Project/Site: Western Portion of Parcel 0420351003  | City/County: City of Puyallup, Pierce County       | Sampling Date: <u>16 APR 2020</u> |  |  |  |  |  |
|---|--|-----------------------------------|--|--|--|--|--|
| Applicant/Owner: Cascade Development  | State: WA  | Sampling Point: <u>SP14</u>       |  |  |  |  |  |
| Investigator(s): Habitat Technologies   | Section, Township, Range: Sec 35                   | T20N R04E QT 12                   |  |  |  |  |  |
| Landform (hillslope, terrace, etc.): valley   | Local relief (concave, convex, none): <u>flat</u>  | Slope (%): <u>&lt;1%</u>          |  |  |  |  |  |
| Subregion (LRR): ALa  | at: Long:  | Datum: USGS                       |  |  |  |  |  |
| Soil Map Unit Name: Briscot loam  | NWI classif  | ication: somewhat poorly drained  |  |  |  |  |  |
| Are climatic / hydrologic conditions on the site typical for this time                                      | e of year? Yes 🛛 🛛 No 🗌 (If no, explain in Remarks | s.)                               |  |  |  |  |  |
| Are Vegetation, Soil, or Hydrology significa  | ntly disturbed? Are "Normal Circumstances" p       | resent? Yes 🛛 No 🗌                |  |  |  |  |  |
| Are Vegetation, Soil, or Hydrology naturally  | problematic? (If needed, explain any answers       | s in Remarks.)                    |  |  |  |  |  |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. |  |                                   |  |  |  |  |  |
| Hydrophytic Vegetation Present? Yes 🗌 No 🗍  | In the Descripted Arrest                           |                                   |  |  |  |  |  |

| Hydrophytic Vegetation Present?<br>Hydric Soil Present?<br>Wetland Hydrology Present? | Yes 🗌       | No 🖂<br>No 🖾            | Is the Sampled Area within a Wetland? | Yes 🗌 No 🛛 |
|---|-------------|-------------------------|---------------------------------------|------------|
| Remarks: managed for annual agricultu   | iral crop p | production and harvest. |                                       |            |

|   | Absolute       | Dominant Indicator      | Dominance Test worksheet:   |          |
|---|----------------|-------------------------|---|----------|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )          | <u>% Cover</u> | Species? Status         | Number of Dominant Species  | ( • )    |
| 1   |                | ·                       | That Are OBL, FACW, or FAC:                                       | (A)      |
| 2   |                |                         | Total Number of Dominant  |          |
| 3   |                | · ·                     | Species Across All Strata:  | (B)      |
| 4   |                | · ·                     | Percent of Dominant Species                                       |          |
|   |                | = Total Cover           | That Are OBL, FACW, or FAC:                                       | (A/B)    |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15ft radius</u> ) |                |                         | Developer of the development of the set                           |          |
| 1   |                |                         | Prevalence Index worksheet:                                       |          |
| 2   |                |                         | Total % Cover of: Multiply by                                     |          |
| 3   |                | · ·                     | OBL species x 1 =   |          |
| 4   |                |                         | FACW species x 2 =  |          |
| 5   |                |                         | FAC species x 3 =   |          |
|   |                | = Total Cover           | FACU species x 4 =  |          |
| Herb Stratum (Plot size: <u>15ft radius</u> )                 |                |                         | UPL species x 5 =   |          |
| 1   |                | · ·                     | Column Totals: (A)  | (B)      |
| 2   |                | · ·                     |   |          |
| 3   |                | · ·                     | Prevalence Index = B/A =  | _        |
| 4   |                |                         | Hydrophytic Vegetation Indicators:                                |          |
| 5   |                |                         | Rapid Test for Hydrophytic Vegetation                             |          |
| 6   |                |                         | Dominance Test is >50%  |          |
| 7   |                |                         | □ Prevalence Index is ≤3.0 <sup>1</sup>                           |          |
| 8   |                |                         | Morphological Adaptations <sup>1</sup> (Provide supplementations) |          |
| 9   |                |                         | data in Remarks or on a separate she                              | eet)     |
| 10  |                |                         | ☐ Wetland Non-Vascular Plants <sup>1</sup>                        |          |
| 11  |                |                         | Problematic Hydrophytic Vegetation <sup>1</sup> (Exp              | plain)   |
|   |                | = Total Cover           | <sup>1</sup> Indicators of hydric soil and wetland hydrolog       | gy must  |
| Woody Vine Stratum (Plot size: <u>15ft radius</u> )           | 100            |                         | be present, unless disturbed or problematic.                      |          |
| 1   |                |                         |   |          |
| 2   |                |                         | Hydrophytic<br>Vegetation   |          |
|   | 0              | = Total Cover           | Present? Yes No   |          |
| % Bare Ground in Herb Stratum                                 | <u> </u>       |                         |   |          |
| Remarks: managed for annual agricultural crop production      | and harves     | st. plant community pri | or to spring plowing a mixture of cover crop, he                  | rbs, and |
| grasses.  |                |                         |   |          |

#### Sampling Point: SP14

| Depth <u>Matr</u><br>(inches) Color (moist)  | rix%         |                           | Redo<br>r (moist)   | <u>x Featur</u><br>%  | <u>es</u><br>Type <sup>1</sup>  | Loc <sup>2</sup>  | Texture   | 2  | Remarks  |                  |
|--|--------------|---------------------------|---|---|---|---|---|--|--|------------------|
| )-9 10YR 3/3   | 100          |                           | (110131)  |   | турс  |   | SL  |  |  |                  |
|  |              | 10/1                      |   | 10  |   |   |   |  | mixed sandy loam   |                  |
| <u>9-15 10YR 3/3</u>   | 90           | _                         | R 4/6   | 10  | <u>D</u>  | <u>M</u>  | <u>SL</u>   |  | mixed sandy loam   |                  |
| <u>15-24 10YR 4/2</u>  | 90           | <u>10YR</u>               | ₹4/6  | 10  | <u>D</u>  | M   | SL  |  | mixed sandy loam   |                  |
| <u> </u>   |              |                           |   |   |   |   |   |  |  |                  |
|  |              |                           |   |   |   |   |   |  |  |                  |
|  |              |                           |   |   |   |   |   |  |  |                  |
|  |              |                           |   |   |   |   |   |  |  |                  |
|  |              |                           |   |   |   |   |   |  |  |                  |
| Type: C=Concentration, D=  | Depletion.   | -<br>RM=Redu              | uced Matrix. CS   | S=Covere  | ed or Coate   | ed Sand G   | rains.  | <sup>2</sup> Loca  | ation: PL=Pore Lining, M=Ma  | atrix.           |
| lydric Soil Indicators: (Ap  |              |                           |   |   |   |   |   |  | s for Problematic Hydric Se  |                  |
| Histosol (A1)  |              | 🗆 s                       | andy Redox (S   | S5)   |   |   |   | 2 cm   | Muck (A10)   |                  |
| Histic Epipedon (A2)   |              | 🗆 S                       | Stripped Matrix   | (S6)  |   |   |   | Red F  | Parent Material (TF2)  |                  |
| Black Histic (A3)  |              | 🗆 La                      | oamy Mucky N  | /lineral (F   | 1) (except  | : MLRA 1)   |   | Very S   | Shallow Dark Surface (TF12)  |                  |
| Hydrogen Sulfide (A4)  |              |                           | oamy Gleyed N   |   | 2)  |   |   | Other  | (Explain in Remarks)   |                  |
| Depleted Below Dark Su   | . ,          |                           | Depleted Matrix   | . ,   |   |   | 2.  |  | •• • • • • • • •   |                  |
| Thick Dark Surface (A12  | ,            |                           | Redox Dark Sur  | •   | ,   |   |   |  | s of hydrophytic vegetation a  |                  |
| Sandy Mucky Mineral (S   |              |                           | Depleted Dark S   |   | ,   |   |   |  | d hydrology must be present  | ,                |
| Sandy Gleyed Matrix (S4  | -            |                           | Redox Depressi  | ions (F8)   |   |   |   | uniess   | disturbed or problematic.  |                  |
| Postrictivo Lavor (if proson   | \+\·         |                           |   |   |   |   |   |  |  |                  |
| -  | •            |                           |   |   |   |   |   |  |  |                  |
| Туре:  | •            |                           |   |   |   |   | Hydrid  | s Soil I   | Prosont? Vos 🗆 No 🎮  |                  |
| Type:<br>Depth (inches):   | •<br>        |                           |   | e of shall  | ow depres   | sion  | Hydrid  | c Soil I   | Present? Yes 🗌 No 🛛  |                  |
| Type:<br>Depth (inches):   | •<br>        |                           |   | e of shall  | ow depres   | sion  | Hydrid  | c Soil I   | Present? Yes 🗌 No 🛛  |                  |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi   | •<br>        |                           |   | e of shall  | ow depres   | sion  | Hydrid  | c Soil I   | Present? Yes 🗌 No 🛛  |                  |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi   | cators of hy |                           |   | e of shall  | ow depres   | sion  | Hydrid  | c Soil I   | Present? Yes 🗌 No 🛛  |                  |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br>DROLOGY<br>Vetland Hydrology Indicat   | cators of hy | dric soils                | located outside   |   | ow depres   | sion  |   |  | Present? Yes D No A  | quired)          |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br>DROLOGY<br>Vetland Hydrology Indicat<br>Primary Indicators (minimum<br>] Surface Water (A1)  | cators of hy | dric soils                | located outside   | y)  | · · · · · · · · · · · · · · · · · · ·   |   |   | Second   |  |                  |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br>DROLOGY<br>Vetland Hydrology Indicat<br>Primary Indicators (minimum<br>] Surface Water (A1)  | cators of hy | dric soils                | located outside   | y)  | /es (B9) ( <b>e</b>   |   |   | Second   | dary Indicators (2 or more rec   |                  |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br>DROLOGY<br>Vetland Hydrology Indicat<br>Primary Indicators (minimum<br>Surface Water (A1)<br>High Water Table (A2)   | cators of hy | dric soils<br>uired; chea | located outside   | y)<br>ned Leav<br><b>A, and 4</b>   | /es (B9) ( <b>e</b>   |   | RA  | Second<br>Wa   | dary Indicators (2 or more red<br>iter-Stained Leaves (B9) ( <b>ML</b>   |                  |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br>DROLOGY<br>Vetland Hydrology Indicat<br>Primary Indicators (minimum<br>Surface Water (A1)<br>High Water Table (A2)<br>Saturation (A3)  | cators of hy | dric soils<br>uired; che  | located outside<br>eck all that appl<br>☐ Water-Stai<br>1, 2, 44  | y)<br>ned Leav<br><b>A, and 48</b><br>(B11)   | /es (B9) ( <b>e</b><br><b>3)</b>  |   | RA  | Second<br>Wa   | dary Indicators (2 or more rec<br>tter-Stained Leaves (B9) ( <b>ML</b><br><b>4A, and 4B)</b>   |                  |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br>DROLOGY<br>Vetland Hydrology Indicat<br>Primary Indicators (minimum<br>Surface Water (A1)<br>High Water Table (A2)<br>Saturation (A3)<br>Water Marks (B1)  | cators of hy | dric soils<br>uired; che  | located outside         eck all that appl         Water-Stai         1, 2, 44         Salt Crust (  | y)<br>ned Leav<br><b>A, and 4</b><br>(B11)<br>/ertebrate  | ves (B9) ( <b>e</b><br><b>3)</b><br>es (B13)  |   | RA  | Second<br>Wa<br>Dra  | dary Indicators (2 or more red<br>ater-Stained Leaves (B9) ( <b>ML</b><br><b>4A, and 4B)</b><br>ainage Patterns (B10)  | RA 1,            |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br>DROLOGY<br>Vetland Hydrology Indicat<br>Primary Indicators (minimum<br>Surface Water (A1)<br>High Water Table (A2)<br>Saturation (A3)<br>Water Marks (B1)<br>Sediment Deposits (B2)  | cators of hy | dric soils<br>uired; che  | located outside         eck all that appl         Water-Stai         1, 2, 44         Salt Crust         Aquatic Inv  | y)<br>ned Leav<br>A, and 4<br>(B11)<br>/ertebrate<br>Sulfide C  | ves (B9) ( <b>e</b><br><b>3)</b><br>es (B13)<br>edor (C1)   | xcept ML  | RA  | Second<br>Wa<br>Drz<br>Dry<br>Sat  | dary Indicators (2 or more red<br>ater-Stained Leaves (B9) ( <b>ML</b><br><b>4A, and 4B)</b><br>ainage Patterns (B10)<br>/-Season Water Table (C2)   | RA 1,            |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br>DROLOGY<br>Vetland Hydrology Indicat<br>Primary Indicators (minimum<br>Surface Water (A1)<br>High Water Table (A2)<br>Saturation (A3)<br>Water Marks (B1)<br>Sediment Deposits (B2)<br>Drift Deposits (B3)   | cators of hy | dric soils                | located outside         eck all that apple         Water-Stain         1, 2, 44         Salt Crust of         Aquatic Inv         Hydrogen S  | y)<br>ned Leav<br>A, and 48<br>(B11)<br>vertebrate<br>Sulfide C<br>Rhizosphe  | ves (B9) ( <b>e</b><br><b>3)</b><br>es (B13)<br>edor (C1)<br>eres along   | xcept ML  | RA Entry of the second | Second<br>Wa<br>Dra<br>Dry<br>Sat<br>Ge<br>Ge  | dary Indicators (2 or more red<br>tter-Stained Leaves (B9) ( <b>ML</b><br><b>4A, and 4B)</b><br>ainage Patterns (B10)<br><i>i</i> -Season Water Table (C2)<br>turation Visible on Aerial Imag  | RA 1,            |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br><b>DROLOGY</b><br>Vetland Hydrology Indicat<br>Primary Indicators (minimum<br>Surface Water (A1)<br>High Water Table (A2)<br>Saturation (A3)<br>Water Marks (B1)<br>Sediment Deposits (B2)<br>Drift Deposits (B3)<br>Algal Mat or Crust (B4)   | cators of hy | dric soils<br>uired; cher | located outside         eck all that apple         Water-Stain         1, 2, 44         Salt Crust in         Aquatic Inv         Hydrogen S         Oxidized R   | y)<br>ned Leav<br>A, and 4<br>(B11)<br>/ertebrate<br>Sulfide C<br>Rhizosphe<br>of Reduce  | ves (B9) ( <b>e</b><br><b>3)</b><br>es (B13)<br>odor (C1)<br>eres along<br>ed Iron (C4  | xcept ML  | RA States (C3)  | Second<br>Wa<br>Drz<br>Dry<br>Sat<br>Ge<br>Sh:   | dary Indicators (2 or more red<br>tter-Stained Leaves (B9) ( <b>ML</b><br><b>4A, and 4B)</b><br>ainage Patterns (B10)<br>/-Season Water Table (C2)<br>turation Visible on Aerial Imag<br>omorphic Position (D2)  | RA 1,            |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br><b>DROLOGY</b><br>Vetland Hydrology Indicat<br>Primary Indicators (minimum<br>Surface Water (A1)<br>High Water Table (A2)<br>Saturation (A3)<br>Water Marks (B1)<br>Sediment Deposits (B2)<br>Drift Deposits (B3)<br>Algal Mat or Crust (B4)<br>Iron Deposits (B5)   | cators of hy | dric soils<br>uired; cher | located outside         eck all that appl         Water-Stai         1, 2, 44         Salt Crust         Aquatic Inv         Hydrogen S         Oxidized R         Presence c   | y)<br>ned Leav<br>A, and 4<br>(B11)<br>/ertebrate<br>Sulfide C<br>Sulfide C<br>Sulfide C<br>Sulfide C<br>Sulfide C<br>Sulfide C<br>Sulfide C<br>Sulfide C | ves (B9) ( <b>e</b><br><b>3)</b><br>es (B13)<br>odor (C1)<br>eres along<br>ed Iron (C4<br>ion in Tiller                           | xcept ML  | RA (C3)   | Second<br>Wa<br>Dra<br>Dry<br>Sat<br>Ge<br>Sha<br>C FA   | dary Indicators (2 or more red<br>tter-Stained Leaves (B9) ( <b>ML</b><br><b>4A, and 4B)</b><br>ainage Patterns (B10)<br><i>y</i> -Season Water Table (C2)<br>turation Visible on Aerial Imag<br>omorphic Position (D2)<br>allow Aquitard (D3)   | RA 1,            |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br>DROLOGY Vetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)   | cators of hy | dric soils<br>uired; che  | located outside         eck all that apple         Water-Stai         1, 2, 44         Salt Crust (         Aquatic Inv         Hydrogen S         Oxidized R         Presence c         Recent Iror  | y)<br>ned Leav<br><b>A, and 4</b><br>(B11)<br>vertebrate<br>Sulfide C<br>Rhizosphe<br>of Reduct<br>n Reduct<br>Stressec                                   | ves (B9) ( <b>e</b><br><b>3)</b><br>es (B13)<br>odor (C1)<br>eres along<br>ed Iron (C4<br>ion in Tilled<br>d Plants (D            | xcept ML  | RA (C3)   | Second           Wa           Dra           Dry           Sat           Ge           Sha           FA           Rain | dary Indicators (2 or more red<br>tter-Stained Leaves (B9) ( <b>ML</b><br><b>4A, and 4B)</b><br>ainage Patterns (B10)<br>/-Season Water Table (C2)<br>turation Visible on Aerial Imag<br>omorphic Position (D2)<br>allow Aquitard (D3)<br>C-Neutral Test (D5)  | RA 1,<br>gery (C |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br><b>DROLOGY</b> Vetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aet   | cators of hy | dric soils                | located outside         eck all that appl         Water-Stai         1, 2, 44         Salt Crust (         Aquatic Inv         Hydrogen S         Oxidized R         Presence C         Recent Iron         Stunted or  | y)<br>ned Leav<br><b>A, and 4</b><br>(B11)<br>vertebrate<br>Sulfide C<br>Rhizosphe<br>of Reduct<br>n Reduct<br>Stressec                                   | ves (B9) ( <b>e</b><br><b>3)</b><br>es (B13)<br>odor (C1)<br>eres along<br>ed Iron (C4<br>ion in Tilled<br>d Plants (D            | xcept ML  | RA (C3)   | Second           Wa           Dra           Dry           Sat           Ge           Sha           FA           Rai  | dary Indicators (2 or more red<br>ater-Stained Leaves (B9) ( <b>ML</b><br><b>4A, and 4B)</b><br>ainage Patterns (B10)<br>/-Season Water Table (C2)<br>turation Visible on Aerial Imag<br>omorphic Position (D2)<br>allow Aquitard (D3)<br>C-Neutral Test (D5)<br>ised Ant Mounds (D6) ( <b>LRR</b> A | RA 1,<br>gery (C |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br>DROLOGY Vetland Hydrology Indicat<br>Primary Indicators (minimum<br>Surface Water (A1)<br>High Water Table (A2)<br>Saturation (A3)<br>Water Marks (B1)<br>Sediment Deposits (B2)<br>Drift Deposits (B3)<br>Algal Mat or Crust (B4)<br>Iron Deposits (B5)<br>Surface Soil Cracks (B6)<br>Inundation Visible on Aer<br>Sparsely Vegetated Com  | cators of hy | dric soils                | located outside         eck all that appl         Water-Stai         1, 2, 44         Salt Crust (         Aquatic Inv         Hydrogen S         Oxidized R         Presence C         Recent Iron         Stunted or  | y)<br>ned Leav<br><b>A, and 4</b><br>(B11)<br>vertebrate<br>Sulfide C<br>Rhizosphe<br>of Reduct<br>n Reduct<br>Stressec                                   | ves (B9) ( <b>e</b><br><b>3)</b><br>es (B13)<br>odor (C1)<br>eres along<br>ed Iron (C4<br>ion in Tilled<br>d Plants (D            | xcept ML  | RA (C3)   | Second           Wa           Dra           Dry           Sat           Ge           Sha           FA           Rai  | dary Indicators (2 or more red<br>ater-Stained Leaves (B9) ( <b>ML</b><br><b>4A, and 4B)</b><br>ainage Patterns (B10)<br>/-Season Water Table (C2)<br>turation Visible on Aerial Imag<br>omorphic Position (D2)<br>allow Aquitard (D3)<br>C-Neutral Test (D5)<br>ised Ant Mounds (D6) ( <b>LRR</b> A | RA 1,<br>gery (C |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br>DROLOGY<br>Vetland Hydrology Indicat<br>Primary Indicators (minimum<br>Surface Water (A1)<br>High Water Table (A2)<br>Saturation (A3)<br>Water Marks (B1)<br>Sediment Deposits (B2)<br>Drift Deposits (B3)<br>Algal Mat or Crust (B4)<br>Iron Deposits (B5)<br>Surface Soil Cracks (B6)<br>Inundation Visible on Aer<br>Sparsely Vegetated Cond<br>Field Observations:                                 | cators of hy | dric soils                | located outside         eck all that appli         Water-Stai         1, 2, 44         Salt Crust i         Aquatic Inv         Hydrogen S         Oxidized R         Presence c         Recent Iron         Stunted or         Other (Exp                        | y)<br>ned Leav<br>A, and 48<br>(B11)<br>/ertebrate<br>Sulfide C<br>Rhizosphe<br>of Reduct<br>n Reduct<br>Stressec<br>alain in Re                          | ves (B9) ( <b>e</b><br><b>3)</b><br>es (B13)<br>odor (C1)<br>eres along<br>ed Iron (C4<br>ion in Tilled<br>d Plants (D<br>emarks) | xcept ML  | RA (C3)   | Second           Wa           Dra           Dry           Sat           Ge           Sha           FA           Rai  | dary Indicators (2 or more red<br>ater-Stained Leaves (B9) ( <b>ML</b><br><b>4A, and 4B)</b><br>ainage Patterns (B10)<br>/-Season Water Table (C2)<br>turation Visible on Aerial Imag<br>omorphic Position (D2)<br>allow Aquitard (D3)<br>C-Neutral Test (D5)<br>ised Ant Mounds (D6) ( <b>LRR</b> A | RA 1, .          |
| Type:<br>Depth (inches):<br>Remarks: NO prominent indi<br><b>DROLOGY</b><br>Vetland Hydrology Indicat<br>Primary Indicators (minimum<br>Surface Water (A1)<br>High Water Table (A2)<br>Saturation (A3)<br>Water Marks (B1)<br>Sediment Deposits (B2)<br>Drift Deposits (B3)<br>Algal Mat or Crust (B4)<br>Iron Deposits (B5)<br>Surface Soil Cracks (B6)<br>Inundation Visible on Aer<br>Sparsely Vegetated Com<br>Field Observations:<br>Surface Water Present? | cators of hy | dric soils                | located outside         eck all that apple         Water-Stai         1, 2, 44         Salt Crust (         Aquatic Inv         Hydrogen 3         Oxidized R         Presence c         Recent Iron         Stunted or         Other (Exp         Depth (inches) | y)<br>ned Leav<br>(B11)<br>vertebrate<br>Sulfide C<br>Rhizosphe<br>of Reduct<br>Stressec<br>olain in Re   | ves (B9) ( <b>e</b><br><b>3)</b><br>es (B13)<br>odor (C1)<br>eres along<br>ed Iron (C4<br>ion in Tilled<br>d Plants (D<br>emarks) | xcept ML  | RA (C3)   | Second           Wa           Dra           Dry           Sat           Ge           Sha           FA           Rai  | dary Indicators (2 or more red<br>ater-Stained Leaves (B9) ( <b>ML</b><br><b>4A, and 4B)</b><br>ainage Patterns (B10)<br>/-Season Water Table (C2)<br>turation Visible on Aerial Imag<br>omorphic Position (D2)<br>allow Aquitard (D3)<br>C-Neutral Test (D5)<br>ised Ant Mounds (D6) ( <b>LRR</b> A | RA 1, .          |
| Depth (inches):<br>Remarks: NO prominent indi<br>DROLOGY<br>Netland Hydrology Indicat<br>Primary Indicators (minimum<br>Surface Water (A1)<br>High Water Table (A2)<br>Saturation (A3)<br>Water Marks (B1)<br>Sediment Deposits (B2)<br>Drift Deposits (B3)<br>Algal Mat or Crust (B4)<br>Iron Deposits (B5)<br>Surface Soil Cracks (B6)   | cators of hy | dric soils                | located outside         eck all that appli         Water-Stai         1, 2, 44         Salt Crust i         Aquatic Inv         Hydrogen S         Oxidized R         Presence c         Recent Iron         Stunted or         Other (Exp                        | y)<br>ned Leav<br>A, and 4E<br>(B11)<br>vertebrate<br>Sulfide C<br>Rhizosphe<br>of Reduct<br>n Reduct<br>Stressec<br>olain in Re<br>s):<br>s):            | ves (B9) ( <b>e</b><br><b>3)</b><br>es (B13)<br>odor (C1)<br>eres along<br>ed Iron (C4<br>ion in Tiller<br>d Plants (D<br>emarks) | xcept MLI<br>Living Roo<br>I)<br>d Soils (Cf<br>1) (LRR A | <b>RA</b>   | Second<br>Wa<br>Dra<br>Dry<br>Sat<br>Ge<br>Sha<br>FA<br>Rai<br>FA  | dary Indicators (2 or more red<br>ater-Stained Leaves (B9) ( <b>ML</b><br><b>4A, and 4B)</b><br>ainage Patterns (B10)<br>/-Season Water Table (C2)<br>turation Visible on Aerial Imag<br>omorphic Position (D2)<br>allow Aquitard (D3)<br>C-Neutral Test (D5)<br>ised Ant Mounds (D6) ( <b>LRR</b> A | RA 1, .          |

Remarks: No prominent field indicators of wetland hydrology. See spring 2020 monitoring data

| Project/Site: Western Portion of Parcel 0420351003                    | City/County: City of Puyallup, Pierce County        | Sampling Date: <u>16 APR 2020</u> |
|---|---|-----------------------------------|
| Applicant/Owner: Cascade Development                                  | State: WA   | Sampling Point: <u>SP15</u>       |
| Investigator(s): Habitat Technologies                                 | Section, Township, Range: <u>Sec 35</u>             | T20N R04E QT 12                   |
| Landform (hillslope, terrace, etc.): valley                           | Local relief (concave, convex, none): flat          | Slope (%): <u>&lt;1%</u>          |
| Subregion (LRR): AL   | at: Long:   | Datum: USGS                       |
| Soil Map Unit Name: Briscot loam                                      | NWI classifi  | cation: somewhat poorly drained   |
| Are climatic / hydrologic conditions on the site typical for this tim | ne of year? Yes 🛛 🛛 No 🗌 (If no, explain in Remarks | s.)                               |
| Are Vegetation, Soil, or Hydrology signification                      | antly disturbed? Are "Normal Circumstances" pr      | resent? Yes 🛛 No 🗌                |
| Are Vegetation, Soil, or Hydrology naturally                          | / problematic? (If needed, explain any answers      | s in Remarks.)                    |
| SUMMARY OF FINDINGS – Attach site map sho                             | owing sampling point locations, transect            | s, important features, etc.       |
| Hydrophytic Vegetation Present? Yes I No I                            |   |                                   |

| Hydrophylic vegetation Present?       |                         | Is the Sampled Area                  |                  |  |
|---------------------------------------|-------------------------|--------------------------------------|------------------|--|
| Hydric Soil Present?                  | Yes 🛛 No 🗌              | within a Wetland?                    | Yes 🖂            |  |
| Wetland Hydrology Present?            | Yes 🛛 No 🗌              |                                      |                  |  |
| Remarks: managed for annual agricultu | Iral crop production an | nd harvest. shallow depression sease | onally saturated |  |
|                                       |                         |                                      |                  |  |
|                                       |                         |                                      |                  |  |

|  | Absolute       | Dominant Indicator                      | Dominance Test worksheet:   |
|--|----------------|---|---|
| <u>Tree Stratum</u> (Plot size: <u>15ft radius</u> )     | <u>% Cover</u> | Species? Status                         | Number of Dominant Species  |
| 1  |                |   | That Are OBL, FACW, or FAC: (A)                                   |
| 2  |                |   | Total Number of Dominant  |
| 3  |                |   | Species Across All Strata: (B)                                    |
| 4  |                |   |   |
|  |                | <b>T</b> ( ) <b>O</b>                   | Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)      |
| Sapling/Shrub Stratum (Plot size: 15ft radius)           |                |   |   |
| 1  |                |   | Prevalence Index worksheet:                                       |
| 2  |                |   | Total % Cover of:Multiply by:                                     |
| 3  |                |   | OBL species x 1 =   |
| 4  |                |   | FACW species x 2 =  |
| 5  |                |   | FAC species x 3 =   |
|  |                | = Total Cover                           | FACU species x 4 =  |
| Herb Stratum (Plot size: 15ft radius)                    |                |   | UPL species x 5 =   |
| 1  |                |   | Column Totals: (A) (B)  |
| 2  |                |   |   |
| 3  |                |   | Prevalence Index = B/A =  |
| 4  |                |   | Hydrophytic Vegetation Indicators:                                |
| 5  |                |   | Rapid Test for Hydrophytic Vegetation                             |
| 6  |                |   | □ Dominance Test is >50%  |
| 7  |                |   | □ Prevalence Index is ≤3.0 <sup>1</sup>                           |
| 8  |                |   | Morphological Adaptations <sup>1</sup> (Provide supporting        |
| 9  |                |   | data in Remarks or on a separate sheet)                           |
|  |                |   | Wetland Non-Vascular Plants <sup>1</sup>                          |
| 10   |                |   | Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)         |
| 11   |                | = Total Cover                           | <sup>1</sup> Indicators of hydric soil and wetland hydrology must |
| Woody Vine Stratum (Plot size: 15ft radius)              | 100            | = Total Cover                           | be present, unless disturbed or problematic.                      |
| <u> </u>   |                |   |   |
| 2  |                |   | Hydrophytic   |
| 2  | 0              | = Total Cover                           | Vegetation Present? Yes 🗌 No 🗌                                    |
| % Bare Ground in Herb Stratum                            | 0              |   |   |
| Remarks: managed for annual agricultural crop production | and harves     | t. plant community pri                  | or to spring plowing a mixture of cover crop, herbs, and          |
| grasses.   |                | . , , , , , , , , , , , , , , , , , , , |   |

#### Sampling Point: SP15

| (inches)   | Color (moist)  | %                        | Color (moist)  | dox Featur  | Type <sup>1</sup>   | Loc <sup>2</sup>                | Textur                     | e Remarks   |  |  |
|--|--|--------------------------|--|---|---|---------------------------------|----------------------------|---|--|--|
| 0-7  | 10YR 3/2   | 100                      |  |   |   |                                 | SL                         | mixed sandy loam  |  |  |
| 7-15   | 10YR 3/2   | 90                       | 10YR 4/6   | 10  | D   | М                               | SL                         | mixed sandy loam  |  |  |
| 15-24  | 10YR 4/2   | 80                       | 10YR 4/6   | 20  |   |                                 |                            | -   |  |  |
| 13-24  | 1011(4/2   |                          | 1011(4/0   |   |   |                                 | <u></u>                    |   |  |  |
|  |  | <u> </u>                 |  |   |   |                                 |                            |   |  |  |
|  |  | <u> </u>                 |  |   |   |                                 |                            |   |  |  |
|  |  |                          |  |   |   |                                 |                            |   |  |  |
|  | Concentration, D=De  |                          |  |   |   | ed Sand G                       |                            | <sup>2</sup> Location: PL=Pore Lining, M=Matrix.<br>dicators for Problematic Hydric Soils <sup>3</sup> :  |  |  |
| Histoso  |  |                          |  |   | Jieu.)  |                                 |                            | 2 cm Muck (A10)   |  |  |
|  | Epipedon (A2)  |                          | Sandy Redox  |   |   |                                 |                            | Red Parent Material (TF2)   |  |  |
| Black H  |  |                          | Loamy Mucky  | · · ·   | =1) ( <b>excep</b>  | t MLRA 1)                       |                            | Very Shallow Dark Surface (TF12)  |  |  |
|  | en Sulfide (A4)  |                          | Loamy Gleye  | •   | , .   |                                 | Other (Explain in Remarks) |   |  |  |
|  | ed Below Dark Surfa  | ce (A11)                 | Depleted Mat   |   | ,   |                                 |                            |   |  |  |
| Thick D  | Dark Surface (A12)   |                          | Redox Dark S   | urface (F6  | 3)  |                                 | <sup>3</sup> Ir            | ndicators of hydrophytic vegetation and   |  |  |
| Sandy  | Mucky Mineral (S1)   |                          | Depleted Dark Surface (F7)   |   |   |                                 |                            | wetland hydrology must be present,  |  |  |
|  | Gleyed Matrix (S4)   |                          | Redox Depres   | ssions (F8  | )   |                                 |                            | unless disturbed or problematic.  |  |  |
|  | e Layer (if present):  |                          |  |   |   |                                 |                            |   |  |  |
|  |  |                          |  |   |   |                                 |                            |   |  |  |
| Depth (I   | nches):  |                          |  |   |   |                                 | Hydri                      | ic Soil Present? 🛛 Yes 🖂 No 🗌   |  |  |
|  |  |                          |  |   |   |                                 |                            |   |  |  |
| DROLO  | GY   |                          |  |   |   |                                 |                            |   |  |  |
| Notional   | ydrology Indicators  | s:                       |  |   |   |                                 |                            |   |  |  |
|  |  |                          |  |   |   |                                 |                            | Secondary Indicators (2 or more required)   |  |  |
| Primary Inc  |  | one requi                | red; check all that ap   |   |   |                                 |                            |   |  |  |
| Primary Ind  | e Water (A1)   | one requii               | ☐ Water-S  | tained Lea  | . , .   | except MLI                      | RA                         | □ Water-Stained Leaves (B9) (MLRA 1, 2  |  |  |
| Primary Inc<br>□ Surface<br>□ High W   | e Water (A1)<br>/ater Table (A2)   | one requi                | ☐ Water-Si<br>1, 2,  | tained Lea<br><b>4A, and 4</b>  | . , .   | except MLI                      | RA                         | 4A, and 4B)   |  |  |
| Primary Inc<br>Surface   | e Water (A1)<br>/ater Table (A2)   | one requi                | ☐ Water-S<br>1, 2,<br>☐ Salt Crus  | tained Lea<br><b>4A, and 4</b><br>st (B11)  | B)  | except MLI                      | RA                         |   |  |  |
| Primary Inc<br>Surface<br>High W<br>Saturat<br>Water M   | e Water (A1)<br>/ater Table (A2)<br>tion (A3)<br>Marks (B1)  | <u>one requi</u>         | ☐ Water-S<br>1, 2,<br>☐ Salt Crus<br>☐ Aquatic   | tained Lea<br><b>4A, and 4</b><br>st (B11)<br>Invertebrat   | <b>B)</b><br>tes (B13)  | except MLI                      | RA                         | <ul> <li>4A, and 4B)</li> <li>□ Drainage Patterns (B10)</li> <li>□ Dry-Season Water Table (C2)</li> </ul>   |  |  |
| Primary Inc<br>Surface<br>High W<br>Saturat<br>Water M   | e Water (A1)<br>/ater Table (A2)<br>tion (A3)  | <u>one requi</u>         | ☐ Water-S<br>1, 2,<br>☐ Salt Crus  | tained Lea<br><b>4A, and 4</b><br>st (B11)<br>Invertebrat   | <b>B)</b><br>tes (B13)  | except MLI                      | A                          | <b>4A, and 4B)</b> Drainage Patterns (B10)  |  |  |
| Primary Inc<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime   | e Water (A1)<br>/ater Table (A2)<br>tion (A3)<br>Marks (B1)  | <u>one requi</u>         | ☐ Water-S<br>1, 2,<br>☐ Salt Crus<br>☐ Aquatic   | tained Lea<br><b>4A, and 4</b><br>st (B11)<br>Invertebrat<br>n Sulfide (  | <b>B)</b><br>tes (B13)<br>Odor (C1)   |                                 |                            | <ul> <li>4A, and 4B)</li> <li>□ Drainage Patterns (B10)</li> <li>□ Dry-Season Water Table (C2)</li> </ul>   |  |  |
| Primary Inc<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De   | e Water (A1)<br>/ater Table (A2)<br>tion (A3)<br>Marks (B1)<br>ent Deposits (B2)   | one requi                | ☐ Water-S<br>1, 2,<br>☐ Salt Crus<br>☐ Aquatic<br>☐ Hydroge  | tained Lea<br><b>4A, and 4</b><br>st (B11)<br>Invertebrat<br>n Sulfide (<br>I Rhizosph  | <b>B)</b><br>Tes (B13)<br>Odor (C1)<br>eres along   | Living Roc                      |                            | <ul> <li>4A, and 4B)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Saturation Visible on Aerial Imagery (California)</li> </ul>  |  |  |
| Primary Inc<br>Surface<br>High W<br>Saturat<br>Water M<br>Sedime<br>Drift De<br>Algal M  | e Water (A1)<br>/ater Table (A2)<br>tion (A3)<br>Marks (B1)<br>ent Deposits (B2)<br>eposits (B3)   | one requi                | <ul> <li>Water-Si</li> <li>1, 2,</li> <li>Salt Crus</li> <li>Aquatic I</li> <li>Hydroge</li> <li>Oxidized</li> <li>Presence</li> <li>Recent I</li> </ul>   | tained Lea<br><b>4A, and 4</b><br>st (B11)<br>Invertebrat<br>n Sulfide (<br>I Rhizosph<br>e of Reduc<br>ron Reduc                       | B)<br>Dodor (C1)<br>eres along<br>ced Iron (Co<br>tion in Tille                           | Living Roc<br>4)<br>d Soils (C6 | ots (C3)                   | <ul> <li>4A, and 4B)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Saturation Visible on Aerial Imagery (C</li> <li>Geomorphic Position (D2)</li> <li>Shallow Aquitard (D3)</li> <li>FAC-Neutral Test (D5)</li> </ul>              |  |  |
| Primary Inc<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De<br>Algal M<br>Iron De                                   | e Water (A1)<br>/ater Table (A2)<br>tion (A3)<br>Marks (B1)<br>ent Deposits (B2)<br>eposits (B3)<br>fat or Crust (B4)  | one requi                | Water-Si<br>1, 2,<br>Salt Crus<br>Aquatic I<br>Hydroge<br>Oxidized<br>Presence<br>Recent I<br>Stunted  | tained Lea<br>4A, and 4<br>st (B11)<br>Invertebrat<br>n Sulfide (<br>I Rhizosph<br>e of Reduc<br>ron Reduc<br>or Stresse                | B)<br>Ddor (C1)<br>eres along<br>ced Iron (C-<br>tion in Tille<br>d Plants (D             | Living Roc<br>4)<br>d Soils (C6 | ots (C3)                   | <ul> <li>4A, and 4B)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Saturation Visible on Aerial Imagery (C</li> <li>Geomorphic Position (D2)</li> <li>Shallow Aquitard (D3)</li> </ul>   |  |  |
| Primary Inc<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De<br>Algal M<br>Iron De<br>Surface                        | e Water (A1)<br>Vater Table (A2)<br>tion (A3)<br>Marks (B1)<br>ent Deposits (B2)<br>eposits (B3)<br>fat or Crust (B4)<br>eposits (B5)  |                          | Water-Si<br>1, 2,<br>Salt Crus<br>Aquatic I<br>Hydroge<br>Oxidized<br>Presence<br>Recent I<br>Stunted  | tained Lea<br>4A, and 4<br>st (B11)<br>Invertebrat<br>n Sulfide (<br>I Rhizosph<br>e of Reduc<br>ron Reduc<br>or Stresse                | B)<br>Ddor (C1)<br>eres along<br>ced Iron (C-<br>tion in Tille<br>d Plants (D             | Living Roc<br>4)<br>d Soils (C6 | ots (C3)                   | <ul> <li>4A, and 4B)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Saturation Visible on Aerial Imagery (C</li> <li>Geomorphic Position (D2)</li> <li>Shallow Aquitard (D3)</li> <li>FAC-Neutral Test (D5)</li> </ul>              |  |  |
| Primary Inc<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De<br>Algal M<br>Iron De<br>Surface                        | e Water (A1)<br>Vater Table (A2)<br>tion (A3)<br>Marks (B1)<br>ent Deposits (B2)<br>eposits (B3)<br>lat or Crust (B4)<br>eposits (B5)<br>e Soil Cracks (B6)  | Imagery (I               | <ul> <li>Water-Si</li> <li>1, 2,</li> <li>Salt Crus</li> <li>Aquatic I</li> <li>Hydroge</li> <li>Oxidized</li> <li>Presence</li> <li>Recent I</li> <li>Stunted</li> <li>B7)</li> <li>Water-Si</li> <li>Water-Si</li> <li>Resence</li> <li>Other (E)</li> </ul> | tained Lea<br>4A, and 4<br>st (B11)<br>Invertebrat<br>n Sulfide (<br>I Rhizosph<br>e of Reduc<br>ron Reduc<br>or Stresse                | B)<br>Ddor (C1)<br>eres along<br>ced Iron (C-<br>tion in Tille<br>d Plants (D             | Living Roc<br>4)<br>d Soils (C6 | ots (C3)                   | 4A, and 4B)         Drainage Patterns (B10)         Dry-Season Water Table (C2)         Saturation Visible on Aerial Imagery (C         Geomorphic Position (D2)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)         Raised Ant Mounds (D6) (LRR A) |  |  |
| Primary Inc<br>Surface<br>High W<br>Saturat<br>Water N<br>Sedime<br>Drift De<br>Algal M<br>Iron De<br>Surface<br>Inundat             | e Water (A1)<br>/ater Table (A2)<br>/ion (A3)<br>Marks (B1)<br>ent Deposits (B2)<br>eposits (B3)<br>fat or Crust (B4)<br>eposits (B5)<br>e Soil Cracks (B6)<br>tion Visible on Aerial<br>ly Vegetated Concav               | Imagery (I               | <ul> <li>Water-Si</li> <li>1, 2,</li> <li>Salt Crus</li> <li>Aquatic I</li> <li>Hydroge</li> <li>Oxidized</li> <li>Presence</li> <li>Recent I</li> <li>Stunted</li> <li>B7)</li> <li>Water-Si</li> <li>Water-Si</li> <li>Resence</li> <li>Other (E)</li> </ul> | tained Lea<br>4A, and 4<br>st (B11)<br>Invertebrat<br>n Sulfide (<br>I Rhizosph<br>e of Reduc<br>ron Reduc<br>or Stresse                | B)<br>Ddor (C1)<br>eres along<br>ced Iron (C-<br>tion in Tille<br>d Plants (D             | Living Roc<br>4)<br>d Soils (C6 | ots (C3)                   | 4A, and 4B)         Drainage Patterns (B10)         Dry-Season Water Table (C2)         Saturation Visible on Aerial Imagery (C         Geomorphic Position (D2)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)         Raised Ant Mounds (D6) (LRR A) |  |  |
| Primary Inc<br>Surface<br>High W<br>Saturat<br>Vater I<br>Sedime<br>Sedime<br>Algal M<br>Iron De<br>Surface<br>Surface<br>Field Obse | e Water (A1)<br>Vater Table (A2)<br>tion (A3)<br>Marks (B1)<br>ent Deposits (B2)<br>eposits (B3)<br>Mat or Crust (B4)<br>eposits (B5)<br>e Soil Cracks (B6)<br>tion Visible on Aerial<br>ly Vegetated Concav<br>ervations: | Imagery (i<br>ve Surface | <ul> <li>Water-Si</li> <li>1, 2,</li> <li>Salt Crus</li> <li>Aquatic I</li> <li>Hydroge</li> <li>Oxidized</li> <li>Presence</li> <li>Recent I</li> <li>Stunted</li> <li>B7)</li> <li>Water-Si</li> <li>Water-Si</li> <li>Resence</li> <li>Other (E)</li> </ul> | tained Lea<br>4A, and 4<br>st (B11)<br>Invertebrat<br>n Sulfide (<br>I Rhizosph<br>e of Reduc<br>ron Reduc<br>or Stresse<br>xplain in R | B)<br>Dodor (C1)<br>eres along<br>ced Iron (C<br>tion in Tille<br>d Plants (D<br>temarks) | Living Roc<br>4)<br>d Soils (C6 | ots (C3)                   | 4A, and 4B)         Drainage Patterns (B10)         Dry-Season Water Table (C2)         Saturation Visible on Aerial Imagery (C         Geomorphic Position (D2)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)         Raised Ant Mounds (D6) (LRR A) |  |  |

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

Depth (inches):

Yes 🗌 No 🖾

Remarks: prominent field indicators of wetland hydrology documented early growing season. Dry on April 16, 2020. See spring 2020 monitoring data

Saturation Present?

Wetland Hydrology Present? Yes 🛛 No 🗌

10.0 Appendix B – Spring 2020 Hydrology Data

| DATE    | SP1        | SP2        | SP3        | SP4        | SP5        | SP6        | SP7        | SP8         |
|---------|------------|------------|------------|------------|------------|------------|------------|-------------|
| 2/28/20 | Sat at -18 | Not Sat    | Not Sat    | Sat at -16 | Not Sat    | Not Sat    | Sat at -14 | Sat at -5   |
|         | No free    | Free at -18 |
| 3/6/20  | Sat at -16 | Sat at -16 | Sat at -17 | Sat at -14 | Sat at -14 | Sat at -15 | Sat at -12 | Sat at -2   |
|         | No free    | Free at -14 |
| 3/13/20 | Sat at -9  | Sat at -11 | Sat at -14 | Sat at -10 | Sat at -11 | Sat at -14 | Sat at -7  | Sat at -0   |
|         | No free    | Free at -9  |
| 3/20/20 | Not Sat    | Not Sat    | Not Sat    | Sat at -16 | Not Sat    | Not Sat    | Sat at -16 | Sat at -8   |
|         | No free    | Free at -20 |
| 3/27/20 | Not Sat    | Sat at -22 | Sat at -16  |
|         | No free     |
| 4/3/20  | Sat at -13 | Sat at -14 | Sat at -13 | Sat at -8  | Sat at -11 | Sat at -12 | Sat at -9  | Sat at -0   |
|         | No free    | Free at -10 |
| 4/10/20 | Not Sat    | Sat at -22  |
|         | No free     |
| 4/16/20 | Not Sat     |
|         | No free     |

# FIELD DATA AT ESTABLISHED MONITORING PLOTS

Depth of free water (free) and saturation (sat) in inches from ground level.

| DATE    | SP9        | SP10       | SP11       | SP12        | SP13       | SP14       | SP15        |  |
|---------|------------|------------|------------|-------------|------------|------------|-------------|--|
| 2/28/20 | Sat at -14 | Sat at -18 | Sat at -13 | Sat at -1   | Sat at -15 | Sat at -16 | Sat at -2   |  |
|         | No free    | No free    | No free    | Free at -12 | No free    | No free    | Free at -14 |  |
| 3/6/20  | Sat at -16 | Not Sat    | Sat at -17 | Sat at -2   | Sat at -18 | Sat at -16 | Sat at -2   |  |
|         | No free    | No free    | No free    | Free at -14 | No free    | No free    | Free at -12 |  |
| 3/13/20 | Sat at -9  | Sat at -12 | Sat at -10 | Sat at -0   | Sat at -9  | Sat at -8  | Sat at -0   |  |
|         | No free    | No free    | No free    | Free at -7  | No free    | No free    | Free at -6  |  |
| 3/20/20 | Not Sat    | Not Sat    | Sat at -18 | Sat at -14  | Sat at -22 | Sat at -22 | Sat at -11  |  |
|         | No free    | No free    | No free    | No Free     | No free    | No free    | Free at -20 |  |
| 3/27/20 | Not Sat    | Not Sat    | Not Sat    | Sat at -17  | Not Sat    | Not Sat    | Sat at -16  |  |
|         | No free    | No free    | No free    | No Free     | No free    | No free    | No Free     |  |
| 4/3/20  | Sat at -8  | Sat at -12 | Sat at -10 | Sat at -1   | Sat at -10 | Sat at -11 | Sat at -0   |  |
|         | No free    | No free    | No free    | Free at -11 | No free    | No free    | Free at -10 |  |
| 4/10/20 | Not Sat    | Not Sat    | Not Sat    | Sat at -17  | Not Sat    | Not Sat    | Sat at -16  |  |
|         | No free    | No free    | No free    | No free     | No free    | No free    | No free     |  |
| 4/16/20 | Not Sat    | Not Sat    | Not Sat    | Not Sat     | Not Sat    | Not Sat    | Not Sat     |  |
|         | No free    | No free    | No free    | No free     | No free    | No free    | No free     |  |

# FIELD DATA AT ESTABLISHED MONITORING PLOTS

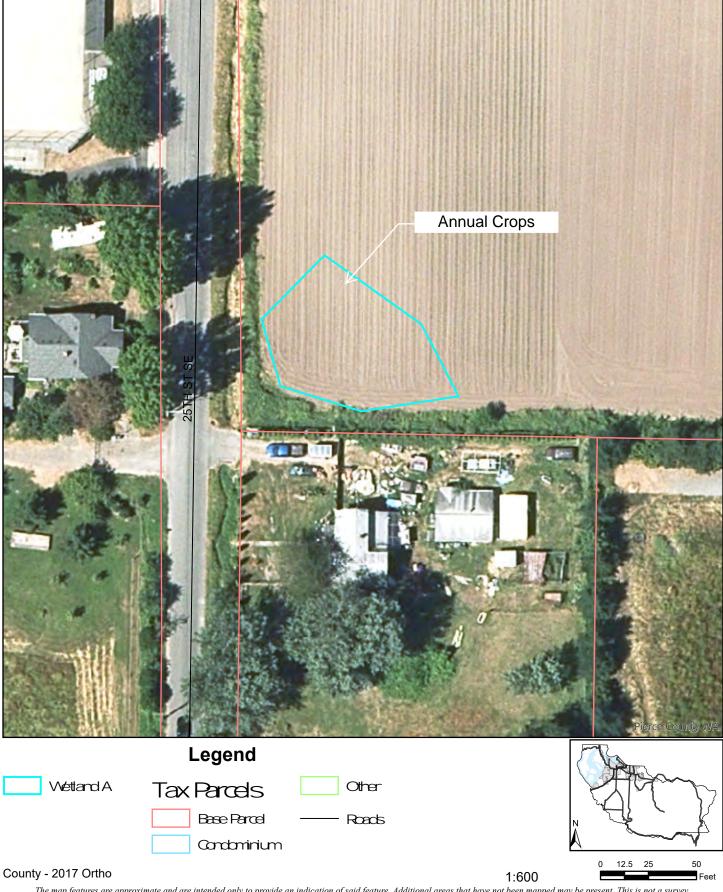
Depth of free water (free) and saturation (sat) in inches from ground level.

11.0 Appendix C – Wetland Rating Worksheet

# Figure A1

# Habitat Technologies

P.O.Box 1088 Puyallup, WA 98371 (253) 845-5119 | www.habitattechnologies.net

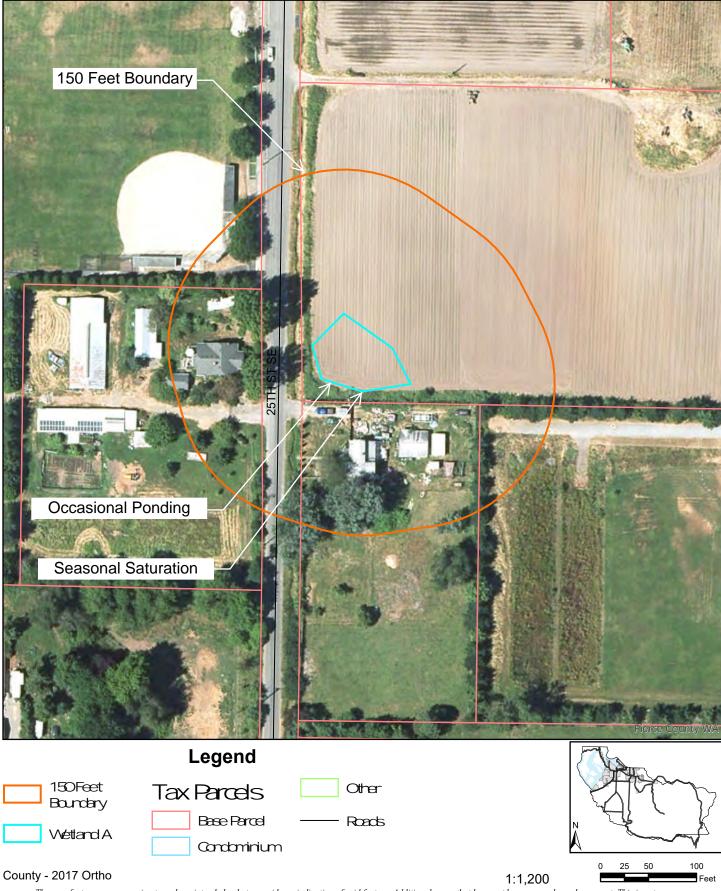


The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS'AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose. Date: 6/16/2020 03:51 PM

# Figure A2

# Habitat Technologies

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The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose. Date: 6/16/2020 03:50 PM

# Habitat Technologies

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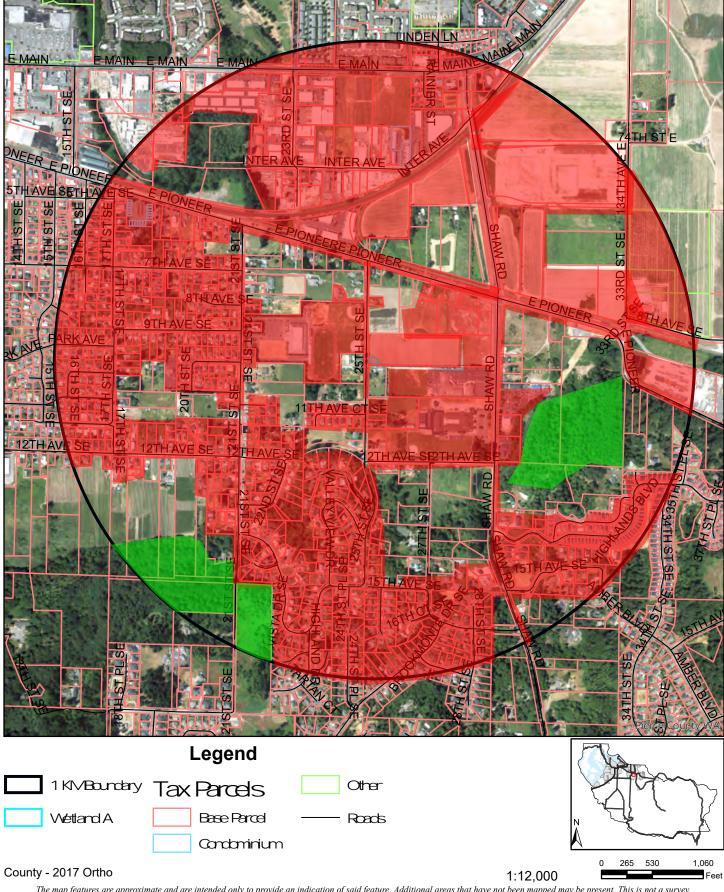


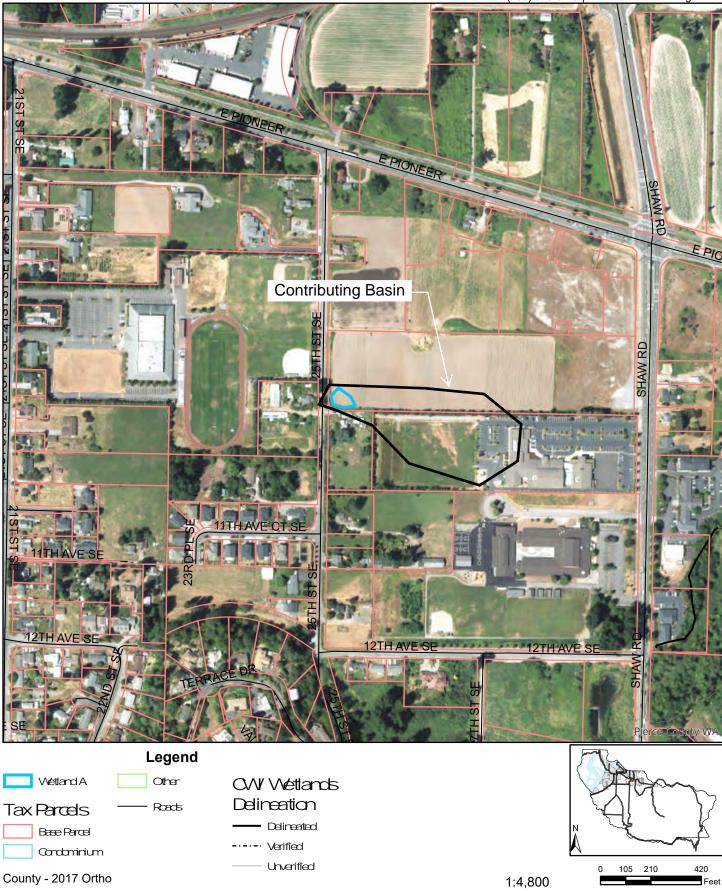
Figure A3

The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS'AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose. Date: 6/16/2020 03:53 PM Date: 6/16/2020 03:53 PM

# Figure A4

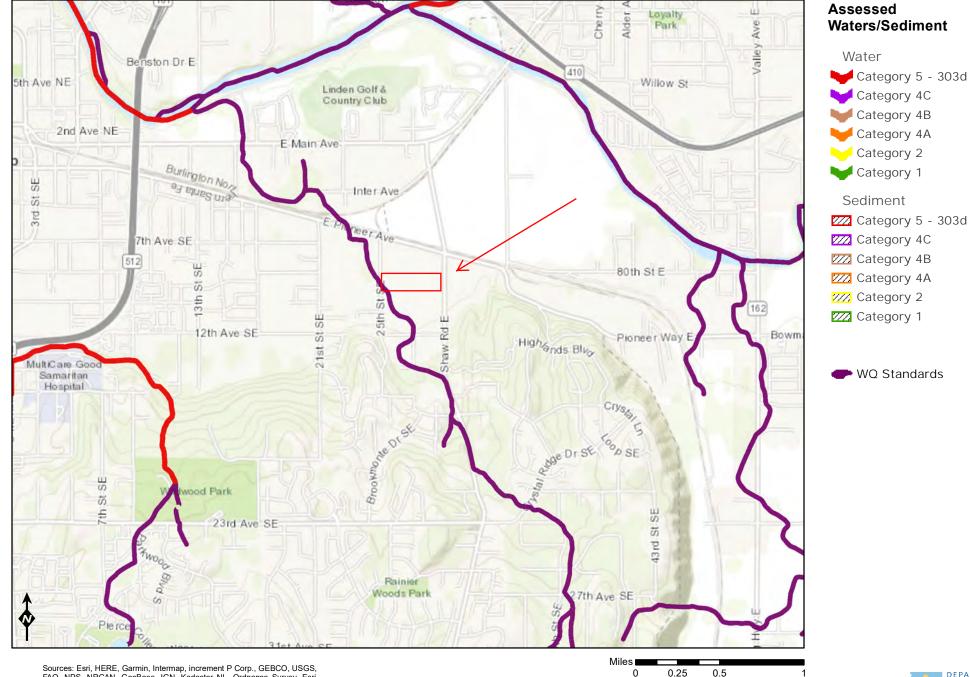
# Habitat Technologies

P.O.Box 1088 Puyallup, WA 98371 (253) 845-5119 | www.habitattechnologies.net



The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS'AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose. Date: 6/16/2020 05:01 PM

# Figure W4

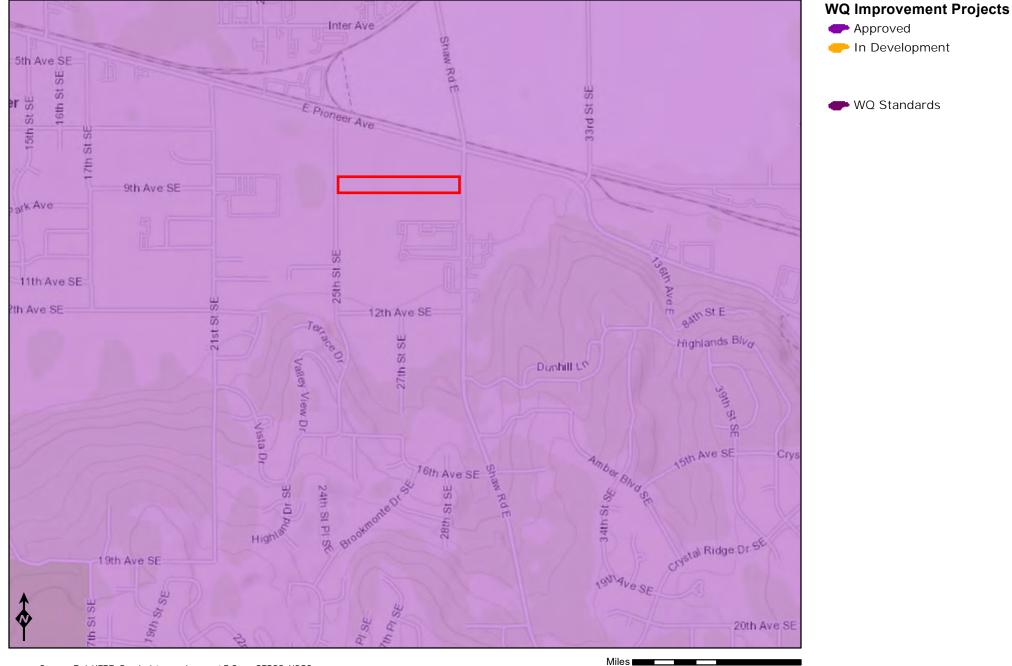


0

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and



# Figure W5



0

0.125

0.25

0.5

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and



# **RATING SUMMARY – Western Washington**

Name of wetland (or ID #):part of Parcel 0420351003Date of site visit:16 ARP 2020Rated byHabitat TechnologiesTrained by Ecology? x YesNo Date of training 2014HGM Class used for ratingDepressionalWetland has multiple HGM classes? x YN

**NOTE:** Form is not complete without the figures requested (figures can be combined). Source of base aerial photo/map\_Pierce County GIS\_\_\_\_\_\_

**OVERALL WETLAND CATEGORY** 4 (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<br>Water Quality |   | Hydrologic |   | Habitat  |        |       |         |       |      |
|---------------------------|----------------------------|---|------------|---|----------|--------|-------|---------|-------|------|
|                           |                            |   |            |   | Circle t | the ap | propr | iate ra | tings |      |
| Site Potential            | Н                          | Μ | L          | Н | Μ        | L      | Н     | Μ       | L     |      |
| Landscape Potential       | Н                          | Μ | L          | Н | ĪVĪ      | L      | Н     | Μ       | Ľ     |      |
| Value                     | Η                          | Μ | L          | Н | Μ        | L      | Н     | Μ       | L     | ΤΟΤΑ |
| Score Based on<br>Ratings |                            | 6 |            |   | 5        |        |       | 4       |       | 15   |

Score for each function based on three ratings (order of ratings is not important) 9 = H,H,H 8 = H,H,M

7 = H,H,L 7 = H,M,M 6 = H,M,L 6 = M,M,M 5 = H,L,L 5 = M,M,L

4 = M,L,L 3 = L,L,L

# 2. Category based on SPECIAL CHARACTERISTICS of wetland

| CHARACTERISTIC                     | CATEGORY    |    |  |  |
|------------------------------------|-------------|----|--|--|
| Estuarine                          | I II        |    |  |  |
| Wetland of High Conservation Value | I           |    |  |  |
| Bog I                              |             |    |  |  |
| Mature Forest                      |             | Ι  |  |  |
| Old Growth Forest                  |             | Ι  |  |  |
| Coastal Lagoon                     | Ι           | II |  |  |
| Interdunal                         | I II III IV |    |  |  |
| None of the above                  | x           |    |  |  |

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

### **Depressional Wetlands**

| Map of:   | To answer questions: | Figure # |
|---|----------------------|----------|
| Cowardin plant classes  | D 1.3, H 1.1, H 1.4  | A1       |
| Hydroperiods  | D 1.4, H 1.2         | A2       |
| Location of outlet (can be added to map of hydroperiods)  | D 1.1, D 4.1         | A2       |
| Boundary of area within 150 ft of the wetland (can be added to another figure)  | D 2.2, D 5.2         | A2       |
| Map of the contributing basin   | D 4.3, D 5.3         | A4       |
| 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  | A3       |
| Screen capture of map of 303(d) listed waters in basin (from Ecology website)   | D 3.1, D 3.2         | W4       |
| Screen capture of list of TMDLs for WRIA in which unit is found (from web)  | D 3.3                | W5       |

#### **Riverine Wetlands**

| Map of:   | To answer questions: | Figure #   |
|---|----------------------|------------|
| Cowardin plant classes  | H 1.1, H 1.4         | $\uparrow$ |
| 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                | N/A        |
| Map of the contributing basin   | R 2.2, R 2.3, R 5.2  |            |
| 1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat | H 2.1, H 2.2, H 2.3  |            |
| Screen capture of map of 303(d) listed waters in basin (from Ecology website)   | R 3.1                |            |
| Screen capture of list of TMDLs for WRIA in which unit is found (from web)  | R 3.2, R 3.3         | $\vee$     |

#### 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        | N/A      |
| 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                      | $\vee$   |

#### Slope Wetlands

| Map of:   | To answer questions: | Figure # |
|---|----------------------|----------|
| Cowardin plant classes  | H 1.1, H 1.4         | $\wedge$ |
| Hydroperiods  | H 1.2                |          |
| Plant cover of dense trees, shrubs, and herbaceous plants   | S 1.3                |          |
| Plant cover of <b>dense, rigid</b> trees, shrubs, and herbaceous plants (can be added to figure above)                            | S 4.1                | N/A      |
| 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 polygons for accessible habitat and undisturbed habitat | H 2.1, H 2.2, H 2.3  |          |
| Screen capture of map of 303(d) listed waters in basin (from Ecology website)   | S 3.1, S 3.2         |          |
| Screen capture of list of TMDLs for WRIA in which unit is found (from web)  | S 3.3                | $\vee$   |

## 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) 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.

#### **YES - Freshwater Tidal Fringe**

Wetland name or number <u>A</u>

NO - go to 6YES - The wetland class is RiverineNOTE: The Riverine unit can contain depressions that are filled with water when the river is not<br/>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 wa   | ter 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 (r   | no outlet).<br>points = 3 |   |
| Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing   | g outlet.<br>points = 2   | 2 |
| Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. | points = 1<br>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  | s = 4 No = 0              | 0 |
| D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cow   | ardin classes):           |   |
| Wetland has persistent, ungrazed, plants > 95% of area   | points = 5                |   |
| Wetland has persistent, ungrazed, plants > $\frac{1}{2}$ of area   | points = 3                | 0 |
| Wetland has persistent, ungrazed plants $> \frac{1}{10}$ of area   | points = 1                |   |
| Wetland has persistent, ungrazed plants $<^{1}/_{10}$ of area  | points = 0                |   |
| D 1.4. Characteristics of seasonal ponding or inundation:  |                           |   |
| This is the area that is ponded for at least 2 months. See description in manual.  |                           |   |
| Area seasonally ponded is > $\frac{1}{2}$ total area of wetland  | points = 4                | 0 |
| Area seasonally ponded is > ¼ total area of wetland  | points = 2                |   |
| Area seasonally ponded is < ¼ total area of wetland  | points = 0                |   |
| Total for D 1Add the points in the b   | oxes above                | 2 |

#### **Rating of Site Potential** If score is: 12-16 = H 6-11 = M X 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                      | ne 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 question<br>Source | ons D 2.1-D 2.3?<br>Yes = 1 No = 0 | 0 |
| Total for D 2   Add the points   | in the boxes above                 | 1 |

**Rating of Landscape Potential** If score is: <u>3 or 4 = H</u>  $\times$  <u>1 or 2 = M</u> <u>0 = L</u> Record the rating on the first page

| D 3.0. Is the water quality improvement provided by the site valuable to society?   |   |
|---|---|
| D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0   | 0 |
| D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0   | 1 |
| D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality ( <i>answer YES if there is a TMDL for the basin in which the unit is found</i> )? Yes = 2 No = 0 | 2 |
| Total for D 3Add the points in the boxes above  | 3 |
| Rating of Value       If score is: X 2-4 = H       1 = M       0 = L       Record the rating on the first page  |   |

| DEPRESSIONAL AND FLATS WETLANDS<br>Hydrologic Functions - Indicators that the site functions to reduce flooding  |   | on        |
|--|---|-----------|
| D 4.0. Does the site have the potential to reduce flooding and erosion?  |   |           |
| 0 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)<br>Wetland has an intermittently flowing stream or ditch, OR highly constricted permane<br>Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowin<br>Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently   | ng ditch points = 1   | 2         |
| O 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<br>Marks of ponding are 3 ft or more above the surface or bottom of outlet<br>Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet<br>Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet<br>The wetland is a "headwater" wetland<br>Wetland is flat but has small depressions on the surface that trap water   | points = 7<br>points = 5<br>points = 3<br>points = 3<br>points = 1  | 0         |
| Marks of ponding less than 0.5 ft (6 in)<br>D 4.3. Contribution of the wetland to storage in the watershed: <i>Estimate the ratio of the area</i>  | points = 0  |           |
| <i>contribution of the wetland to storage in the watershed.</i> Estimate the ratio of the area of the vetland unit itself.<br>The area of the basin is less than 10 times the area of the unit<br>The area of the basin is 10 to 100 times the area of the unit<br>The area of the basin is more than 100 times the area of the unit<br>Entire wetland is in the Flats class   | points = 5<br>points = 3<br>points = 0<br>points = 5  | 3         |
|  | nts in the boxes above  | 5         |
| Rating of Site Potential If score is: 12-16 = H6-11 = M $\times$ 0-5 = L   | Record the rating on the  | first pag |
| D 5.0. Does the landscape have the potential to support hydrologic functions of the s  | ite?  |           |
| 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 runo   | ff? Yes = 1 No = 0  | 1         |
| D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive huma<br>>1 residence/ac, urban, commercial, agriculture, etc.)?  | n land uses (residential at<br>Yes = 1 No = 0   | 1         |
| Total for D 5 Add the poi  | nts 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  | first pag |
| D 6.0. Are the hydrologic functions provided by the site valuable to society?  |   |           |
| <ul> <li>D 6.1. <u>The unit is in a landscape that has flooding problems</u>. Choose the description that best is the wetland unit being rated. Do not add points. <u>Choose the highest score if more than</u> The wetland captures surface water that would otherwise flow down-gradient into are damaged human or natural resources (e.g., houses or salmon redds):</li> <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. Flooding from groundwater is an issue in the sub-basin.</li> <li>The existing or potential outflow from the wetland is so constrained by human or natural resources.</li> </ul> | one condition is met.<br>as where flooding has<br>points = 2<br>X points = 1<br>points = 1<br>ral conditions that the | 1         |
| water stored by the wetland cannot reach areas that flood. <i>Explain why</i>  | _ points = 0<br>points = 0  |           |
|  |   |           |
| D 6.2. Has the site been identified as important for flood storage or flood conveyance in a reg  | ional flood control plan?<br>Yes = 2 No = 0   | 0         |
|  | 105 - 2 $100 - 0$   |           |

| HABITAT FUNCTIONS - Indicators that site fun  | ons to provide important habitat  |
|---|---|
| H 1.0. Does the site have the potential to provide ha   | tat?  |
| Cowardin plant classes in the wetland. Up to 10 pa<br>of ¼ ac or more than 10% of the unit if it is smaller<br>Aquatic bed<br>Emergent<br>Scrub-shrub (areas where shrubs have > 30%<br>Forested (areas where trees have > 30% cove<br>If the unit has a Forested class, check if:  | 4 structures or more: points = 4<br>3 structures: points = 2<br>2 structures: points = 1<br>1 structure: points = 0<br>sub-canopy, shrubs, herbaceous, moss/ground-cover) |
| more than 10% of the wetland or ¼ ac to count (see<br>Permanently flooded or inundated<br>Seasonally flooded or inundated<br>XOccasionally flooded or inundated<br>XSaturated only<br>Permanently flowing stream or river in, or adj<br>Seasonally flowing stream in, or adjacent to, t<br>Seasonally flowing stream in, or adjacent to, t<br>Lake Fringe wetland<br>Freshwater tidal wetland | 4 or more types present: points = 3<br>3 types present: points = 2<br>2 types present: points = 1<br>1 type present: points = 0<br>ent to, the wetland                    |
| the species. <b>Do not include Eurasian milfoil, reed</b><br>If you counted: > 19 species   | ed to meet the size threshold and you do not have to name   |
| H 1.4. Interspersion of habitats<br>Decide from the diagrams below whether interspe   | on among Cowardin plants classes (described in H 1.1), or water or mudflats) is high, moderate, low, or none. <i>If you</i>   |

| H 1.5. Special habitat features:   |   |
|--|---|
| Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long)Standing snags (dbh > 4 in) within the wetlandUndercut 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 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 <i>(cut shrubs or trees that have not yet weathered where wood is exposed)</i> | 0 |
| <ul> <li>At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated <i>(structures for egg-laying by amphibians)</i></li> <li>Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</li> </ul>   |   |
| Total for H 1 Add the points in the boxes above  | 1 |

Rating of Site Potential If score is: \_\_\_15-18 = H \_\_\_7-14 = M X\_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 <u>0</u> + [(% moderate and low intensity land uses),         | /2] <u>0</u> = <u>0</u> %   |             |
| If total accessible habitat is:  |                             |             |
| > <sup>1</sup> / <sub>3</sub> (33.3%) of 1 km Polygon  | points = 3                  | 0           |
| 20-33% of 1 km Polygon   | points = 2                  | U           |
| 10-19% of 1 km Polygon   | points = 1                  |             |
| < 10% of 1 km Polygon  | points = 0                  |             |
| 12.2. Undisturbed habitat in 1 km Polygon around the wetland.                                  |                             |             |
| <i>Calculate:</i> % undisturbed habitat <u>10</u> + [(% moderate and low intensity land uses), | /2] <u>11</u> = <u>21</u> % |             |
| Undisturbed habitat > 50% of Polygon   | points = 3                  |             |
| Undisturbed habitat 10-50% and in 1-3 patches  | points = 2                  | 1           |
| 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)              | -2          |
| ≤ 50% of 1 km Polygon is high intensity  | points = 0                  |             |
| Total for H 2 Add the points   | in the boxes above          | -1          |
| Rating of Landscape Potential If score is:4-6 = H1-3 = MX < 1 = L                              | Record the rating on th     | e first pag |

| 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        | y 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 st</li> </ul>   | ate or federal lists) | 1              |
| <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</li> </ul>     | Resources             |                |
| <ul> <li>It has been categorized as an important habitat site in a local or regional comprehensive</li> </ul> | e 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  | χ points = 1          |                |
| Site does not meet any of the criteria above  | points = 0            |                |
| Rating of Value If score is: 2 = H X 1 = M 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. <u>http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</u> or access the list from here: <u>http://wdfw.wa.gov/conservation/phs/list/</u>)

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: <u>Old-growth west of Cascade crest</u> 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. <u>Mature forests</u> 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*).
- X Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 see web link above*).
- X Instream: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 6.5 ft (0.15 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

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

## Habitat Technologies

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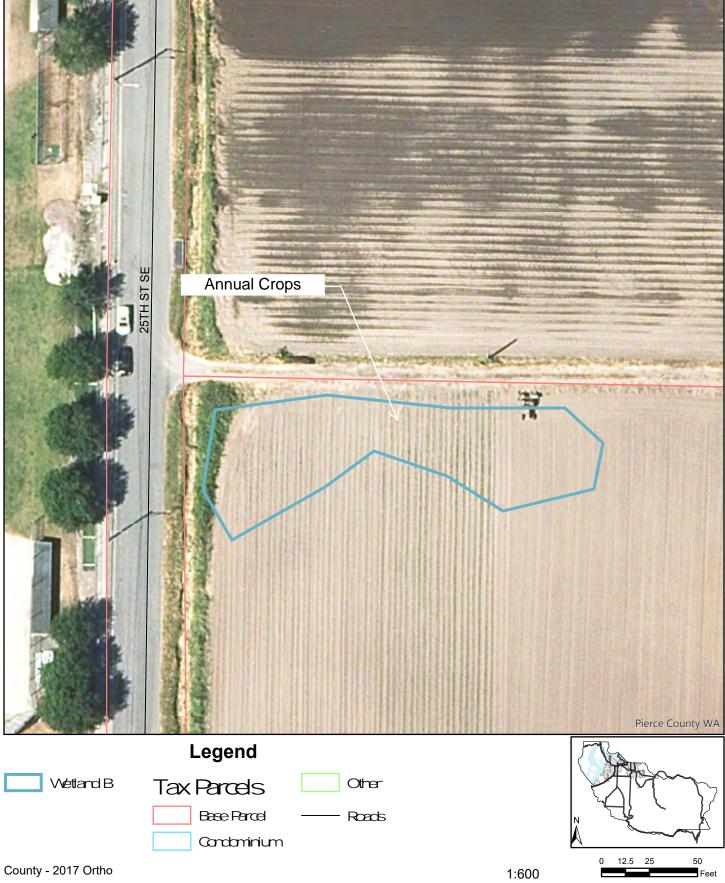


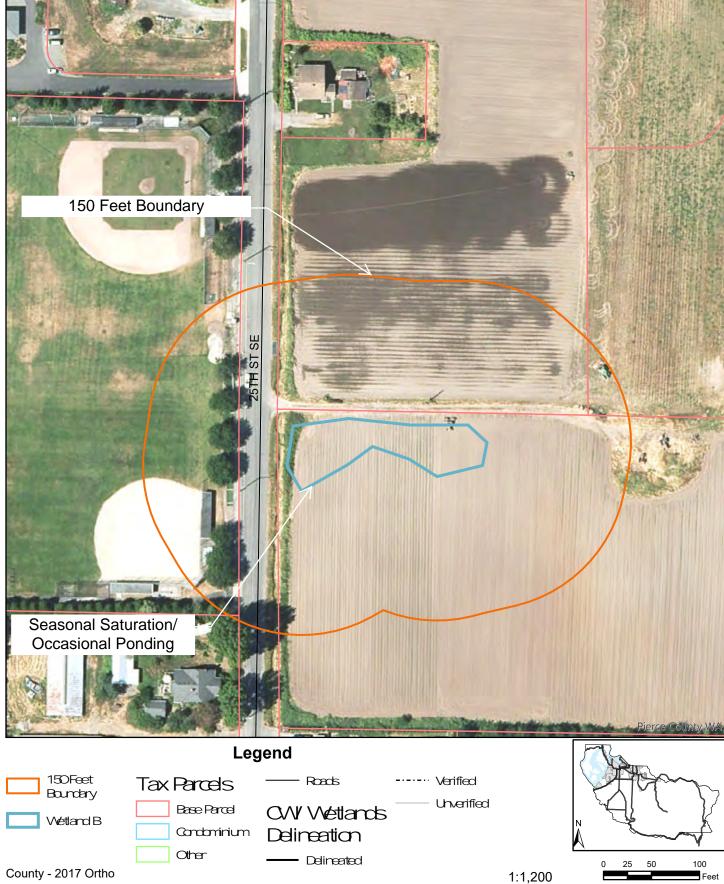
Figure B1

The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS'AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose. Date: 6/16/2020 03:55 PM Date: 6/16/2020 03:55 PM

## Figure B2

## Habitat Technologies

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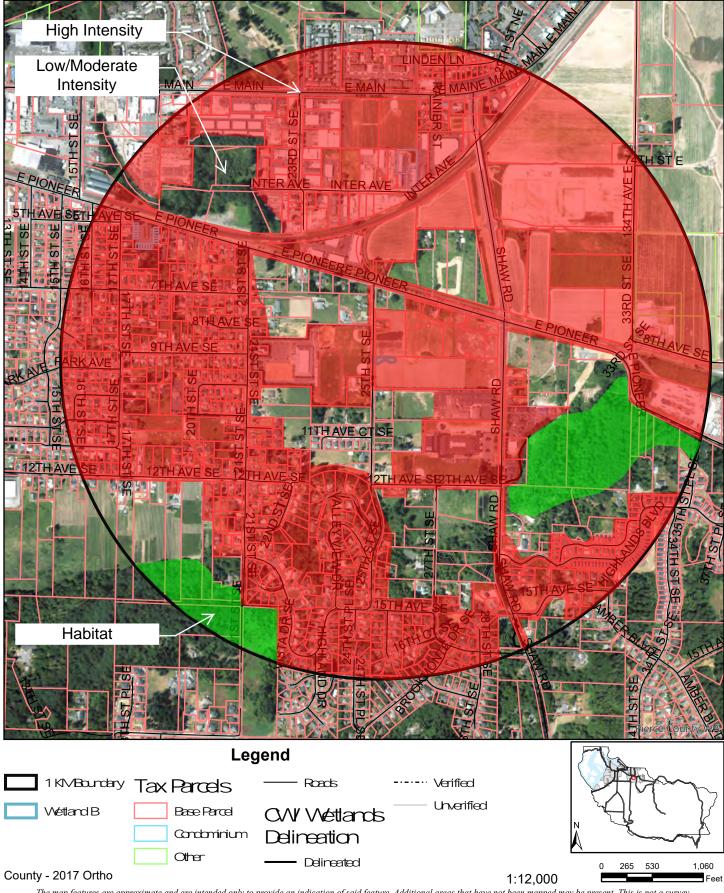


Figure B3

The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose. Date: 6/16/2020 04:03 PM

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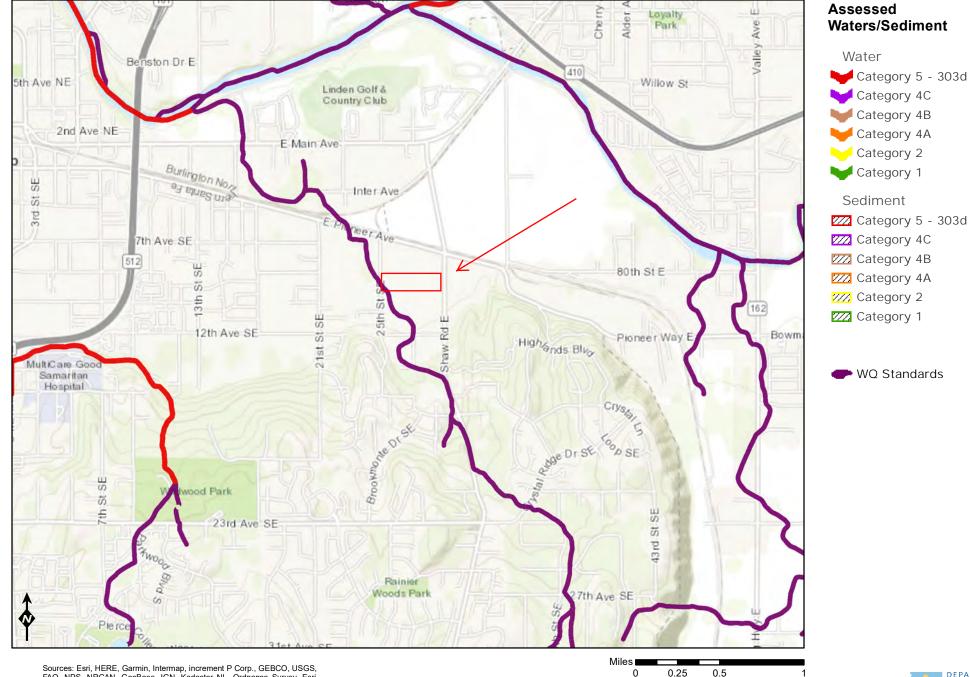
# (253) 845 5119 Lynnwydd



The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. Orthophotos and other data may not align. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose. Date: 6/16/2020 04:56 PM

## Figure B4

## Figure W4

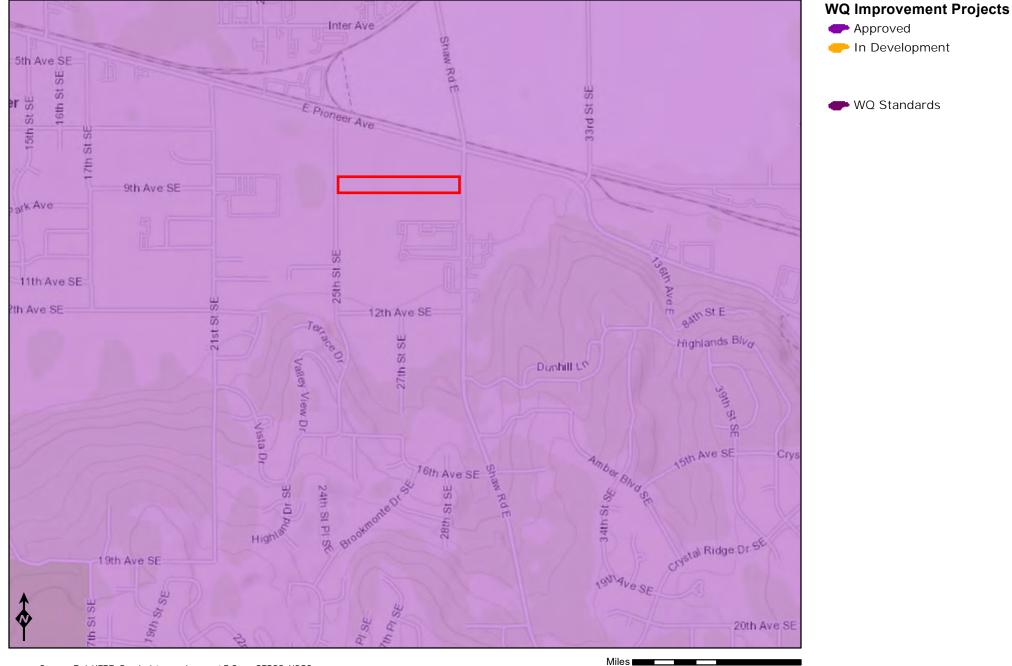


0

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and



## Figure W5



0

0.125

0.25

0.5

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and



## **RATING SUMMARY – Western Washington**

Name of wetland (or ID #):part of Parcel 0420351003Date of site visit:16 ARP 2020Rated byHabitat TechnologiesTrained by Ecology? x YesNo Date of training 2014HGM Class used for ratingDepressionalWetland has multiple HGM classes? x YN

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

**OVERALL WETLAND CATEGORY** 4 (based on functions x or special characteristics )

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

**\_\_\_\_Category I** – Total score = 23 - 27

**\_\_\_\_Category II** – Total score = 20 - 22

**Category III** – Total score = 16 - 19

**X** Category IV – Total score = 9 - 15

| FUNCTION                  |   | nprov<br>er Q | ving<br>uality | Н | ydrolo   | ogic   |       | Habit   | at     |       |
|---------------------------|---|---------------|----------------|---|----------|--------|-------|---------|--------|-------|
|                           |   |               |                |   | Circle t | the ap | oropr | iate ra | ntings |       |
| Site Potential            | Н | М             | L              | Н | М        | L      | Н     | М       | L      |       |
| Landscape Potential       | н | Μ             | L              | Н | M        | L      | Н     | М       | L      |       |
| Value                     | Н | М             | L              | Н | Μ        | L      | Н     | Μ       | L      | TOTAL |
| Score Based on<br>Ratings |   | 6             |                |   | 5        |        |       | 4       |        | 15    |

Score for each function based on three ratings (order of ratings is not important) 9 = H,H,H 8 = H,H,M 7 = H,H,L

7 = H,M,M 6 = H,M,L 6 = M,M,M 5 = H,L,L

5 = M,M,L

#### 4 = M,L,L 3 = L,L,L

#### 2. Category based on SPECIAL CHARACTERISTICS of wetland

| CHARACTERISTIC                     | CATE | GORY   |
|------------------------------------|------|--------|
| Estuarine                          | Ι    | II     |
| Wetland of High Conservation Value |      | I      |
| Bog                                |      | Ι      |
| Mature Forest                      |      | I      |
| Old Growth Forest                  |      | I      |
| Coastal Lagoon                     | Ι    | II     |
| Interdunal                         | I II | III IV |
| None of the above                  | )    | K      |

# 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  | B1       |
| Hydroperiods  | D 1.4, H 1.2         | B2       |
| Location of outlet (can be added to map of hydroperiods)  | D 1.1, D 4.1         | B2       |
| Boundary of area within 150 ft of the wetland (can be added to another figure)  | D 2.2, D 5.2         | B2       |
| Map of the contributing basin   | D 4.3, D 5.3         | B4       |
| 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  | B3       |
| Screen capture of map of 303(d) listed waters in basin (from Ecology website)   | D 3.1, D 3.2         | W4       |
| Screen capture of list of TMDLs for WRIA in which unit is found (from web)  | D 3.3                | W5       |

#### **Riverine Wetlands**

| Map of:   | To answer questions: | Figure #   |
|---|----------------------|------------|
| Cowardin plant classes  | H 1.1, H 1.4         | $\uparrow$ |
| 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                | N/A        |
| Map of the contributing basin   | R 2.2, R 2.3, R 5.2  |            |
| 1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat | H 2.1, H 2.2, H 2.3  |            |
| Screen capture of map of 303(d) listed waters in basin (from Ecology website)   | R 3.1                |            |
| Screen capture of list of TMDLs for WRIA in which unit is found (from web)  | R 3.2, R 3.3         | $\vee$     |

#### Lake Fringe Wetlands

| Map of:   | To answer questions:       | Figure # |
|---|----------------------------|----------|
| Cowardin plant classes  | L 1.1, L 4.1, H 1.1, H 1.4 | $\land$  |
| 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        | N/A      |
| 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                      | $\vee$   |

#### Slope Wetlands

| Map of:   | To answer questions: | Figure # |
|---|----------------------|----------|
| Cowardin plant classes  | H 1.1, H 1.4         | $\wedge$ |
| 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 (can be added to figure above)                            | S 4.1                | N/A      |
| 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 polygons for accessible habitat and undisturbed habitat | H 2.1, H 2.2, H 2.3  |          |
| Screen capture of map of 303(d) listed waters in basin (from Ecology website)   | S 3.1, S 3.2         |          |
| Screen capture of list of TMDLs for WRIA in which unit is found (from web)  | S 3.3                | V        |

## 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) 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.

#### **YES - Freshwater Tidal Fringe**

Wetland name or number <u>B</u>

NO - go to 6YES - The wetland class is RiverineNOTE: The Riverine unit can contain depressions that are filled with water when the river is not<br/>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 wa   | ater 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).<br>points = 3 |   |
| Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowin  | g outlet.<br>points = 2   | 2 |
| Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. | points = 1<br>points = 1  |   |
| D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Ye   | s = 4 No = 0              | 0 |
| D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cow   | /ardin classes):          |   |
| Wetland has persistent, ungrazed, plants > 95% of area   | points = 5                |   |
| Wetland has persistent, ungrazed, plants > ½ of area   | points = 3                | 0 |
| Wetland has persistent, ungrazed plants > $^{1}/_{10}$ of area   | points = 1                |   |
| Wetland has persistent, ungrazed plants <1/10 of area  | points = 0                |   |
| D 1.4. Characteristics of seasonal ponding or inundation:  |                           |   |
| This is the area that is ponded for at least 2 months. See description in manual.  |                           |   |
| Area seasonally ponded is > $\frac{1}{2}$ total area of wetland  | points = 4                | 0 |
| Area seasonally ponded is > ¼ total area of wetland  | points = 2                |   |
| Area seasonally ponded is < ¼ total area of wetland  | points = 0                |   |
| Total for D 1 Add the points in the b  | ooxes above               | 2 |

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

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

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

| D 3.0. Is the water quality improvement provided by the site valuable to society?   |   |
|---|---|
| D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0   | 0 |
| D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0   | 1 |
| D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality ( <i>answer YES if there is a TMDL for the basin in which the unit is found</i> )? Yes = 2 No = 0 | 2 |
| Total for D 3Add the points in the boxes above  | 3 |
| Rating of Value       If score is: x 2-4 = H       I = M       0 = L       Record the rating on the first page  |   |

| DEPRESSIONAL AND FLATS WETLAND<br>Hydrologic Functions - Indicators that the site functions to reduce flood  |  | on        |
|--|--|-----------|
| D 4.0. Does the site have the potential to reduce flooding and erosion?  |  | -         |
| D 4.1. <u>Characteristics of surface water outflows from the wetland</u> :<br>Wetland is a depression or flat depression with no surface water leaving it (no outlet)<br>Wetland has an intermittently flowing stream or ditch, OR highly constricted perman<br>Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flow<br>Wetland has an unconstricted, or slightly constricted, surface outlet that is permanen   | ently flowing outletpoints = 2<br>ving ditch points = 1                                      | 2         |
| D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the botton with no outlet, measure from the surface of permanent water or if dry, the deepest per Marks of ponding are 3 ft or more above the surface or bottom of outlet Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet The wetland is a "headwater" wetland Wetland is flat but has small depressions on the surface that trap water Marks of ponding less than 0.5 ft (6 in)  | -  | 0         |
| D 4.3. <u>Contribution of the wetland to storage in the watershed</u> : <i>Estimate the ratio of the area contributing surface water to the wetland to the area of the wetland unit itself.</i><br>The area of the basin is less than 10 times the area of the unit<br>The area of the basin is 10 to 100 times the area of the unit<br>The area of the basin is more than 100 times the area of the unit<br>Entire wetland is in the Flats class  |  | 3         |
|  | pints in the boxes above   | 5         |
| Rating of Site Potential If score is: 12-16 = H6-11 = M _X _0-5 = L  | Record the rating on the   | first pag |
| O 5.0. Does the landscape have the potential to support hydrologic functions of the  | site?  |           |
| 0 5.1. Does the wetland receive stormwater discharges?   | Yes = 1 No = 0   | 0         |
| 0 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess rur  | noff? Yes = 1 No = 0   | 1         |
| D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive hun<br>>1 residence/ac, urban, commercial, agriculture, etc.)?   | nan land uses (residential at<br>Yes = 1 No = 0  | 1         |
| Fotal for D 5Add the po  | pints in the boxes above   | 2         |
| Rating of Landscape Potential If score is:3 = H _X_1 or 2 = M0 = L   | Record the rating on the   | first pa  |
| 0 6.0. Are the hydrologic functions provided by the site valuable to society?  |  |           |
| <ul> <li>D 6.1. <u>The unit is in a landscape that has flooding problems</u>. <i>Choose the description that best the wetland unit being rated. Do not add points. <u>Choose the highest score if more that</u> The wetland captures surface water that would otherwise flow down-gradient into an damaged human or natural resources (e.g., houses or salmon redds):</i></li> <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. Flooding from groundwater is an issue in the sub-basin.</li> </ul> | n one condition is met.<br>reas where flooding has<br>points = 2<br>points = 1<br>points = 1 | 1         |
| The existing or potential outflow from the wetland is so constrained by human or nat 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   |           |
| D 6.2. Has the site been identified as important for flood storage or flood conveyance in a re   | egional flood control plan?<br>Yes = 2 No = 0  | 0         |
|  |  |           |

| These questions apply to wetlands of all HGM classes.  |   |
|--|---|
| HABITAT FUNCTIONS - Indicators that site functions to provide important habitat         1 1.0. Does the site have the potential to provide habitat?  |   |
| 1 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        Arease       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:       1 structure: points = 0   | 0 |
| The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon   |   |
| 1.2. 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         XOccasionally flooded or inundated       2 types present: points = 1         XSaturated only       1 type present: points = 0        Permanently flowing stream or river in, or adjacent to, the wetland       2 points        Seasonally flowing stream in, or adjacent to, the wetland       2 points        Seasonally flowing stream in, or adjacent to, the wetland       2 points  | 1 |
| 1 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       actively managed crop production area       points = 1         < 5 species   | 0 |
| 1.4. Interspersion of habitats<br>Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or<br>the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. <i>If you</i><br><i>have four or more plant classes or three classes and open water, the rating is always high.</i><br>None = 0 points<br>Low = 1 point<br>None = 0 points<br>HI three diagrams<br>n this row<br>are HIGH = 3points<br>Decide from the diagrams<br>The HIGH = 3points<br>Decide from the diagrams<br>Decide from the diagrams<br>The HIGH = 3points<br>Decide from the diagrams<br>The HIGH = 3points<br>Decide from the diagrams<br>Decide from the diagrams<br>De | 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) <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 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) | 0 |
| At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated <i>(structures for egg-laying by amphibians)</i>   |   |
| Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)  |   |
| Total for H 1Add the points in the boxes above   | 1 |

Rating of Site Potential If score is: \_\_\_15-18 = H \_\_\_7-14 = M X\_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).                              |                     |
| <i>Calculate:</i> % undisturbed habitat $0 + [(\% \text{ moderate and low intensity land uses})/2] 0 = 0$       | %                   |
| If total accessible habitat is:   |                     |
| > <sup>1</sup> / <sub>3</sub> (33.3%) of 1 km Polygon points  | s=3 0               |
| 20-33% of 1 km Polygon points   | •                   |
| 10-19% of 1 km Polygon points   | 5 = 1               |
| < 10% of 1 km Polygon points  | 5 = 0               |
| I 2.2. Undisturbed habitat in 1 km Polygon around the wetland.  |                     |
| Calculate: % undisturbed habitat <u>10</u> + [(% moderate and low intensity land uses)/2] <u>11</u> = <u>21</u> | %                   |
| Undisturbed habitat > 50% of Polygon points   | 5 = 3               |
| Undisturbed habitat 10-50% and in 1-3 patches points  | s=2 1               |
| Undisturbed habitat 10-50% and > 3 patches points   | 5 = 1               |
| Undisturbed habitat < 10% of 1 km Polygon points  | 5 = 0               |
| H 2.3. Land use intensity in 1 km Polygon: If   |                     |
| > 50% of 1 km Polygon is high intensity land use points =   | (- 2) (-2)          |
| ≤ 50% of 1 km Polygon is high intensity points  | 5 = 0               |
| Total for H 2 Add the points in the boxes ab  | oove 0              |
| Rating of Landscape Potential If score is:4-6 = H1-3 = M $X < 1 = L$ Record the ratio                           | ng on the first pag |

| 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)           | 1              |
| <ul> <li>It is mapped as a location for an individual WDFW priority species</li> </ul>                                   |                |
| — 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 X points = 1  |                |
| Site does not meet any of the criteria above points = 0  |                |
| Rating of Value If score is:       2 = H       X       1 = M       0 = L       Record the rating or                      | 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. <u>http://wdfw.wa.gov/publications/00165/wdfw00165.pdf</u> or access the list from here: <u>http://wdfw.wa.gov/conservation/phs/list/</u>)

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: <u>Old-growth west of Cascade crest</u> 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. <u>Mature forests</u> 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*).
- X Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 see web link above*).
- X Instream: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 6.5 ft (0.15 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

Wetland Rating System for Western WA: 2014 Update Rating Form – Effective January 1, 2015 Wetland name or number \_\_\_\_\_ Potential Offsite Wetland Z to the south of the project site

## **RATING SUMMARY – Western Washington**

Name of wetland (or ID #):South of Parcel 0420351003Date of site visit:10 MAY 2022Rated byHabitat TechnologiesTrained by Ecology? x YesNo Date of training 2014HGM Class used for ratingDepressionalWetland has multiple HGM classes? x YN

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

**OVERALL WETLAND CATEGORY** []] (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

- **X** Category III Total score = 16 19
  - Category IV Total score = 9 15

| FUNCTION                       |   | nprov<br>er Q | /ing<br>uality | H | ydrol | ogic |   | Habita | ət |      |
|--------------------------------|---|---------------|----------------|---|-------|------|---|--------|----|------|
| Circle the appropriate ratings |   |               |                |   |       |      |   |        |    |      |
| Site Potential                 | Н | Μ             | L              | Н | М     | L    | Н | Μ      | L  |      |
| Landscape Potential            | Н | Μ             | L              | Н | M     | L    | Н | Μ      | L  |      |
| Value                          | Н | Μ             | L              | Н | Μ     | ] L  | Н | Μ      | L  | ΤΟΤΑ |
| Score Based on<br>Ratings      |   | 6             |                |   | 6     |      |   | 4      |    | 16   |

Score for each function based on three ratings (order of ratings is not important) 9 = H,H,H

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

3 = L,L,L

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

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

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

### **Depressional Wetlands**

| Map of:   | To answer questions: | Figure # |
|---|----------------------|----------|
| Cowardin plant classes  | D 1.3, H 1.1, H 1.4  | B1       |
| Hydroperiods  | D 1.4, H 1.2         | B2       |
| Location of outlet (can be added to map of hydroperiods)  | D 1.1, D 4.1         | B2       |
| Boundary of area within 150 ft of the wetland (can be added to another figure)  | D 2.2, D 5.2         | B2       |
| Map of the contributing basin   | D 4.3, D 5.3         | B4       |
| 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  | B3       |
| Screen capture of map of 303(d) listed waters in basin (from Ecology website)   | D 3.1, D 3.2         | W4       |
| Screen capture of list of TMDLs for WRIA in which unit is found (from web)  | D 3.3                | W5       |

#### **Riverine Wetlands**

| Map of:   | To answer questions: | Figure #   |
|---|----------------------|------------|
| Cowardin plant classes  | H 1.1, H 1.4         | $\uparrow$ |
| 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                | N/A        |
| Map of the contributing basin   | R 2.2, R 2.3, R 5.2  |            |
| 1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat | H 2.1, H 2.2, H 2.3  |            |
| Screen capture of map of 303(d) listed waters in basin (from Ecology website)   | R 3.1                |            |
| Screen capture of list of TMDLs for WRIA in which unit is found (from web)  | R 3.2, R 3.3         | $\vee$     |

#### Lake Fringe Wetlands

| Map of:   | To answer questions:       | Figure # |
|---|----------------------------|----------|
| Cowardin plant classes  | L 1.1, L 4.1, H 1.1, H 1.4 | $\land$  |
| 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        | N/A      |
| 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                      | $\vee$   |

#### Slope Wetlands

| Map of:   | To answer questions: | Figure # |
|---|----------------------|----------|
| Cowardin plant classes  | H 1.1, H 1.4         | $\wedge$ |
| Hydroperiods  | H 1.2                |          |
| Plant cover of dense trees, shrubs, and herbaceous plants   | S 1.3                |          |
| Plant cover of <b>dense, rigid</b> trees, shrubs, and herbaceous plants (can be added to figure above)                            | S 4.1                | N/A      |
| 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 polygons for accessible habitat and undisturbed habitat | H 2.1, H 2.2, H 2.3  |          |
| Screen capture of map of 303(d) listed waters in basin (from Ecology website)   | S 3.1, S 3.2         |          |
| Screen capture of list of TMDLs for WRIA in which unit is found (from web)  | S 3.3                | $\vee$   |

## 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) 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.

#### **YES – Freshwater Tidal Fringe**

NO - go to 6YES - The wetland class is RiverineNOTE: The Riverine unit can contain depressions that are filled with water when the river is not<br/>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 qua   | lity   |
| 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   |        |
| 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<br>Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points |        |
| 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 cla   | sses): |
| Wetland has persistent, ungrazed, plants > 95% of area points   | = 5    |
| Wetland has persistent, ungrazed, plants > ½ of area points   | = 3 0  |
| Wetland has persistent, ungrazed plants $> 1/10$ of area points   | = 1    |
| Wetland has persistent, ungrazed plants $<^1/_{10}$ of area points  | = 0    |
| D 1.4. Characteristics of seasonal ponding or inundation:   |        |
| This is the area that is ponded for at least 2 months. See description in manual.   |        |
| Area seasonally ponded is > 1/2 total area of wetland points  | = 4 0  |
| Area seasonally ponded is > ¼ total area of wetland points  | = 2    |
| Area seasonally ponded is < ¼ total area of wetland points  | = 0    |
| Total for D 1Add the points in the boxes about  | ove 2  |

**Rating of Site Potential** If score is: 12-16 = H 6-11 = M X 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                 | ne 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 questi Source | ons D 2.1-D 2.3?<br>Yes = 1 No = 0 | 0 |
| Total for D 2     Add the points  | in the boxes above                 | 1 |

Rating of Landscape Potential If score is: <u>3 or 4 = H</u> <u>x</u> 1 or 2 = M <u>0 = L</u> Record the rating on the first page

| D 3.0. Is the water quality improvement provided by the site valuable to society?   |   |
|---|---|
| D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0   | 0 |
| D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0   | 1 |
| D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality ( <i>answer YES if there is a TMDL for the basin in which the unit is found</i> )? Yes = 2 No = 0 |   |
| Total for D 3 Add the points in the boxes above   | 3 |
| Rating of Value       If score is: x 2-4 = H       1 = M       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:       points = 4         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   | 2          |
| 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 outletpoints = 7Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet  | 0          |
| D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin<br>contributing surface water to the wetland to the area of the wetland unit itself.<br>The area of the basin is less than 10 times the area of the unitpoints = 5The area of the basin is 10 to 100 times the area of the unitpoints = 3The area of the basin is more than 100 times the area of the unitpoints = 0Entire wetland is in the Flats classpoints = 5  | 5          |
| Total for D 4Add the points in the boxes above   | 7          |
| Rating of Site Potential If score is:       12-16 = H       X 6-11 = M       0-5 = L       Record the rating on the  | first page |
| D 5.0. Does the landscape have the potential to support hydrologic 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 5Add the points in the boxes above   | 2          |
| Rating of Landscape PotentialIf score is:3 = HX_1 or 2 = M0 = LRecord the rating on the  | first page |
| D 6.0. Are the hydrologic functions provided by the site valuable to society?  | -          |
| <ul> <li>D 6.1. <u>The unit is in a landscape that has flooding problems</u>. <i>Choose the description that best matches conditions around the wetland unit being rated</i>. <i>Do not add points</i>. <u><i>Choose the highest score if more than one condition is met</i></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 = 1</li> <li>Flooding from groundwater is an issue in the sub-basin.</li> <li>points = 1</li> <li>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</li> </ul> </li> </ul> | 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?<br>Yes = 2 No = 0   | 0          |
| Total for D 6Add the points in the boxes above   | 1          |
| <b>Rating of Value</b> If score is: $2-4 = H \times 1 = M = 0 = L$ Record the rating on the  | first page |

| <b>HABITAT FUNCTIONS</b> - Indicators that site functions to provide babitat?  |  |
|--|--|
| 1.0. Does the site have the potential to provide habitat?  |  |
| <ul> <li>1.1. Structure of plant community: Indicators are Cowardin classes and<br/>Cowardin plant classes in the wetland. Up to 10 patches may be con<br/>of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add<br/>Aquatic bed<br/>Aquatic bed<br/>Scrub-shrub (areas where shrubs have &gt; 30% cover)<br/>Forested (areas where trees have &gt; 30% cover)</li> </ul> | nbined for each class to meet the threshold  |
| If the unit has a Forested class, check if:<br>The Forested class has 3 out of 5 strata (canopy, sub-canopy, s<br>that each cover 20% within the Forested polygon  |  |
| <ul> <li>1.2. Hydroperiods</li> <li>Check the types of water regimes (hydroperiods) present within the more than 10% of the wetland or ¼ ac to count (see text for descrip</li></ul>   | tions of hydroperiods).<br>4 or more types present: points = 3<br>3 types present: points = 2<br>2 types present: points = 1<br>1 type present: points = 0 |
| <ul> <li>1 1.3. Richness of plant species</li> <li>Count the number of plant species in the wetland that cover at leas</li> <li>Different patches of the same species can be combined to meet the the species. Do not include Eurasian milfoil, reed canarygrass, pulling you counted: &gt; 19 species</li> <li>5 - 19 species</li> <li>5 - 19 species</li> <li>5 species</li> </ul>       | size threshold and you do not have to name<br>rple loosestrife, Canadian thistle<br>points = 2   |
| All three diagrams<br>n this row   | vardin plants classes (described in H 1.1), or<br>lats) is high, moderate, low, or none. If you  |

| 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 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) | 0 |
| At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)  |   |
| Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)  |   |
| Total for H 1Add the points in the boxes above   | 1 |

Rating of Site Potential If score is: \_\_\_\_15-18 = H \_\_\_\_7-14 = M X\_\_\_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 |                                  |      |
|--|----------------------------------|------|
| H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).   |                                  |      |
| Calculate: % undisturbed habitat <u>0</u> + [(% moderate and low intensity land      | uses)/2] <u>0</u> = <u>0</u> %   |      |
| If total accessible habitat is:  |                                  |      |
| > 1/3 (33.3%) of 1 km Polygon  | points = 3                       | 0    |
| 20-33% of 1 km Polygon   | points = 2                       | Ū    |
| 10-19% of 1 km Polygon   | points = 1                       |      |
| < 10% of 1 km Polygon  | points = 0                       |      |
| H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.                       |                                  |      |
| Calculate: % undisturbed habitat <u>10</u> + [(% moderate and low intensity land     | uses)/2] <u>11</u> = <u>21</u> % |      |
| Undisturbed habitat > 50% of Polygon   | points = 3                       |      |
| Undisturbed habitat 10-50% and in 1-3 patches  | points = 2                       | 1    |
| Undisturbed habitat 10-50% and > 3 patches   | points = 1                       |      |
| Undisturbed habitat < 10% of 1 km Polygon  | points = 0                       |      |
| H 2.3. Land use intensity in 1 km Polygon: If  |                                  |      |
| > 50% of 1 km Polygon is high intensity land use                                     | points = (- 2)                   | (-2) |
| ≤ 50% of 1 km Polygon is high intensity  | points = 0                       |      |
| Total for H 2 Add the p  | points in the boxes above        | 0    |

Rating of Landscape Potential If score is: \_\_\_\_\_4-6 = H \_\_\_\_\_1-3 = M \_\_\_\_\_ < 1 = L

Record the rating on the first page

| H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose that applies to the wetland being rated.</i> | only the highest score    |             |
|---|---------------------------|-------------|
| 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 th</li> </ul>   | e state or federal lists) | 1           |
| <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 Nat</li> </ul>   | ural Resources            |             |
| <ul> <li>It has been categorized as an important habitat site in a local or regional compreher</li> </ul>   | nsive 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  | X points = 1              |             |
| Site does not meet any of the criteria above  | points = 0                |             |
| Rating of Value If score is: 2 = H X 1 = M 0 = L  | Record the rating on th   | ne first po |

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

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: <u>Old-growth west of Cascade crest</u> 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. <u>Mature forests</u> 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*).
- X Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- Westside Prairies: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 see web link above*).
- X Instream: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and
  Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report –
  see web link on previous page*).
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 6.5 ft (0.15 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

Wetland Rating System for Western WA: 2014 Update Rating Form – Effective January 1, 2015 12.0 Photos



View southeasterly across Wetland B from the northwestern corner of the project site.



View easterly across Wetland B from the northwestern corner of the project site.



View westerly from eastern boundary of Wetland A.



View northerly across the eastern portion of the project site.



View northerly along Deer Creek near the southwestern corner of the project site.



View southerly along Deer Creek near the northwestern corner of the project site.



View of Offsite Wetland X immediately to the north of Wetland B and separated by an existing internal roadway.



General view of Offsite Wetland Y to the north of the project site.