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Staff Report

Project Name: Abundant Life Church

Applicant: Mr. Brad Grasley

Agent: Mr. Tom Deming, PWS

Habitat Technologies

Project Address: 1005 Orting Kapowsin Hwy East

Orting, WA 98360

Site Legal Description: Pierce County Parcel numbers

0519314027 and 0519314030

Date of Application: July 28, 2023

Date of Notice of Application:

Notice of Application was issued on September 8, 2023

Prepared By: Josh Wozniak, PWS JC Hungerford, PE

Consulting Wetland Biologist

Wayne E. Carlson, FAICP, LEED AP

Consulting Planner

Date of Staff Report: September 25, 2023

Requested Approvals: Wetland Buffer Variance

Project Description: The application is to develop the site for use as a 28,772 square-foot church,

constructed in two phases. Phase I will include demolition and erosion control for the entire project, construction of the main building, construction of the main parking, and utilities for the entire project. Phase I will also include the west expansion of the building, additional parking spaces, as well as a 24-footwide driveway on the south side of the building to provide access to the new parking on the east side of the building. Phase II will include the east expansion of the building and parking for more additional spaces. The project proposal includes a total of 144 parking spaces. The project requires the approval of site development permits, building permits, site plan approval, administrative design review, alternative landscape plan approval, and a variance from critical areas

protection criteria.

Consulting Civil Engineer

Public Comment Periods:

A combined Notice of Application and a SEPA Determination of Nonsignificance was issued on September 8, 2023, with a comment period ending on September 22, 2023, at 5:00 pm.

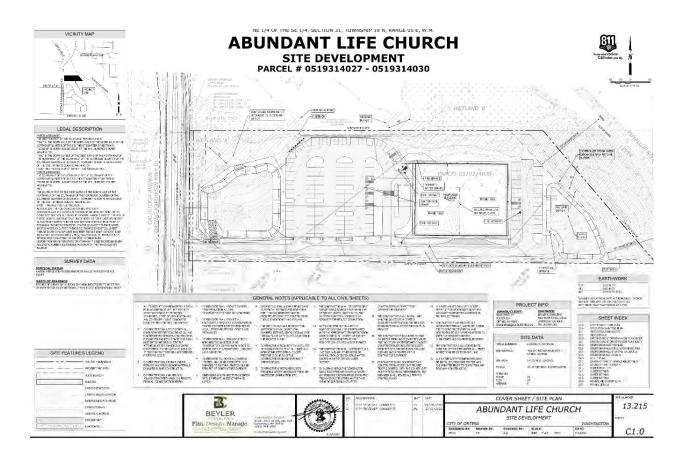
Notice of the Notice of the Hearing was separately mailed to property owners within 500 feet of the property, posted on site and at City Hall, and published in the newspaper of record on September 22, 2023.

SEPA Determination:

The City of Orting issued a Determination of Nonsignificance on September 8, 2023. No appeal was filed.

Exhibits:

- 1. Variance Request, dated July 2023
- 2. Wetland Delineation Report, dated October 2015
- 3. Wetland Revisions, dated June 2019
- 4. Wetland Buffer Establishment and Enhancement Program, dated February 2022
- 5. Civil Plans, dated August 2022
- 6. Landscape Plan, dated June 2022
- 7. Noticing Mailing Labels



Analysis

- 1. Variance Request. The application is to develop the site for use as a 28,772 square-foot church and parking lot with 144 spaces. The project requires the approval of site development permits, building permits, site plan approval, administrative design review, alternative landscape plan approval, and is requesting a variance from critical areas protection criteria described in Title 11 of the Orting Code.
- 2. On-site Critical Areas. The Puyallup River is located off-site to the east of the subject property. It has been identified to provide critical habitats for two federally listed threatened species Puget Sound Chinook Salmon, and Puget Sound Steelhead.

Per the Wetland Delineation Report, Critical Habitats Assessment and Buffer Establishment Program prepared by Habitat Technologies (Exhibit 7), there are two wetlands most relevant to this project, Wetlands A and B. The other wetlands described in the report do not have buffers that extend into the project area.

Wetland A is located within the northwestern portion of the project site and is within a shallow swale that continues into an adjacent parcel to the north. Wetland A is a Category III forested wetland.

Wetland B is located north of the project site in a shallow depression. This wetland is a forested Category II wetland.

3. Consistency with Development Code: The following section addresses consistency with applicable Orting development code.

OMC 11-4-1. The proposal is not consistent with the wetland buffer requirements stated in OMC 11-4-1. The Wetland A buffer is a Category 3 in a High Intensity use, requiring an 80' buffer, rather than the 50' depicted in the site plan. The Wetland B buffer is a Category 2 designation in a High Intensity Use, requiring a 150' buffer, rather than the 50' depicted in the site plan. The proposed project would permanently impact wetland buffers without meeting the development and mitigation requirements (11-4-1). The project would reduce the buffer width of one wetland by over 75% which is specifically prohibited (only up to 25% is allowed, with appropriate mitigation). In addition, the only proposed mitigation is removing weeds and planting natives of the small buffer area that will remain. The typical approach to permanent buffer impact mitigation would be buffer averaging and/or compensatory on- or off-site mitigation. The impact areas to the current correct buffers were not mapped, calculated or presented in application materials, despite several requests. The applicant also rejected input from Orting review staff to consider revising a planned large lawn in the floodplain to provide buffer mitigation, or to consider off-site mitigation opportunities. As such, the proposed project does not meet development requirements.

The applicant has requested a variance the buffer requirements under OMC 11-1-8.

OMC 11-1-8 allows for the granting of a variance if the following criteria are established:

A. Because of the special circumstances applicable to the subject property, including size, shape, topography, location or surroundings, or the size or nature of the critical area, the

strict application of this title would deprive the property owner of reasonable use of their property; and

Staff Analysis: The parcel is large, flat and with access to the roadway without impacting buffers. A significant portion of the site has no buffer restrictions, and a large additional area is within the outer portion of buffers where (mitigated) impacts are allowed.

B. The granting of the variance is the minimum necessary to accommodate the development proposal and will not be materially detrimental to the public welfare or injurious to the property or improvements in the vicinity and zone in which the property is situated, or contrary to the goals and purposes of this title.

Staff Analysis: The variance is not the minimum necessary to accommodate the development of a large church facility. The site, with existing critical area restrictions, can still contain significant developable area. The permanent removal of wetland buffers without appropriate mitigation would degrade the long-term protection of critical areas within Orting. It would also negatively affect all residents who have compiled and will comply with the critical area code by inconsistently enforcing land development codes.

Summary of Recommendation

The proposed project does not meet the variance requirements. It does not quantify or map the impacts, so the scale of the variance is not known. Beyond that it does not meet code requirements at a gross scale. There are opportunities to mitigate the proposed permanent buffer impacts that have been rejected by the applicant. A large permanent reduction to the wetland buffer, replacement with development and not providing adequate mitigation will reduce buffer functions and negatively impact the wetland. This would permanently remove critical areas (buffers) from Orting and negatively impact nearby aquatic resources (wetlands).

Staff recommends that the Hearing Examiner deny the applicant's request for a critical areas variance.

Cc: Tom Deming, Habitat Technologies
Brad Grasley, Abundant Life Church
Chuck Sundsmo, Land Use Consulting and Development, LLC

HABITAT TECHNOLOGIES

July 28, 2023

Mr. Wayne Carlson, Principal @ AHBL Inc. e-mail wecarlson@ahbl.com

Mr. Josh Wozniak
@ Parametrix Inc.
e-mail JWozniak@parametrix.com

RE: Abundant Life Community Church Critical Areas Variance Request

Dear Mr. Carlson and Mr. Wozniak,

Please see attached the itemized responses to the criteria of OMC 11-1-8 as a part of the request for a variance from the specific criteria of the City's *Critical Areas Ordinance*. Following your review please contact any of the Church project team with any questions, comments, or need for further information.

Thank you for your involvement with the final permitting of this essential Church facility.

Sincerely,

Thomas D. Deming

Thomas D. Deming, SPWS Habitat Technologies

cc. Brad Grasley e-mail brad@alccorthing.com Chuck Sundsmo e-mail chucksundsmo@msn.com

HABITAT TECHNOLOGIES

July 27, 2023

Abundant Life Community Church @ Mr. Chuck Sundsmo e-mail chucksundsmo@msn.com

RE: Abundant Life Community Church Critical Areas Variance Request Discussion

Dear Mr. Sundsmo,

As outlined in the numerous project documents the overall planning and proposed development of the Abundant Life Community Church Facilities must meet specific sizes, structures, and dimensions required to satisfactorily achieve the needs and desires of the Abundant Life Church to provide for the religious and community participation needs of the parishioners, families, and friends. However, to meet these needs and aspirations

As defined within the City of Orting Municipal Code, the purpose of Title 11 is to designate and protect the functions and values of ecologically sensitive and hazardous areas without violating any citizen's constitutional rights. To achiever this primary purpose the development of the Abundant Life Church Facilities would be accomplished without direct adverse impacts to the identified onsite wetland, potential offsite wetlands, potential flood hazard areas, or to offsite critical habitats. Additional site development actions would establish and enhance viable protective buffers adjacent to these defined onsite and offsite critical areas to allow for the short-term and long-term protection and sustainability of physical and biological functions and values of these critical areas, allow for both the controlled and treated release of seasonal surface water runoff to ensure no adverse impacts to downstream aquatic areas or water quality, and provide floodplain protections through compensatory flood storage and controlled release.

However, because of the limited size of the project site; the location of identified onsite Wetland A; and the standard buffer widths as defined within the present 2016 City Code associated with Wetland A, the potential offsite Wetland B, and the location of the adjacent Puyallup River the development of the proposed Church facility would require an unavoidable encroachment into the standard City of Orting 2016 buffers associated with Wetland A, the potential offsite wetlands, and the Puyallup River.

To ensure consistency with the provisions and intent of Title 11, while also meeting the needs of the Church community, the Abundant Life Community Church has requested a "variance" from the critical areas protection criteria (OMC 11-1-8).

wetlands, streams, fisheries, wildlife – mitigation and permitting solutions P.O. Box 1088, Puyallup, Washington 98371
253-845-5119 contact@habitattechnologies.net

As defined within **OMC 11-1-8 Variances** a variance from the standards of this title may be authorized by the City Council in accordance with the procedures set forth in Title 13 of the City Municipal Code - zoning. In granting such a variance, the City Council, after review and recommendation by the planning commission, shall find:

A. Because of the special circumstances applicable to the subject property, including size, shape, topography, location or surroundings, or the size or nature of the critical area, the strict application of this title would deprive the property owner of reasonable use of their property;

Discussion: As defined above, project site was cleared, filled, and leveled pursuant to a City of Orting permit as a part of the development Hidden Lakes Residential Community in the late 1990s/early 2000s located directly to the south. The filling of the project site raised the site between approximately one (1) to eight (8) feet above the original grade and utilized very gravelly imported materials. Following the filling of the entire project site the plant community outside those areas not regularly managed as a part of the existing, ongoing church uses became dominated by a variety of grasses, herbs, and primarily invasive shrubs. The property directly to the north has also undergone a variety of land uses generally associated with an existing single-family homesite and pasture management. In addition, the project site is bounded on the east by a Pierce County level adjacent to the Puyallup River and on the west by Calistoga Avenue – a well utilized public highway.

Onsite assessment identified a previously created wetland generally associated with the Calistoga Avenue Corridor at the northwestern corner of the project site and a managed pastured wetland within the homesite property to the north of the project site. The onsite wetland, together with the standard buffers associated with both the onsite and offsite wetlands comprise approximately 1.92 acres – approximately 40% of the entire project site.

As specifically defined throughout the Church planning process the proposed facilities must meet specific sizes, structures, and dimensions required to adequately meet the needs of the Abundant Life Church to provide for the religious and community participation needs of the parishioners, families, and friends. These facilities are also required to ensuring that the facilities development and utilization protects the functions and values of identified onsite and offsite environmentally critical areas; protects the public from potentially offsite hazardous areas; provides safe and appropriate parking and internal traffic circulation; provides safe and appropriate access and egress for emergency vehicles and police protection; provides safe and appropriate stormwater collection, treatment, and detention; and ensures overall public safety.

Conclusion: The overall intent of this proposal is to establish a Church facility that meets the needs and religious desires of the parishioners, families, friends,

along with the needs of the Orting community. This intent would be met through the combination of a variety of site development actions, to include the implementation of the *Wetland Buffer Establishment and Enhancement Program* outlined below. Without the City Council's granting of a variance from the provisions associated with standard wetland buffer establishment, the size and character of the property, the somewhat narrow rectangular shape of the property, the need to meet City public health and safety standards, the need to meet City stormwater standards, and the desire to create a viable and beneficial facility could <u>not</u> be met. Strict application of the wetland buffer requirements would result in the inability to construct the necessary Church facilities.

B. The granting of the variance is the minimum necessary to accommodate the development proposal and will not be materially detrimental to the public welfare or injurious to the property or improvements in the vicinity and zone in which the property is situated, or contrary to the goals and purposes of this title.

Discussion: As outlined above the proposed reduction of the standard wetland buffers provides the minimum necessary area onsite to accommodate the proposed Church facilities while also meeting the City of Orting regulations for parking and internal traffic circulation; safe access and egress for emergency vehicles and police protection; and safe stormwater management facilities.

Conclusion: The overall intent of this proposal is to establish a Church facility that meets the needs and religious desires of the parishioners, families, friends, along with the needs of the Orting community. The City's granting of this variance to allow for the development of the Abundant Life Church Facilities as presently planned would <u>not</u> be materially detrimental to the public welfare, would <u>not</u> be injurious to the property or improvements within the vicinity, and would <u>not</u> be contrary to the goals and purposes of the City of Orting Municipal Code.

Thank you for allowing Habitat Technologies to continue to assist with your project planning. Please contact us with any additional questions or wish to discuss the requested variance further.

Sincerely, Thomas D. Deming

Thomas D. Deming, SPWS Habitat Technologies

WETLAND DELINEATION REPORT

PARCELS 0519314027 and 0519314030 1005 Orting Kapowsin Highway East Orting, Washington 98360

prepared for:

Abundant Life Community Church Mr. Jim Burbridge P.O. Box 826 Orting, Washington 98360

prepared by:

HABITAT TECHNOLOGIES
P.O. Box 1088
Puyallup, Washington 98371-1088
253-845-5119

October 27, 2015

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INTRODUCTION

This document outlines the culmination of activities and onsite evaluations undertaken to complete a wetland delineation report within and immediately adjacent to the project site (Parcels 0519314027 and 0519314030). Onsite assessment followed the methods and procedures defined in the *Corps of Engineers Wetland Delineation Manual* (1987 Manual) with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (2010 Supplement); guidance provided by the Washington State Department of Ecology for the *Washington State Wetlands Identification and Delineation Manual* (Wash Manual), the State of Washington Department of Natural Resources (WDNR) Forest Practice Rules (WAC 222-16-030), and the City of Orting Title 11. The project site was located at 1005 Orting Kapowsin Highway East Orting, Washington (part of Section 31, Township 19N, Range 05E, W.M.) (Figure 1). This document has been prepared for submittal to the City of Orting and potentially other resource permitting agencies for wetland and potentially other critical areas (i.e. surface water drainages, critical habitats) verification and permitting actions.

PROJECT SITE DESCRIPTION

The project site was composed of two (2) existing parcels within the western portion of the City of Orting. The project site was irregular in shape, totaled 4.84 acres in size, and was generally level. The project site had undergone prior land use manipulations to include the development of a single-family home and associated outbuildings, fencing, produce garden, fill placement, public roadway development, and the development of adjacent properties. Prior to 2004 the project site had been managed for agricultural production for several decades. In 2004 the project site was part of the planning area for the Hidden Harbor Residential Community located directly to the south. As a part of the development of this residential community the project site was cleared, filled, and leveled as a part of the development of a temporary stormwater pond. The project site was bound by existing single family development to the north and south, Orting Kapowsin Highway East to the western boundary, and the Puyallup River to the east.

Legal Descriptions:

Parcel 0519314027: Section 31 Township 19 Range 05 Quarter 41: W 330 FT OF FOLL PARCEL A S 1/2 OF N 1/2 OF S 1/2 OF NE OF SE EXC CALISTOGA AVE PARCEL B S 99 FT OF W 3/4 OF N 1/2 OF N 1/2 OF S 1/2 OF NE OF SE EXC CALISTOGA AVE SEG F 0755

Parcel 0519314030: Section 31 Township 19 Range 05 Quarter 41: PARCEL A S 1/2 OF N 1/2 OF S 1/2 OF NE OF SE EXC W 330 FT PARCEL B S 99 FT OF W 3/4 OF N 1/2 OF N 1/2 OF S 1/2 OF NE OF SE EXC W 330 FT EXC POR CYD TO P CO ETN W1085443 OUT OF 4-028 SEG N0638 4/10/02MD

BACKGROUND INFORMATION

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 drainages within the project site. This mapping resource did identify offsite wetlands to the northeast of the project site which were generally associated with the Puyallup River Corridor.

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 species within the project site. This mapping resource identified an offsite wetland to the southeast of the project site.

STATE OF WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

The State of Washington Department of Fish and Wildlife (WDFW) Mapping was reviewed as a part of this assessment (Figure 4). This mapping resource did not identify any drainage corridors or water bodies within the project site. This mapping resource did identify the Puyallup River Corridor offsite to the east.

The WDFW SalmonScape identifies that the Puyallup River within the area offsite to the east of the project site provides habitats for fall Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), fall chum salmon (*Oncorhynchus keta*), winter steelhead (*Oncorhynchus mykiss*), pink salmon (*Oncorhynchus gorbuscha*), and native char (*Salvelinus confluentus*).

STATE OF WASHINGTON DEPARTMENT OF NATURAL RESOURCES

The State of Washington Department of Natural Resources (WDNR) Mapping was reviewed as a part of this assessment (Figure 5). This mapping resource did not identify any wetlands or drainage corridors within the project site. This mapping resource did identify a wetland complex offsite to the northeast associated with the Puyallup River Corridor. This mapping resource identified the Puyallup River as a WDNR Type S (shoreline) Water.

PIERCE COUNTY MAPPING

The Pierce County Mapping was reviewed as a part of this assessment (Figure 6). This mapping resource identified the project site within a County floodplain. This mapping resource also noted potential fish and wildlife habitat conservation areas, hydrology, County floodplains, and potential wetlands within the vicinity of the project site.

SOILS MAPPING

The soil mapping inventory completed by the Soils Conservation Service was reviewed as a part of this assessment (Figure 7). This mapping resource identified the soil throughout the majority of the western portion of the project site as Philchuck fine sand (29A). The Philchuck soil series is defined as excessively drained, as formed in alluvium, and as not listed as "hydric."

A small band of Orting loam (28A) was noted in the southwest corner of the project site. The Orting soils series is defined as somewhat poorly drained, as formed in the Electron mudflow, and as listed as "hydric." The eastern portion of the project site was identified to contain Aquic Xeroluvents (2A). The Aquic soil series is defined as somewhat excessively drained, as formed in alluvium, and as not listed as "hydric."

PRIOR ASSESSMENTS

In 2004 a wetland reconnaissance report was completed by John Comis Associates for the project site. This study identified a portion of a City of Orting Category 3 Wetland within the northwestern corner of the project site. This wetland was noted to extend offsite to the north. This prior study further identified City of Orting Category 2 Wetlands offsite to the north, east, and south east of the project site.

ONSITE ANALYSIS

CRITERIA FOR WETLAND IDENTIFICATION

The purpose of this assessment was to provide a formal wetland delineation throughout the project site consistent with the presently applicable federal, state, and City of Orting requirements and methodologies. To future assist with project planning this assessment also included an analysis of potential surface water drainage corridors (streams) and potential critical habitats which may be located within or immediately adjacent to the project site. This assessment did <u>not</u> include an assessment of potential steep slope, potential floodplain critical areas, or geotechnically hazardous critical areas.

Wetlands: Wetlands are transitional areas between aquatic and upland habitats. In general terms, wetlands are lands where the extent and duration of saturation with water is the primary factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface (Cowardin, et al., 1979). Wetlands are generally defined within land use regulations as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (1987 Manual).

Wetlands exhibit three essential characteristics, all of which must be present for an area to meet the established criteria within the Wash. Manual and the 1987 Manual. These essential characteristics are:

- **1. Hydrophytic Vegetation:** A predominance of plants that are typically adapted for life in saturated soils.
- **2. Hydric Soil:** A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper horizons.
- **3. Wetland Hydrology:** Permanent or periodic inundation, or soil saturation to the surface, at least seasonally.

The City of Orting defines "wetlands" as areas that are inundated or saturated by surface water 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, shallow open waters, and similar areas. Wetlands do not include those artificial wetlands purposefully and intentionally created from nonwetland sites by human actions, 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 created to mitigate conversion of wetlands.

STUDY METHODS

Habitat Technologies completed a series of onsite assessments during September and October 2015. In addition, Habitat Technologies has completed similar assessments for parcels within the local area of the project site. The objective of the assessment was to define and delineate potential wetland areas within or immediately adjacent to the project area. 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 1987 Manual and 2010 supplement, the Wash. Manual, City of Orting Title 11, and the WDNR Forest Practice Rules. Delineation was performed using the *routine methodology for areas*

smaller than five acres as detailed in the 1987 Manual. Field data sheets and sample plot locations are provided in Appendix A.

FIELD OBSERVATION

The project site was accessed along the western boundary via an existing public roadway (Orting Kapowsin Highway East). The project site contained an existing single family home, associated outbuildings, and a produce garden. The project site had been utilized by Abundant Life Church in recent years. As noted above, the project site had undergone prior land use manipulations to include clearing and grading, fencing, ditching, fill placement, public roadway development, and the development of adjacent properties.

Soils

As documented at representative sample plots throughout the majority of the project site the soil exhibited a sandy loam to gravelly sandy loam texture. The surface soil typically exhibited a very dark grayish brown (10YR 3/2) to dark brown (10YR 3/3) coloration and loamy sand to gravelly sandy loam texture. The subsoil to a depth of approximately 20 inches exhibited a dark brown (10YR 3/3) coloration, and very gravelly loamy sand texture. This soil was identified as non-hydric in character and appeared best defined as imported fill.

The soil identified within a shallow topographic depression in the northwestern corner of the project site also exhibited a surface soil coloration of dark brown (10YR 3/3) to a depth of approximately 24 inches. The subsoil exhibited few redoximorphic features (i.e. depleted matrix and redox concentrations). The soil was dominated by a silty loam texture that appeared best defined as a moderately well drained native soil. The soil within this area exhibited field characteristics typical of a non-hydric soil.

A shallow topographic swale was also present in the northwestern corner of the project site. This swale appeared to have been created by prior ditching to direct seasonal surface water to a culvert crossing westerly of the Orting Kapowsin Highway East. The soil within this swale exhibited a very dark grayish brown (10YR 3/2) coloration and a silty loam texture. This soil also exhibited a few prominent redoximorphic features. The soil within this swale exhibited field characteristics typical of a hydric soil.

Hydrology

Onsite hydrology patterns throughout the project site appeared to be the result of seasonal stormwater runoff from onsite, adjacent parcels, and roadside stormwater flow. The majority of the project site appeared to drain moderately well to well and did not exhibit field indicators typically associated with wetland hydrology.

A shallow swale within the northwestern boundary area of the project site appeared to receive seasonal stormwater runoff from the project site, adjacent parcels to the north, and prior roadside ditch flow. This swale exhibited field indicators of shallow seasonal ponding near the installed culvert under Orting Kapowsin Highway East. Remnant ditch lines were also noted along the northern boundary and western boundary within the project site that conveyed seasonal hydrology to the northwestern boundary area. Seasonal hydrology was then conveyed via the installed culvert to the northwest.

Offsite to the east of the project site a ditch line was identified to convey seasonal stormwater generally to the north/northwest. This ditch entered a small depression at approximately the midway point along the eastern boundary then continued to the north/northwest. Within the adjacent parcel to the north this ditch appeared to discharge into a depression in the adjacent parcel to the north. This offsite depression appeared to seasonally pond following seasonal storm events.

A created ditch was also present along the southern boundary of the project site. This ditch appeared as a remnant of the development of the residential community to the south.

Vegetation

The project site exhibited two (2) primary plant communities, both of which had undergone prior land use manipulations. The first plant community was typically associated with the majority of the project site. Observed species included Himalayan blackberry (*Rubus procera*), evergreen blackberry (*Rubus laciniatus*), trailing blackberry (*Rubus ursinus*), Scots broom (*Cytisus scoparius*), Pacific red elderberry (*Sambucus racemosa*), bracken fern (*Pteridium aquilium*), bluegrass (*Poa spp.*), bedstraw (*Galium spp.*), hairy cats ear (*Hypochaeris radicata*), dandelion (*Taraxacum officinale*), daisy (*Bellis perennis*), clover (*Trifolium spp.*), reed canarygrass (*Phalaris arundinacea*), and buttercup (*Ranunculus repens*). This plant community was located throughout the majority of the project site and was identified as non-hydrophytic in character (i.e. typical of uplands).

The second plant community was noted within the northwestern corner of the project site and was typically associated with damp to saturated soils. Observed species included black cottonwood (*Populus trichocarpa*), Sitka willow (*Salix sitchensis*), Pacific willow (*Salix lasiandra*), salmonberry (*Rubus spectabilis*), common lady fern (*Athyrium filix-femina*), and buttercup. This plant community was identified as hydrophytic in character (i.e. typical of wetlands) and generally dominated the identified created drainage swale.

Wildlife Observations

Wildlife species observed directly and indirectly within the project site during September and October 2015 included American crow (Corvus brachynchos), Steller's jay (Cyanocitta stelleri), American robin (Turdus migratorius), black capped chickadee (Parus atricapillus), rufous-sided towhee (Pipilo erythrophthalmus), dark eyed junco (Junco hyemalis), common raven (Corvus coraw), rufous hummingbird (Selasphorus rufus), and eastern cottontail (Sylvilagus floridanus). Additional species that would be expected within the general area of the project site base on existing plant communities, available habitats, and prior observations would include tree swallow (Tachycineta bicolor), violet green swallow (Tachycineta thallassina), song sparrow (Melospiza melodia), starling (Sturnus vulgaris), band-tailed pigeon (Columba fasciata), mourning dove (Zenaida macroura), rock dove (Columbia livia), Northern flicker (Colaptes auratus), hairy woodpecker (Picoides villosus), pileated woodpecker (Dryocopus pileatus), marsh wren (Cistothorus platensis), red tailed hawk (Buteo jamaicensis), great horned owl (Bubo virginianus), Western screech owl (Otus kennicotti), great blue heron (Ardea herodias), California quail (Callipepla californica), hooded merganser (Lophodytes susullatus), American goldfinch (Carduelis tristis), American dipper (Cinclus mexicanus), chestnut backed chickadee (Parus rufescens), red breasted nuthatch (Sitta canadensis), golden crowned kinglet (Regulus satrapa), Roosevelt elk (Cervus elaphus roosevelti), black tailed deer (Odocoileus hemionus), coyote (Canis latrans), bobcat (Lynx rufus), porcupine (Erithizon dorsatum), raccoon (Procyon lotor), striped skunk (Mephitis mephitis), opossum (Didelphis virginianus), Douglas squirrel (Tamiasciurus douglasii), deer mouse (Peromyscus maniculatus), shrew (Sorex spp.), vole (Microtus spp.), Townsend Chipmunk (Eutamias townsendi), bats (Myotis spp.), common garter snake (Thamnophis sirtalis), Pacific treefrog (Hyla regilla), red-legged frog (Rana aurora), and northwestern salamander (Ambystoma gracile).

The project site was not identified to provide habitats for fish species. However, the Puyallup River located offsite to the east/northeast has been documented to provide habitats for Chinook salmon, coho salmon, rainbow/steelhead trout, cutthroat trout (*Oncorhynchus clarkii*), native char, sculpins (*Cottus* spp.), sucker (*Catostomus* spp.), and whitefish (*Prosopium* spp.).

Movement Corridors: The project site and adjacent parcels exhibited numerous well-used wildlife trails for small, medium, and large mammals. In addition, the Puyallup River Corridor offsite to the east/northeast provides a movement corridor for aquatic and terrestrial species. The project site was also located within the Pacific Flyway for waterfowl and the migratory corridor for passerine birds.

State Priority Species: Several species identified by the State of Washington as "Priority Species" were observed onsite or potentially may utilize 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 Roosevelt elk, black tailed deer, band-tailed pigeon, hooded merganser, California quail, ruffed grouse, mourning dove, Chinook salmon, coho salmon, rainbow/steelhead trout, cutthroat trout, whitefish, native char, and common mallard.

State Monitored: State Monitored species are native to Washington but require habitat that has limited availability, are indicators of environmental quality, require further assessment, have unresolved taxonomy, may be competing with other species of concern, or have significant popular appeal. State Monitored species – great blue heron – may utilize the habitats associated with the Puyallup River Corridor.

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. One State Candidate species - pileated woodpecker – would be expected within the area of the project site. Two State Candidate fish species – Chinook salmon and native char – are documented to use the habitats within the adjacent Puyallup River Corridor.

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 as a part of this assessment. However, a single State Sensitive species – bald eagle – has been documented within the general area of the project site and to use the habitats associated with the Puyallup River Corridor.

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 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 direct critical habitats for State Endangered species.

Federally Listed Species: A single, federally listed "species of concern" – bald eagle – has been documented to utilize the habitats generally associated with the Puyallup River Corridor. As such, this species may occasionally overfly the project site. However, the project site does not provide critical habitats for this species.

Three federally listed threatened species - Chinook salmon, steelhead, and native char – and a single species of concern – coho salmon – have been documented to use the habitats associated with the Puyallup River within the vicinity of the project site.

IDENTIFIED WETLANDS

Onsite assessment completed during September and October 2015 identified a single wetland generally associated with a created ditch at the northwestern corner of the project site. This assessment also identified a wetland offsite to the north and northeast of the project site. Those areas identified were similar to the findings outlined in the Wetland Reconnaissance Report for the Hidden Harbor – North Lot Property prepared by John Comis Associates dated November 16, 2004.

Onsite assessment did not identify any streams or critical wildlife habitat areas.

ONSITE WETLAND

WETLAND	CLASSIFICATION	ORTING	ORTING RATED	WDOE	WDOE RATED
	(USFWS)	CATEGORY	BUFFER WIDTH	CATEGORY	BUFFER WIDTH
A	PFOEx	2	50 feet	3	25 feet

Wetland A: Wetland A was identified in the northwestern corner of the project site within a shallow created swale that continued offsite into the adjacent parcel to the north a short distance. The Wetland A exhibited a young, deciduous forest canopy and dense shrub understory. Wetland hydrology was provided by seasonal stormwater sheetflow, prior excavation and roadway construction actions, and soils characteristics. Hydrology to the wetland appeared to have been historically provided by the roadside ditch system associated with Orting Kapowsin Highway East. However, recent roadway improvements (curb, gutter, and sidewalks) along Orting Kapowsin Highway East to have redirected hydrology into the installed stormwater system and no longer entered the shallow created swale.

Wetland A met the U.S. Fish and Wildlife Service (USFWS) criteria for classification of palustrine, forested, seasonally saturated/flooded, excavated (PFOEx). Wetland A was identified to meet the criteria for designation as a City of Orting Category 2 Wetland based solely on the presence of a forested wetland class. However, this forested wetland class was dominated of a single species – Pacific willow.

Wetland A achieved a total functions score of 42 points utilizing the Washington State Department of Ecology (WDOE) Wetland Rating Form for Western Washington (Appendix B). As such, Wetland A would be identified as a Category 3 Wetland based on the WDOE rating worksheet.

POTENTIAL OFFSITE WETLANDS

WETLAND	CLASSIFICATION (USFWS) (offsite)	ORTING CATEGORY	WDOE CATEGORY	ORTING BUFFER WIDTH
В	PFOEf/PEMEf	2	2	50 feet

Potential Wetland B: Wetland B was identified in the adjacent parcel to the north of the project site in a shallow depression (Comis Wetland B). This northern wetland area also exhibited a mosaic pattern connection with the shallow depression located offsite to the east of the project site (Comis Wetland C). Because of land ownership no direct assessment of these offsite depressions were completed during September/October 2015 and these areas were rated from the project boundary and from historical aerial photos - as such the notation as "potential." The offsite depression to the north appeared to be utilized by livestock. Wetland B exhibited a forest canopy and shrub understory. An area of the wetland to the north appeared to be dominated by emergent species. Wetland hydrology was provided by seasonal stormwater sheetflow, ditched flow directed to the wetland, and soils characteristics. Hydrology to the wetland appeared to have been historically provided by a ditch system along the western side of the levee. Recent development improvements to the south appeared to have redirected some hydrology into the installed stormwater system and no longer entered the wetland.

Wetland B met the USFWS criteria for classification of palustrine, forested, seasonally saturated/flooded, farmed (PFOEf); and palustrine, emergent seasonally saturated/flooded, farmed (PEMEf). Wetland B was identified to meet the criteria for designation as a City of Orting Category 2 Wetland. Wetland B achieved a total functions score of 51 points utilizing the Washington State Department of Ecology (WDOE) Wetland Rating Form for Western Washington (Appendix B) and was identified as a Category 2 Wetland based on the rating worksheet.

Another potential wetland area appeared to be located well offsite to the southeast of the southeastern corner of the project site (Comis Wetland D). This potential wetland appeared dominated by a young deciduous forest plant community and appeared consistent with the mapping provided in Figure 4 above.

REGULATORY CONSIDERATION

The proposed alteration of lands defined by various federal, state, and local authority rules and regulations as "wetlands" or "critical areas" raises environmental concerns that are generally addressed in the development review process. These concerns center on the development's potential adverse impacts to the structure, function, value, and size of these "wetland" areas. Such adverse impacts may include: a reduction in

wildlife habitats, reduced surface water quality, reduced water retention, a reduced ground water recharge rate, reduced plant species diversity, and the reduction in the function and value of other associated wetland and non-wetland characteristics.

U.S. ARMY CORPS OF ENGINEERS - Section 404

Section 404 of the Clean Water Act (33 U.S.C. 1344) prohibits the discharge of dredged or fill material into "Waters of the United States" without a permit from the Corps of Engineers (Corps). The Corps has jurisdiction over freshwater systems waterward from the ordinary high water line of a water body or waterward from the upland boundary of the adjacent wetland. The definition of fill materials includes the replacement of aquatic areas with dry land, grading which changes the surface contour of a wetland, and mechanized land clearing in wetlands. For the purposes of Section 404 permitting the Corps makes the final determination as to whether an area meets the wetland definition and would be subject to regulation under the Corps program. Applications to the Corps for permitting actions must follow the 1987 Manual wetland delineation format.

Currently the Corps has two specific types of permits which apply to wetland fill proposals. These two types are a series of specific Nationwide Permits and the Individual Permit. The Nationwide Permit process identifies specific categories of work that can be undertaken following a set of specific conditions applicable to each Nationwide Permit number. The Corps requires an Individual Permit where a proposed activity within an identified jurisdictional wetland area cannot be authorized under one of the Nationwide Permits. Within the Individual Permit process the Corps undertakes a much more in-depth review of the proposed project and the proposed impacts. The Corps must evaluate whether the benefits derived from the project outweigh the foreseeable environmental impacts of the project's completion.

All projects that proceed forward using either one of the Nationwide Permits or the Individual Permit process must also comply with the provisions of the Endangered Species Act. As defined by a recent U.S. Supreme Court decisions the Corps of Engineers does **not** typically regulated "isolated" wetlands pursuant to Section 404 of the Clean Water Act. Under this decision "isolated" wetlands do not exhibit a continuous surface water connection to other, downstream aguatic system.

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

Proposed action undertaken through either of the Corps of Engineers processes (Nationwide, Individual, or isolated) are also subject to the provisions of the Washington State Department of Ecology *Water Quality Certification Process*. Projects that may be exempt from Corps of Engineers Section 404 jurisdiction may still require review by the Washington State Department of Ecology to ensure consistency with State water quality protection provisions.

CITY OF ORTING CRITICAL AREAS REGULATIONS

The City of Orting regulates activities in and around identified "critical areas" pursuant to Chapter 11.

Wetland Categories

The City of Orting has identified that wetlands shall be classified into categories which are reflective of each wetland's function and value and unique characteristics. Wetland categories are based on the generalized criteria and the specific criteria provided in the Washington State Wetland Rating System for Western Washington (WDOE publication #04-06-025). Wetland categories shall be designated according to the following generalized criteria:

Wetlands shall be designated Class I, Class II, and Class III according to the criteria in this section.

Class I Wetlands: Class I wetlands mean wetlands that meet any of the following criteria:

- 1. The presence of species listed by the federal government or state as endangered, threatened, or the presence of actual habitat for those species; or
- 2. Wetlands having forty percent (40%) to sixty percent (60%) permanent open water in dispersed patches with two (2) or more classes of hydrophytic vegetation; or
- 3. Contiguous wetlands equal to or greater than ten (10) acres in size and having three (3) or more wetlands classes, as defined in subsection D of this section, one of which is open water; or
- 4. The presence of plant associations of infrequent occurrence in the Orting region. These include, but are not limited to, mature forested communities and bog systems.

Class II Wetlands: Class II wetlands mean any wetlands which meet any of the following criteria:

- 1. Contiguous wetlands greater than one acre in size that do not meet the criteria for a class I wetland: or
- 2. Contiguous wetlands between one acre and two thousand five hundred (2,500) square feet in size, and having three (3) or more wetland classes, as defined in subsection D of this section; or
- 3. Contiguous wetlands between one acre and two thousand five hundred (2,500) square feet that have a forested wetland class.

Class III Wetlands: Class III wetlands are wetlands that do not meet the criteria of class I or II wetlands.

Wetland Buffers

The City of Orting has identified that the following buffers shall be required for wetlands based on the class of wetland as outlined in section <u>11-3-2</u> of this title. The City may allow buffer averaging.

WETLAND CATEGORY	BASE BUFFER WIDTH
Category 1 Wetland	150 feet
Category 2 Wetland	50 feet
Category 3 Wetland	25 feet

Buffer Averaging

Buffer width averaging may be allowed where the applicant demonstrates to the city that the wetland contains variations in sensitivity due to existing physical characteristics, that lower intensity land uses would be located adjacent to areas where the buffer width is reduced, and/or that the total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging.

Buffer width may be reduced by up to twenty five percent (25%) if an applicant undertakes measures approved by the city to enhance the buffer, including, but not limited to, planting of native trees and shrubs or increasing the diversity of plant cover types.

SELECTED DEVELOPMENT ACTION

The Selected Development Action for Parcels 0519314027 and 0519314030 focuses on the development of the Abundant Life Church Facility consistent with the City of Orting Comprehensive Plan, local zoning, and the local neighborhood (see project site plan).

The development of this church facility would be accomplished without a direct adverse impact to the identified onsite wetland (Wetland A) or to the identified potential offsite wetlands. However, because of the limited size of the project site, the location of identified Wetland A, and the standard buffer width associated with Wetland A the development of the proposed church facility may require a modification to the standard buffer associated with Wetland A. If required, such buffer modification shall be completed consistent with the provisions of Chapter 11. Site development would also utilize Best Management Practices to ensure protection of local water quality and to protect against adverse erosion and stormwater release.

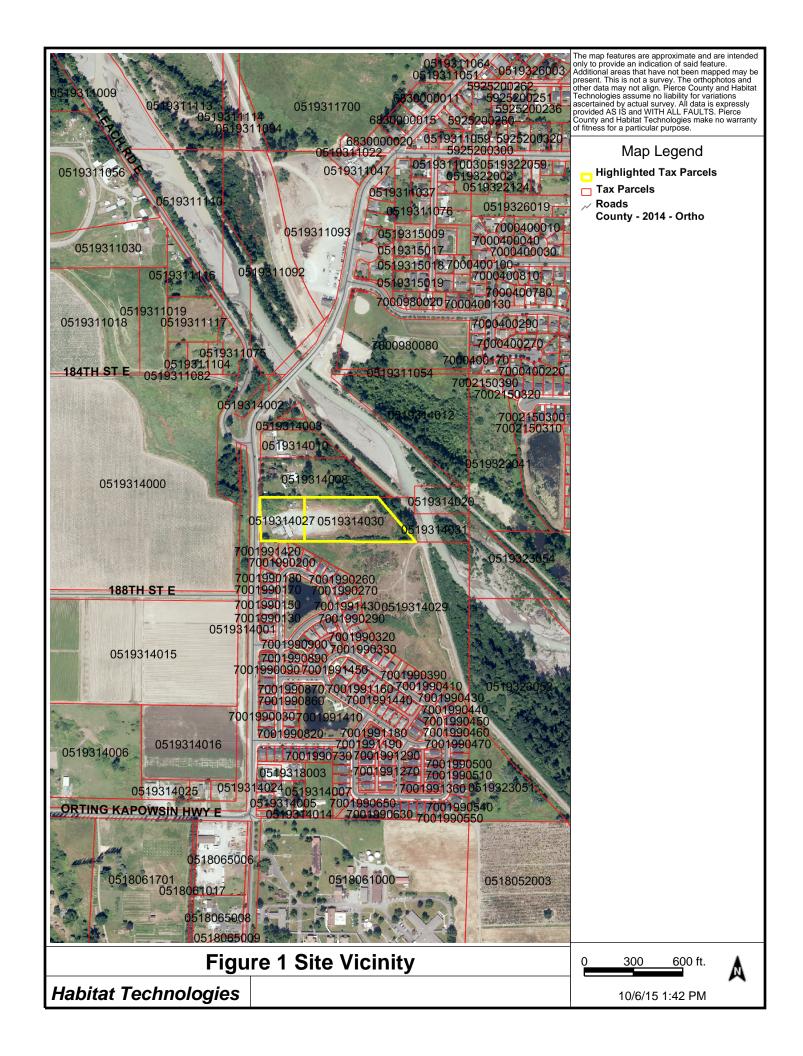
STANDARD OF CARE

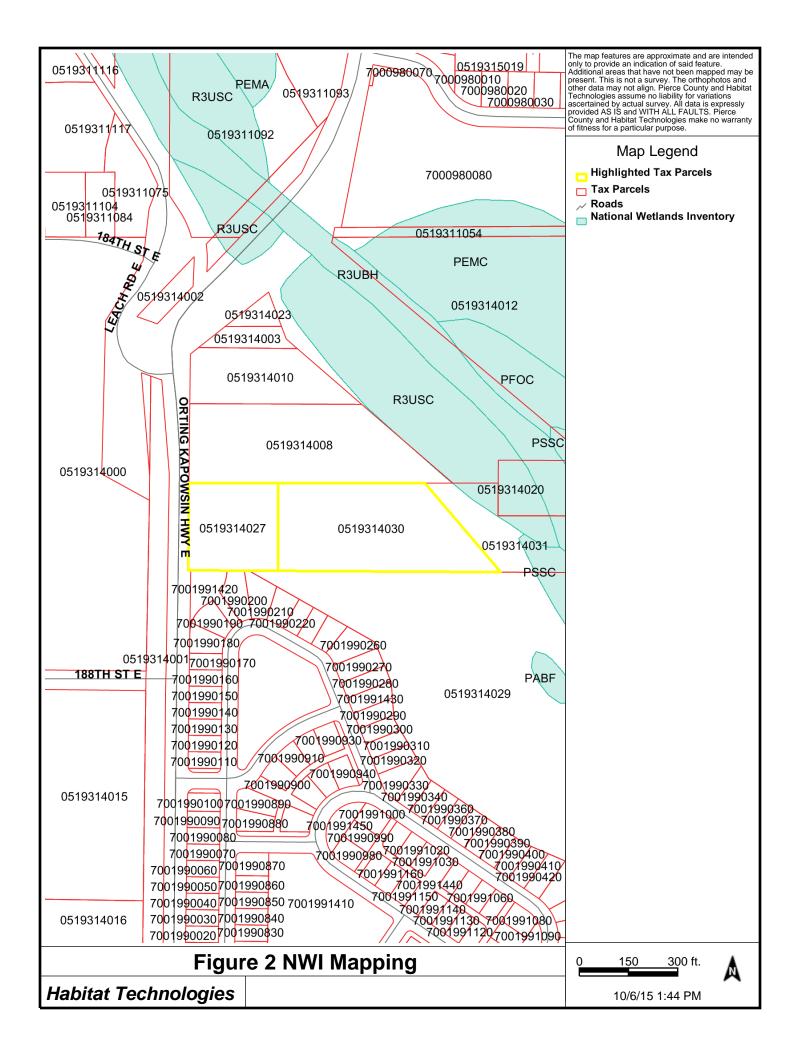
This document has been completed by Habitat Technologies for use by Abundant Life Church. Prior to extensive site planning the defined critical habitats should be reviewed and verified by Pierce County Planning and Land Services personnel and potentially other resource and permitting agencies. Habitat 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.

Thomas D. Deming

Bryan W. Peck Wetland Biologist Thomas D. Deming, PWS Habitat Technologies

FIGURES





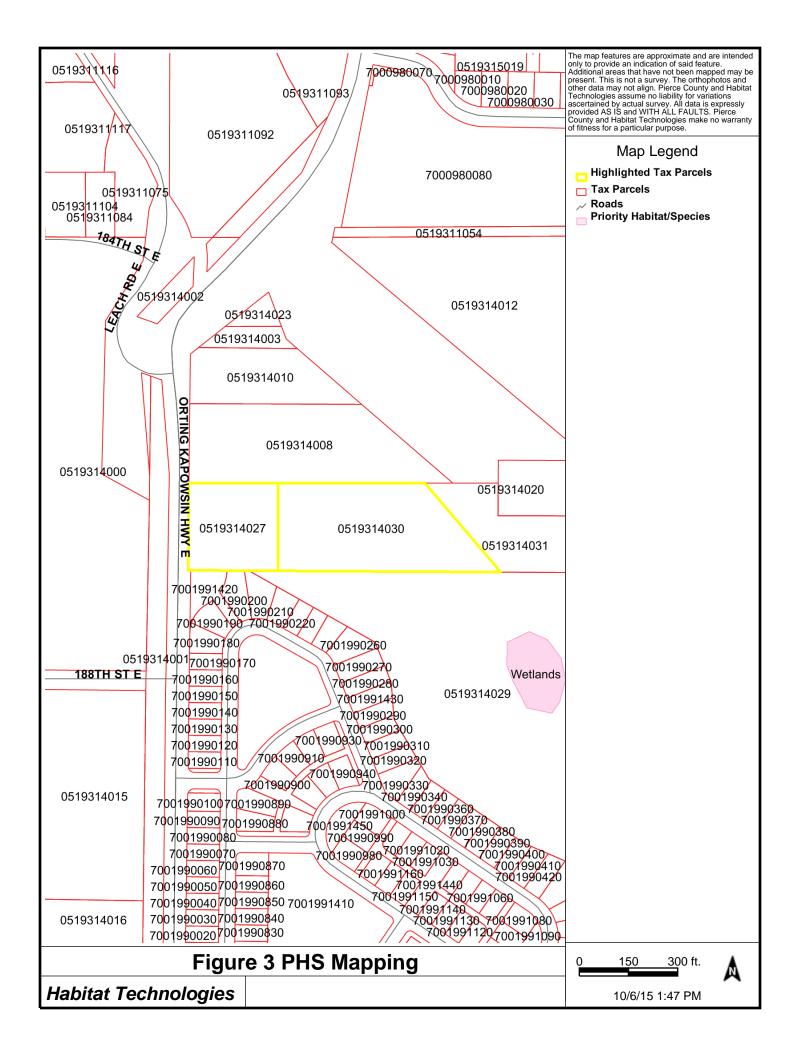


Figure 4 WDFW Mapping



October 6, 2015

Water Resource Inventory Area (WRIA)



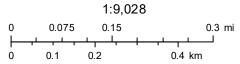
Township



Section



All SalmonScape Species

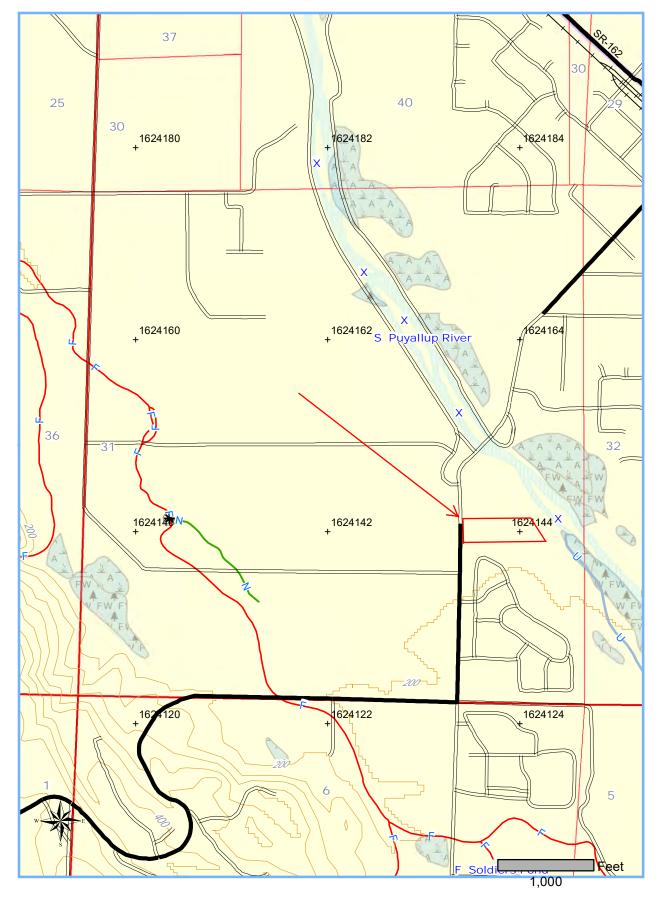


 $\begin{tabular}{ll} USGS/NHD\\ Esri, HERE, DeLorme, Mapmylndia, @ OpenStreetMap contributors, and the GIS user community\\ WDFW \end{tabular}$

FOREST PRACTICE WATER TYPE MAP

TOWNSHIP 19 NORTH HALF 0, RANGE 05 EAST (W.M.) HALF 0, SECTION 31

Application #:

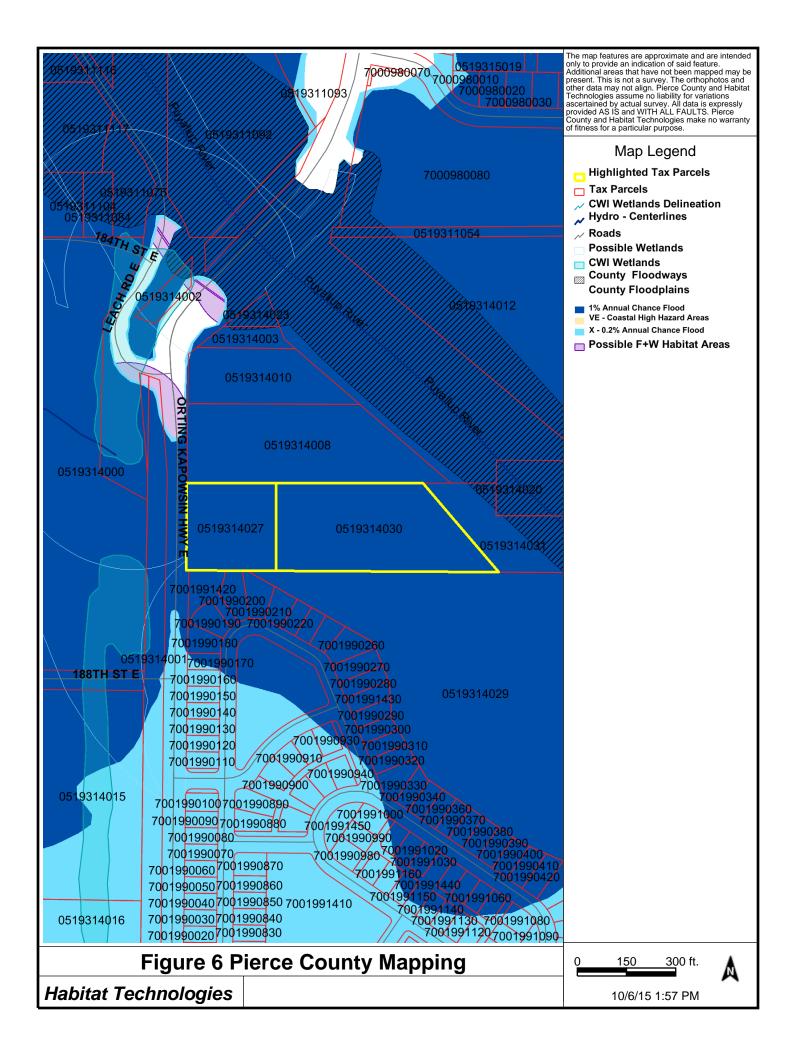


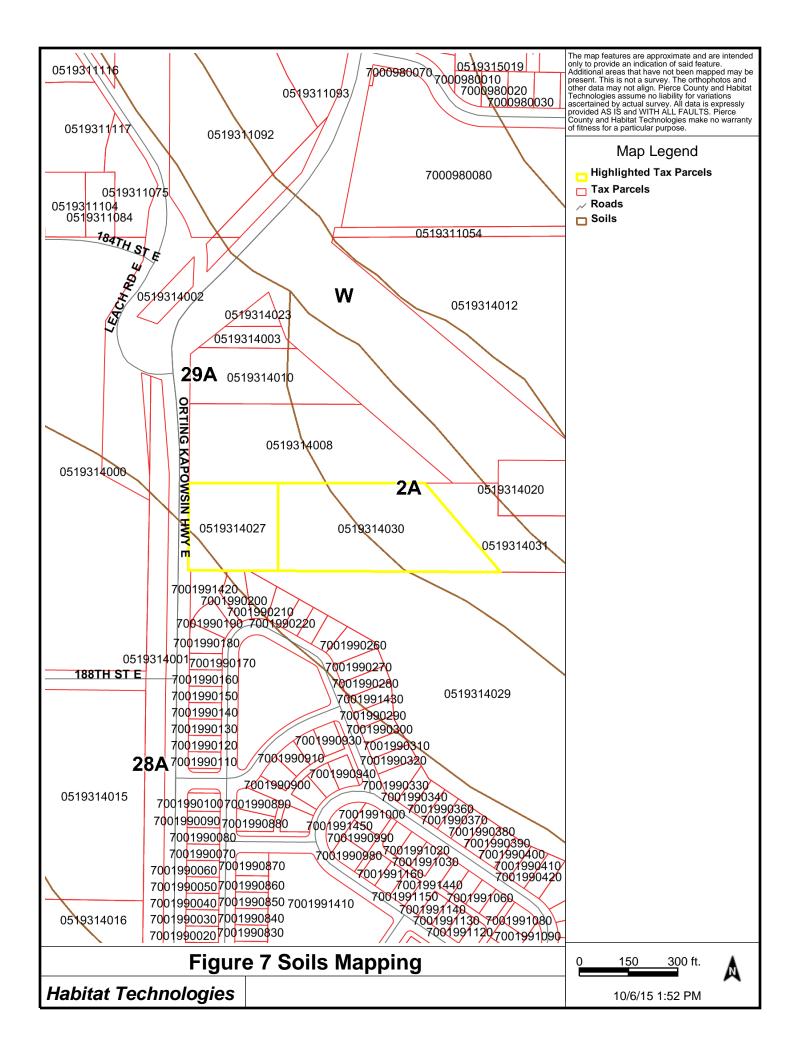
Date: 10/6/2015

Time: 2:01:14 PM

NAD 83

Contour Interval: 40 Feet





REFERENCE LIST

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APPENDIX A - FIELD DATA FORMS

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

Project/Site: Parcel 0519314027		City/Co	ounty: Orting/Pie	erce	Sampling Date: 23 SE	PT 2015
Applicant/Owner:				State: Washington	Sampling Point: SP-1	
Investigator(s): Habitat Technologies			Section, To	ownship, Range: <u>S31, T19</u>	, R5E	
Landform (hillslope, terrace, etc.):		_ Local	relief (concave	, convex, none):	Slope (%	o):
Subregion (LRR): A						
Soil Map Unit Name: Philchuck fine sand						
Are climatic / hydrologic conditions on the site typical for th						
Are Vegetation, Soil, or Hydrology sig	•		•	ormal Circumstances" pres	sent? Yes ⊠ No □	
Are Vegetation, Soil, or Hydrology nat				ed, explain any answers in		
SUMMARY OF FINDINGS – Attach site map					•	es, etc.
Hydrophytic Vegetation Present? Yes ⊠ No □						
Hydric Soil Present? Yes ☐ No ☒			s the Sampled within a Wetlar		o M	
Wetland Hydrology Present? Yes ☐ No ☒		'	willilli a vvellai	iu: Tes 🗌 N	0 🖂	
Remarks: Upland.						
VEGETATION – Use scientific names of plan	nte					
VEGETATION – Use scientific frames of plan		Domir	nant Indicator	Dominance Test works	sheet:	
Tree Stratum (Plot size: 15ft radius)			es? Status	Number of Dominant Sp		
1				That Are OBL, FACW, o		(A)
2				Total Number of Domina	ant	
3				Species Across All Strat	a: <u>1</u>	(B)
4				Percent of Dominant Sp		
Sapling/Shrub Stratum (Plot size: 15ft radius)	0	_ = 100	ai Cover	That Are OBL, FACW, o	or FAC: <u>100</u>	(A/B)
1				Prevalence Index work	sheet:	
2					Multiply by:	
3				OBL species		
4				FACW species		
5				FACILIANAPIA		
Herb Stratum (Plot size: 15ft radius)	0	_ = I ot	al Cover	FACU species UPL species		
1. Phalaris arundinacea	100	yes	<u>FACW</u>	Column Totals:		
2						
3					= B/A =	
4				Hydrophytic Vegetatio		
5				Rapid Test for Hydro		
6				☑ Dominance Test is >☐ Prevalence Index is		
7				☐ Morphological Adapt		ortina
8				data in Remarks	or on a separate shee	t)
9 10				☐ Wetland Non-Vascu	lar Plants ¹	
11.				☐ Problematic Hydropl		,
	100		al Cover	¹ Indicators of hydric soil be present, unless distu		must
Woody Vine Stratum (Plot size: 15ft radius)		_		be present, unless dista	bed of problematic.	
1		-		Hydrophytic		
2				Vegetation	s⊠ No□	
% Bare Ground in Herb Stratum 0	0	_ = I ot	al Cover	Present? Yes	NO L	
Remarks:				1		

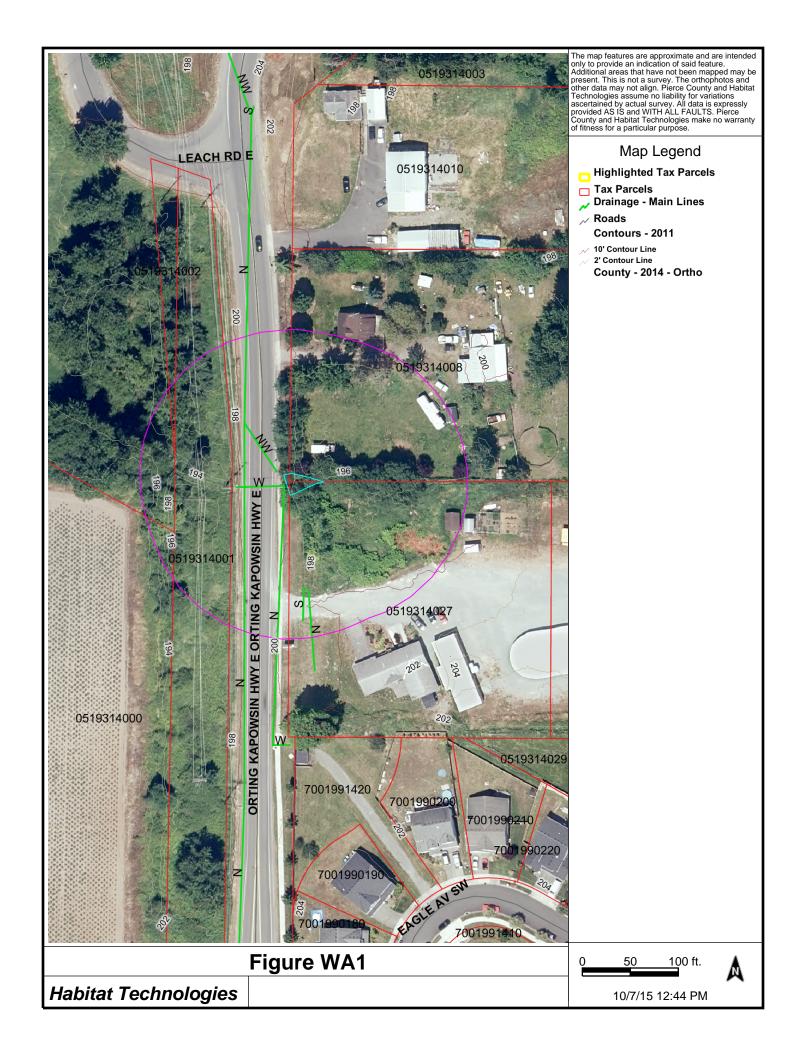
Depth	Matrix			Redox Features				
(inches)	Color (moist)	%	Colc	or (moist) % Ty	vpe ¹ Loc	c ²	Texture	<u>Remarks</u>
0-18	10YR 3/3	100				<u>L</u>	.s	
								· -
	-							•
								
¹Type: C=C	Concentration D=D	enletion	- RM=Red	uced Matrix, CS=Covered or	Coated Sa	nd Grai	ns ² l c	ocation: PL=Pore Lining, M=Matrix.
				s, unless otherwise noted.)		na Oran		ors for Problematic Hydric Soils ³ :
☐ Histosol				Sandy Redox (S5)				m Muck (A10)
	pipedon (A2)			Stripped Matrix (S6)				d Parent Material (TF2)
☐ Black Hi	istic (A3)			_oamy Mucky Mineral (F1) (ex	xcept MLR	RA 1)	☐ Ver	y Shallow Dark Surface (TF12)
☐ Hydroge	en Sulfide (A4)			_oamy Gleyed Matrix (F2)			☐ Oth	er (Explain in Remarks)
	d Below Dark Surfa	ice (A11)		Depleted Matrix (F3)				
	ark Surface (A12)			Redox Dark Surface (F6)				ors of hydrophytic vegetation and
-	Mucky Mineral (S1)			Depleted Dark Surface (F7)				and hydrology must be present,
	Gleyed Matrix (S4)			Redox Depressions (F8)			unle	ss disturbed or problematic.
Type:	Layer (if present)							
, <u> </u>	nches):							
Берит (п	icries)						Hydric Soi	il Present? Yes ☐ No ☒
Wetland Hy	drology Indicator							
Wetland Hy	drology Indicator		uired; che					ondary Indicators (2 or more required)
Wetland Hy Primary Indi Surface	ydrology Indicator icators (minimum o Water (A1)		uired; ch	☐ Water-Stained Leaves (B	39) (excep t	t MLRA		Vater-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary Indi Surface High Wa	ydrology Indicator icators (minimum o Water (A1) ater Table (A2)		uired; ch	☐ Water-Stained Leaves (B 1, 2, 4A, and 4B)	39) (excep t	t MLRA	□ V	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hy Primary Indi ☐ Surface ☐ High Wa ☐ Saturation	ydrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3)		uired; ch	☐ Water-Stained Leaves (B 1, 2, 4A, and 4B) ☐ Salt Crust (B11)	,, ,	t MLRA		Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10)
Wetland Hy Primary Indi Surface High Wa Saturati	rdrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1)		uired; ch	☐ Water-Stained Leaves (B 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B1	13)	t MLRA		Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimer	ydrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)		uired; ch	☐ Water-Stained Leaves (B 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B1 ☐ Hydrogen Sulfide Odor (6	13) C1)		V	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimer Drift Dep	ydrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		uired; ch	□ Water-Stained Leaves (B 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B1 □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres a	13) C1) along Living		(C3) C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimer Drift Der Algal Ma	rdrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		uired; ch	Water-Stained Leaves (B 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B1 Hydrogen Sulfide Odor (C Oxidized Rhizospheres a Presence of Reduced Iro	13) C1) along Living on (C4)	g Roots	(C3) C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimer Drift Dep Algal Ma	ydrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		uired; ch	Water-Stained Leaves (B	13) C1) along Living on (C4) n Tilled Soil	g Roots s (C6)	(C3) C C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimer Drift Der Algal Ma Iron Der	ydrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	f one requ		Water-Stained Leaves (B	13) C1) along Living on (C4) n Tilled Soil nts (D1) (LF	g Roots s (C6)	(C3) C F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimel Drift Del Algal Ma Iron Dep Surface	ydrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria	f one requ	· (B7)	Water-Stained Leaves (B	13) C1) along Living on (C4) n Tilled Soil nts (D1) (LF	g Roots s (C6)	(C3) C F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely	wdrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3) warks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria by Vegetated Conca	f one requ	· (B7)	Water-Stained Leaves (B	13) C1) along Living on (C4) n Tilled Soil nts (D1) (LF	g Roots s (C6)	(C3) C F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely	ydrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca rvations:	f one requ I Imagery ve Surfac	r (B7) be (B8)	Water-Stained Leaves (B	13) C1) along Living on (C4) n Tilled Soil nts (D1) (LF	g Roots s (C6)	(C3) C F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimer Algal Ma Iron Dep Surface Inundati Sparsely Field Observance	rdrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca rvations: ter Present?	f one required in the second of the second	e (B7) ce (B8) No 🖂	Water-Stained Leaves (B	13) C1) along Living on (C4) n Tilled Soil nts (D1) (LF	g Roots s (C6)	(C3) C F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimel Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table	ydrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria by Vegetated Concarvations: ter Present?	I Imagery ve Surfac Yes □ Yes □	(B7) te (B8) No 🖂	Water-Stained Leaves (B 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B1 Hydrogen Sulfide Odor (C Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark	13) C1) along Living on (C4) n Tilled Soil hts (D1) (LF	g Roots s (C6) RR A)	(C3)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indi Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wa Water Table Saturation F	ydrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca rvations: ter Present? Present?	f one required in the second of the second	e (B7) ce (B8) No 🖂	Water-Stained Leaves (B	13) C1) along Living on (C4) n Tilled Soil hts (D1) (LF	g Roots s (C6) RR A)	(C3)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Algal Ma Iron Dep Iron Dep Iron Dep Surface Inundati Sparsely Field Obser Surface Wa Water Table Saturation F (includes ca	rdrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca rvations: ter Present? Present? apillary fringe)	I Imagery ve Surfac Yes Yes Yes Yes Yes Yes	(B7) ce (B8) No 🖂 No 🖂	Water-Stained Leaves (B 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B1 Hydrogen Sulfide Odor (C Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plan Other (Explain in Remark	13) C1) along Living on (C4) n Tilled Soil nts (D1) (LF	g Roots s (C6) RR A)	(C3)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimer Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation F (includes ca	rdrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca rvations: ter Present? Present? apillary fringe)	I Imagery ve Surfac Yes Yes Yes Yes Yes Yes	(B7) ce (B8) No 🖂 No 🖂	Water-Stained Leaves (B	13) C1) along Living on (C4) n Tilled Soil nts (D1) (LF	g Roots s (C6) RR A)	(C3)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimen Algal Ma Iron Dep Surface Inundati Sparsely Field Obset Surface Wa Water Table Saturation F (includes ca	rdrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca rvations: ter Present? Present? apillary fringe)	I Imagery ve Surfac Yes Yes Yes Yes Yes Yes	(B7) ce (B8) No 🖂 No 🖂	Water-Stained Leaves (B	13) C1) along Living on (C4) n Tilled Soil nts (D1) (LF	g Roots s (C6) RR A)	(C3)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimer Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation F (includes ca	rdrology Indicator icators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca rvations: ter Present? Present? apillary fringe)	I Imagery ve Surfac Yes Yes Yes Yes Yes Yes	(B7) ce (B8) No 🖂 No 🖂	Water-Stained Leaves (B	13) C1) along Living on (C4) n Tilled Soil nts (D1) (LF	g Roots s (C6) RR A)	(C3)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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

Project/Site: Parcel 0519314027		City/County: Orting/P	ierce	Sampling Date: 23 SEPT 2015
Applicant/Owner:			State: Washington	Sampling Point: SP-2
Investigator(s): Habitat Technologies		Section, T	ownship, Range: <u>S31, T19</u>	, R5E
Landform (hillslope, terrace, etc.):		Local relief (concave	e, convex, none):	Slope (%):
Subregion (LRR): A				
Soil Map Unit Name: Philchuck fine sand				
Are climatic / hydrologic conditions on the site typical for				
Are Vegetation, Soil, or Hydrology s	•		lormal Circumstances" pres	sent? Yes ⊠ No □
Are Vegetation, Soil, or Hydrology n			ded, explain any answers ir	
SUMMARY OF FINDINGS – Attach site ma				•
Hydrophytic Vegetation Present? Yes ⊠ No [
Hydric Soil Present? Yes ☐ No [Is the Sample		- 🖂
Wetland Hydrology Present? Yes ☐ No [\boxtimes	within a Wetla	ınd? Yes ☐ N	0 🖾
Remarks: Upland.		<u>.</u>		
VECETATION . He asigntific names of all				
VEGETATION – Use scientific names of pla		Dominant Indicator	Daminanaa Taat warks	sh a a fi
Tree Stratum (Plot size: 15ft radius)		Species? Status	Number of Dominant Sp	
1			That Are OBL, FACW, o	
2			Total Number of Domina	ant
3			Species Across All Strat	
4			Percent of Dominant Sp	ecies
Sapling/Shrub Stratum (Plot size: 15ft radius)	0	= Total Cover	That Are OBL, FACW, o	
1. Cornus stolonifera	40	yes FACW	Prevalence Index work	sheet:
2.			Total % Cover of:	Multiply by:
3			OBL species	x 1 =
4				x 2 =
5				x 3 =
Herb Stratum (Plot size: 15ft radius)	40	= Total Cover		x 4 =
Phalaris arundinacea	60	yes FACW		x 5 =
2		-	Column Totals:	(A) (B)
3.			Prevalence Index	= B/A =
4			Hydrophytic Vegetatio	n Indicators:
5			Rapid Test for Hydro	
6			□ Dominance Test is > □	
7			☐ Prevalence Index is	
8			data in Remarks	tations ¹ (Provide supporting or on a separate sheet)
9			☐ Wetland Non-Vascu	
10.			☐ Problematic Hydropl	hytic Vegetation ¹ (Explain)
11	60	= Total Cover		and wetland hydrology must
Woody Vine Stratum (Plot size: 15ft radius)	00	- Total Gover	be present, unless distu	rbed or problematic.
1	_		Hydrophytic	
2			Vegetation	
% Bare Ground in Herb Stratum 0	0	= Total Cover	Present? Yes	i⊠ No □
Remarks: Red osier dogwood in ditch.			1	

Profile Description: (Des Depth Ma	ıtrix	Redox Features		
(inches) Color (moist)		olor (moist) % Type ¹ L	oc² Tex	xture Remarks
0-8 10YR 3/3	100		Ls	
<u> </u>	100			
8-18 10YR 3/3	100		<u>Gsl</u>	
				
1				2
• •	•	educed Matrix, CS=Covered or Coated S RRs, unless otherwise noted.)	and Grains.	. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
-				·
☐ Histosol (A1) ☐ Histic Epipedon (A2)	<u> </u>] Sandy Redox (S5)] Stripped Matrix (S6)		2 cm Muck (A10) Red Parent Material (TF2)
☐ Black Histic (A3)		Doamy Mucky Mineral (F1) (except ML	RA 1)	☐ Very Shallow Dark Surface (TF12)
☐ Hydrogen Sulfide (A4)	Ī	Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
☐ Depleted Below Dark S		Depleted Matrix (F3)		_ ,
☐ Thick Dark Surface (A1	2)	Redox Dark Surface (F6)		³ Indicators of hydrophytic vegetation and
☐ Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		wetland hydrology must be present,
☐ Sandy Gleyed Matrix (S	•	Redox Depressions (F8)		unless disturbed or problematic.
Restrictive Layer (if prese				
Depth (inches):			Hy	ydric Soil Present? Yes □ No ⊠
HYDROLOGY				
HYDROLOGY Wetland Hydrology Indica	ators:			
		check all that apply)		Secondary Indicators (2 or more required)
Wetland Hydrology Indica		check all that apply) Water-Stained Leaves (B9) (exce	pt MLRA	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indica Primary Indicators (minimum			pt MLRA	-
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1)		☐ Water-Stained Leaves (B9) (exce	pt MLRA	☐ Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2)		☐ Water-Stained Leaves (B9) (excell 1, 2, 4A, and 4B)	pt MLRA	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)	m of one required;	☐ Water-Stained Leaves (B9) (exce 1, 2, 4A, and 4B) ☐ Salt Crust (B11)	pt MLRA	 □ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators (minimum Indicators (minimum Indicators (Minimum Indicators (Minimum Indicators (Management Indicators (Management Indicators (Management Indicators (Minimum Indicators (Management Indicators (Minimum Indicators (Management Indicators (Minimum Indicators (M	m of one required;	 □ Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living 		 □ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	m of one required;	 □ Water-Stained Leaves (B9) (excellent 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) 		 □ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators (minimum Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	m of one required;	 □ Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Living 	ng Roots (C	□ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) 3) □ Geomorphic Position (D2)
Wetland Hydrology Indicators (minimum 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	m of one required; o	 □ Water-Stained Leaves (B9) (except, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Livin □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Scool □ Stunted or Stressed Plants (D1) (I 	ng Roots (C	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators (minimum 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 A	m of one required;	□ Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Social Stunted or Stressed Plants (D1) (L1) □ Other (Explain in Remarks)	ng Roots (C	□ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) 3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5)
Wetland Hydrology Indicators (minimum Primary Indicators (minimum Primary Indicators (minimum Primary Indicators (minimum Primary Indicators (Max) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A Sparsely Vegetated Co	m of one required;	□ Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Social Stunted or Stressed Plants (D1) (L1) □ Other (Explain in Remarks)	ng Roots (C	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators (minimum 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 A Sparsely Vegetated Co	m of one required;) 6) erial Imagery (B7) ncave Surface (B8)	 □ Water-Stained Leaves (B9) (except, 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Livin □ Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Some Stunted or Stressed Plants (D1) (L1) □ Other (Explain in Remarks) 	ng Roots (C	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present?	m of one required; defined in the second of	□ Water-Stained Leaves (B9) (excellent 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Scole Stunted or Stressed Plants (D1) (I1) □ Other (Explain in Remarks)	ng Roots (C	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Water Table Present?	m of one required; defined in the second of	□ Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Scole Stunted or Stressed Plants (D1) (L1) □ Other (Explain in Remarks) Depth (inches): Depth (inches):	ng Roots (C iils (C6) _RR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	m of one required; of one required; of one required; of one required; of one of	□ Water-Stained Leaves (B9) (except 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Scole Stunted or Stressed Plants (D1) (L1) □ Other (Explain in Remarks) Depth (inches): Depth (inches):	ng Roots (C pils (C6) LRR A) Wetland	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) 3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
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Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	m of one required; of one required; of one required; of one required; of one of	□ Water-Stained Leaves (B9) (excellent 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Social Stunted or Stressed Plants (D1) (I1) □ Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	ng Roots (C pils (C6) LRR A) Wetland	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) 3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (see Automatical Company	m of one required; of one required; of one required; of one required; of one of	□ Water-Stained Leaves (B9) (excellent 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B13) □ Hydrogen Sulfide Odor (C1) □ Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) □ Recent Iron Reduction in Tilled Social Stunted or Stressed Plants (D1) (I1) □ Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	ng Roots (C pils (C6) LRR A) Wetland	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) 3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)

APPENDIX B - WETLAND RATING FORM



WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Parcel	0519314027 Date of site	e visit: 23 SEPT 2015
Rated by Habitat Technologies	Trained by Ecology? Yes x No D	Date of training 2006
SEC: <u>31</u> TWNSHP: <u>19</u> RNGE: <u>5</u> E	Is S/T/R in Appendix D? Yes No_	x
Map of wetland unit	:: Figure <u>W1</u> Estimated size <u>3,00</u>	<u>0</u> sqft
SUN	MMARY OF RATING	
Category based on FUNCTION	S provided by wetland	
I II III_ <u>×</u> IV_		
Cotacomy I = Saama >= 70	Score for Water Quality Function	s 14
Category I = Score >=70 Category II = Score 51-69	Score for Hydrologic Function	s 16
Category III = Score 30-50	Score for Habitat Function	s 12
Category IV = Score < 30	TOTAL score for Function	s 42
Category based on SPECIAL C	HARACTERISTICS of wetland	
I II Does not Ap		
Final Category (cl	noose the "highest" category from above)	3
Summary of has	sic information about the wetland unit	

Summary of basic information about the wetland unit

Wetland Unit has Special		Wetland HGM Class	
Characteristics		used for Rating	
Estuarine		Depressional	Х
Natural Heritage Wetland		Riverine	
Bog		Lake-fringe	
Mature Forest		Slope	
Old Growth Forest		Flats	
Coastal Lagoon		Freshwater Tidal	
Interdunal			
None of the above	x	Check if unit has multiple	
		HGM classes present	

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		х
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		х
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		x
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		x

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

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 (i.e. except during floods)? NO – go to 2 YES – the wetland class is Tidal Fringe
	If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES – Freshwater Tidal Fringe 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 rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
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 both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (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)
1.	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? 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 <3ft diameter and less than 1 foot deep). NO - go to 5 YES - The wetland class is Slope

Wetland name or number A	
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- **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 two years.

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

NO - go to 6

YES – The wetland class is **Riverine**

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 clases. 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 your wetland. 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 class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still 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.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)			
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)			
D	Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing")				
D		0			
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation > = 95% of area Wetland has persistent, ungrazed, vegetation > = 1/2 of area Wetland has persistent, ungrazed vegetation > = 1/10 of area Wetland has persistent, ungrazed vegetation < 1/10 of area Points = 1 Points = 0	Figure			
D	Map of Cowardin vegetation classes D1.4 Characteristics of seasonal ponding or inundation. This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4 Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 0 Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0				
\mathbf{D}	Total for D 1 Map of Hydroperiods Add the points in the boxes above	7			
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft X Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other YES multiplier is 2 NO multiplier is 1				
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	14			

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)	
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)	
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing"] Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	2	
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	3	
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5	3	
\mathbf{D}	Total for D 3 Add the points in the boxes above	8	
D	D 4. Does the wetland unit have the opportunity to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems X Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems — Other		
	YES multiplier is 2 NO multiplier is 1	2	
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 Add score to table on p. 1	16	

These questions apply to wetlands of all HGM HABITAT FUNCTIONS - Indicators that unit function		habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to pr	ovide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72) Check the types of vegetation classes present (as defined class is ¼ acre or more than 10% of the area if unit is Aquatic bedEmergent plants Scrub/shrub (areas where shrubs have >30% of	smaller than 2.5 acres.	old for each	Figure
X Forested (areas where trees have >30% cover If the unit has a forested class check if: X The forested class has 3 out of 5 strata (canon moss/ground-cover) that each cover 20% Add the number of vegetation structures that qualify. If	by, sub-canopy, shrubs, here within the forested polygor		1
Map of Cowardin vegetation classes	3 structures 2 structures 1 structure	points = 2 points = 1 points = 0	
H 1.2. <u>Hydroperiods</u> (see p. 73)			Figure
Check the types of water regimes (hydroperiods) pre regime has to cover more than 10% of the wetland or descriptions of hydroperiods) Permanently flooded or inundated Seasonally flooded or inundated Occasionally flooded or inundated X Saturated only Permanently flowing stream or river in, or adjated to the seasonally flowing stream in, or adjacent to, the Lake-fringe wetland = 2 points	4 or more types present 3 types present 2 types present 1 type present acent to, the wetland we wetland	points = 3 points = 2 point = 1 points = 0	2
Freshwater tidal wetland = 2 points	Map of hydr	operiods	
H 1.3. Richness of Plant Species (see p. 75) Count the number of plant species in the wetland the of the same species can be combined to meet the size You do not have to name the species. Do not include Eurasian Milfoil, reed canarygra If you counted: List species below if you want to:	e threshold)	•	1

Total for page ____4

H 1.4. Interspersion of habitats (see p. 76) Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	Figure
None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	0
H 1.5. Special Habitat Features: (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. X Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). Standing snags (diameter at the bottom > 4 inches) in the wetland Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) 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 turned grey/brown) At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.(structures for egg-laying by amphibians) X Invasive plants cover less than 25% of the wetland area in each stratum of plants NOTE: The 20% stated in early printings of the manual on page 78 is an error.	2
H 1. TOTAL Score - potential for providing habitat	
Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	6

Comments

H 2. Does the wetland unit have the opportunity to pro	ovide habitat for many species?	
H 2.1 <u>Buffers</u> (see p. 80)		Figure
Choose the description that best represents condition of buffer	of wetland unit. The highest scoring	
criterion that applies to the wetland is to be used in the rating.	See text for definition of	
"undisturbed."		
 — 100 m (330ft) of relatively undisturbed vegetated areas 	s, rocky areas, or open water >95%	
of circumference. No structures are within the undistu		
undisturbed also means no-grazing, no landscaping, no	· · · · · · · · · · · · · · · · · · ·	
— 100 m (330 ft) of relatively undisturbed vegetated area		
50% circumference.	Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated areas	, rocky areas, or open water >95%	
circumference.	Points = 4	
— 100 m (330ft) of relatively undisturbed vegetated areas		
circumference, .	Points = 3	
— 50 m (170ft) of relatively undisturbed vegetated areas		
50% circumference.	Points = 3	
If buffer does not meet any of the		
 No paved areas (except paved trails) or buildings within 		1
circumference. Light to moderate grazing, or lawns ar		
 No paved areas or buildings within 50m of wetland for 		
Light to moderate grazing, or lawns are OK.	Points = 2	
 Heavy grazing in buffer. 	Points = 1	
— Vegetated buffers are <2m wide (6.6ft) for more than 9		
fields, paving, basalt bedrock extend to edge of wetlan		
 Buffer does not meet any of the criteria above. 	Points = 1	
	to showing buffers	
H 2.2 Corridors and Connections (see p. 81)	dl	
H 2.2.1 Is the wetland part of a relatively undisturbed and	•	
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed		
uplands that are at least 250 acres in size? (dams in ripar		
roads, paved roads, are considered breaks in the corrido		
YES = 4 points (go to $H 2.3$)	NO = go to H $2.2.2$	
H 2.2.2 Is the wetland part of a relatively undisturbed and		
(either riparian or upland) that is at least 50ft wide, has a		
forest, and connects to estuaries, other wetlands or undist		
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in		
the question above?		1
YES = 2 points (go to $H 2.3$)	NO = H 2.2.3	1
H 2.2.3 Is the wetland:		
within 5 mi (8km) of a brackish or salt water estuary OR		
within 3 mi of a large field or pasture (>40 acres) OR		
within 1 mi of a lake greater than 20 acres?		
YES = 1 point	NO = 0 points	

Total for page 2

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	I
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	I
Which of the following priority habitats are within 330ft (100m) of the wetland unit? NOTE: the	1
connections do not have to be relatively undisturbed.	I
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	I
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	I
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	I
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	I
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	1
species, forming a multi-layered canopy with occasional small openings; with at least 20	I
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	I
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	1
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	I
large downed material is generally less than that found in old-growth; 80 - 200 years old	1
west of the Cascade crest.	1
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	1
canopy coverage of the oak component is important (full descriptions in WDFW PHS	1
report p. 158).	1
X Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	1
both aquatic and terrestrial ecosystems which mutually influence each other.	1
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	1
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	1
Instream: The combination of physical, biological, and chemical processes and conditions	1
that interact to provide functional life history requirements for instream fish and wildlife	1
resources.	1
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	1
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	1
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	I
Appendix A).	1
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	1
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	1
human.	1
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	1
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	I
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	1
tailings. May be associated with cliffs.	1
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	1
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	1
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	1
long.	1
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile There is at least 1 wetland within ½ mile. There are no wetlands within ½ mile. There are no wetlands within ½ mile.	3
H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	6
TOTAL for H 1 from page 14	6
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	12

Wetland name or number	Wetland name or number	В	
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WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Parce	I 0519314008	Date of site visit: 23 SEPT 20	15 —
Rated by Habitat Technologies	Trained by Ecology? Yes x	No Date of training 2006	_
SEC: <u>31</u> TWNSHP: <u>19</u> RNGE: <u>5</u>	Is S/T/R in Appendix D? Yes	No_X	
Map of wetland un	it: Figure <u>WB</u> 1 Estimated si	ze <u>0.5 Ac</u> re	
SU	MMARY OF RATING		
Category based on FUNCTIO	NS provided by wetland		
I II III_ <u>×</u> IV_			
Cotagony I - Coores > 70	Score for Water Quality	Functions 16	
Category I = Score >=70 Category II = Score 51-69	Score for Hydrologic	Functions 18	
Category III = Score 30-50	Score for Habitat	Functions 17	
Category IV = Score < 30	TOTAL score for	Functions 51	
Category based on SPECIAL	CHARACTERISTICS of we	tland	
I II Does not A			
Final Category (choose the "highest" category from	m above) 3	
Summany of he	osia information about the wetlan	d unit	

Summary of basic information about the wetland unit

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		Depressional	Х
Natural Heritage Wetland		Riverine	
Bog		Lake-fringe	
Mature Forest		Slope	
Old Growth Forest		Flats	
Coastal Lagoon		Freshwater Tidal	
Interdunal			
None of the above	х	Check if unit has multiple HGM classes present	

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)? For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		х
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		х
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		х
SP4. Does the wetland unit have a local significance in addition to its functions? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		x

SP3: Potential game species, pileated woodpecker, great blue heron, merlin.

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number	В	
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Classification of Wetland Units in Western Washington

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.

hydro	logic criteria in questions 1-7 apply, and go to Question 8.
	ne water levels in the entire unit usually controlled by tides (i.e. except during floods)? YES – the wetland class is Tidal Fringe
	If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts pe thousand)? YES – Freshwater Tidal Fringe 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 rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
Grou	ntire wetland unit is flat and precipitation is the only source (>90%) of water to it. andwater and surface water runoff are NOT sources of water to the unit. $\overline{-\text{go to 3}}$ YES – The wetland class is Flats
	If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands.
	the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? 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 (<i>slope can be very gradual</i>), 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.
NO -	The water leaves the wetland without being impounded? 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 <3ft diameter and less than 1 foot deep). go to 5 YES – The wetland class is Slope

Wetland name or number	В	
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- 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 two years.

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

NO - go to 6

YES – The wetland class is **Riverine**

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 clases. 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 your wetland. 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 class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still 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.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)
	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) points = 3	Figure
D	Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing	3
	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic <i>(use NRCS</i>	
	definitions)	0
D	YES points = 4	
	NO $points = 0$	
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class)	Figure
D	Wetland has persistent, ungrazed, vegetation $>$ = 95% of area points = 5	
D	Wetland has persistent, ungrazed, vegetation $> = 1/2$ of area points $= 3$	3
	Wetland has persistent, ungrazed vegetation $> = 1/10$ of area points $= 1$	
	Wetland has persistent, ungrazed vegetation $<1/10$ of area points = 0 Map of Cowardin vegetation classes	
	D1.4 Characteristics of seasonal ponding or inundation.	Figure
D	This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4 Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 2 Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0	2
	Map of Hydroperiods	
D	Total for D 1 Add the points in the boxes above	8
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. X Grazing in the wetland or within 150 ft Untreated stormwater discharges to wetland Tilled fields or orchards within 150 ft of wetland A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging Residential, urban areas, golf courses are within 150 ft of wetland Wetland is fed by groundwater high in phosphorus or nitrogen Other	(see p. 44) multiplier 2
	YES multiplier is 2 NO multiplier is 1	
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	16

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	3
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft points = 0	3
D	D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire unit is in the FLATS class points = 5	3
D	Total for D 3 Add the points in the boxes above	9
D	Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems X Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems	(see p. 49)
	— Other YES multiplier is 2 NO multiplier is 1	2
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 Add score to table on p. 1	18

These questions apply to wetlands of all HGN HABITAT FUNCTIONS - Indicators that unit function		habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to pro	ovide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72) Check the types of vegetation classes present (as defined class is ¼ acre or more than 10% of the area if unit is Aquatic bedEmergent plants	smaller than 2.5 acres.	hold for each	Figure
Scrub/shrub (areas where shrubs have >30% of X Forested (areas where trees have >30% cover) If the unit has a forested class check if: X The forested class has 3 out of 5 strata (canon moss/ground-cover) that each cover 20% of Add the number of vegetation structures that qualify. If you	by, sub-canopy, shrubs, he within the forested polygon wou have:	n	2
Map of Cowardin vegetation classes	4 structures or more 3 structures 2 structures 1 structure	points = 4 points = 2 points = 1 points = 0	
H 1.2. Hydroperiods (see p. 73)		ni ,	Figure
Check the types of water regimes (hydroperiods) pre regime has to cover more than 10% of the wetland or descriptions of hydroperiods) Permanently flooded or inundated Seasonally flooded or inundated Coccasionally flooded or inundated X Saturated only Permanently flowing stream or river in, or adja X Seasonally flowing stream in, or adjacent to, the Lake-fringe wetland = 2 points Freshwater tidal wetland = 2 points	4 or more types present 3 types present 2 types present 1 type present cent to, the wetland	for points = 3 points = 2 point = 1 points = 0	2
H 1.3. Richness of Plant Species (see p. 75) Count the number of plant species in the wetland that of the same species can be combined to meet the size You do not have to name the species. Do not include Eurasian Milfoil, reed canarygra If you counted: List species below if you want to:	threshold)	•	2

H 1.4. <u>Interspersion of habitats</u> (see p. 76) Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	Figure
None = 0 points Low = 1 point Moderate = 2 points	
High = 3 points NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	1
H 1.5. Special Habitat Features: (see p. 77) Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. X Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). X Standing snags (diameter at the bottom > 4 inches) in the wetland Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m) 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 turned grey/brown) X At least ¼ acre of thin-stemmed persistent vegetation 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 each stratum of plants NOTE: The 20% stated in early printings of the manual on page 78 is an error.	3
H 1. TOTAL Score - potential for providing habitat	10
Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	! *

Comments

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
11 V 1	Figures
H 2.1 <u>Buffers</u> (see p. 80) Change the description that hest represents condition of buffer of wetland unit. The highest secring	Figure
Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of	
"undisturbed."	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
of circumference. No structures are within the undisturbed part of buffer. (relatively	
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5	
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >	
50% circumference. Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
circumference. Points = 4	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%	
circumference, . Points = 3	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >	
50% circumference. Points = 3	
If buffer does not meet any of the criteria above	
— No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95%	2
circumference. Light to moderate grazing, or lawns are OK. Points = 2	_
— No paved areas or buildings within 50m of wetland for >50% circumference.	
Light to moderate grazing, or lawns are OK. Points = 2	
Heavy grazing in buffer.Points = 1	
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled	
fields, paving, basalt bedrock extend to edge of wetland $Points = 0$.	
Buffer does not meet any of the criteria above.Points = 1	
Aerial photo showing buffers	
H 2.2 Corridors and Connections (see p. 81)	
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest	
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel	
roads, paved roads, are considered breaks in the corridor).	
YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$	
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or	
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25	
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in	
the question above?	
YES = 2 points (go to $H 2.3$) NO = H 2.2.3	1
H 2.2.3 Is the wetland:	
within 5 mi (8km) of a brackish or salt water estuary OR	
within 3 mi of a large field or pasture (>40 acres) OR	
within 1 mi of a lake greater than 20 acres?	
YES = 1 point NO = 0 points	

Total for page 3

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	I
Which of the following priority habitats are within 330ft (100m) of the wetland unit? NOTE: the	1
connections do not have to be relatively undisturbed.	1
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	1
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	1
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	I
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	1
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	1
species, forming a multi-layered canopy with occasional small openings; with at least 20	1
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	1
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	I
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	1
large downed material is generally less than that found in old-growth; 80 - 200 years old	1
west of the Cascade crest.	1
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	1
canopy coverage of the oak component is important (full descriptions in WDFW PHS	1
report p. 158).	1
X Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	1
both aquatic and terrestrial ecosystems which mutually influence each other.	I
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	1
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	1
Instream: The combination of physical, biological, and chemical processes and conditions	1
that interact to provide functional life history requirements for instream fish and wildlife	1
resources.	1
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	1
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	1
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	1
Appendix A).	1
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	I
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	1
human.	1
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	1
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	1
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	I
tailings. May be associated with cliffs.	1
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	1
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	1
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	1
long.	1
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	1

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2 There are no wetlands within ½ mile.	3
H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	7
TOTAL for H 1 from page 14	10
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	17

Wayne Carlson

From: JC Hungerford < JHungerford@parametrix.com>

Sent: Tuesday, September 26, 2023 3:27 PM

To: Wayne Carlson

Subject: [EXTERNAL] FW: Abundant Life Church revisions 06/07/2019

Attachments: sp1 2015.pdf; sp1 XX.pdf; sp2 2015.pdf; sp2 XX.pdf; sp3 XX.pdf; sp4 XX.pdf; sp5 XX.pdf; Site

Graphic.pdf

This is one of the few emails I have from Tom.

From: Rob Harrington <rob@harringtonfamilyonline.com>

Sent: Friday, June 7, 2019 8:13 PM

To: JC Hungerford <JHungerford@parametrix.com>; April Whittaker <AWhittaker@parametrix.com>

Cc: Mark Bethune <mbethune@cityoforting.org>; ETerrell@cityoforting.org; Brad Grasley <brad@alccorting.com>; Jim

Burbridge <jim@americandreaminfo.com>; Jim Cook <jcook@beylerconsulting.com>; Landon Beyler

<landon@beylerconsulting.com>

Subject: Fwd: Abundant Life Church revisions 06/07/2019

April -

I apologize for the delay. Here are the revisions from Tom at Habitat Technologies.

-Rob Harrington

On Fri, Jun 7, 2019 at 3:13 PM Tom < tom@habitattechnologies.net > wrote:

Please see attached. I have modified the "RESULTS' graphic and the sample data forms as requested.

As to comment #2 the sample plot appeared to shift a little from 2015 to 2016 (flag ties on vegetation that grew taller and leaned over) such that the 2016 plot included young alders that were just outside the edge in 2015.

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

Project/Site: Parcel 0519314027		City/Co	Sampling Date: 23 SEPT 2015			
Applicant/Owner:				Sampling Point: SP-1		
Investigator(s): Habitat Technologies			9, R5E			
Landform (hillslope, terrace, etc.):		_Local	Slope (%):			
Subregion (LRR): A						
Soil Map Unit Name: Philchuck fine sand						
Are climatic / hydrologic conditions on the site typical for th						
Are Vegetation, Soil, or Hydrology sig	•		•	ormal Circumstances" pres	sent? Yes ⊠ No □	l
Are Vegetation, Soil, or Hydrology nat				ed, explain any answers in		,
SUMMARY OF FINDINGS – Attach site map			•		·	es, etc.
Hydrophytic Vegetation Present? Yes ⊠ No □						
Hydric Soil Present? Yes ☐ No ☒			s the Sampled within a Wetlar		• M	
Wetland Hydrology Present? Yes ☐ No ☒		'	witiiiii a vvetiai	ild: Tes 🗌 N	0 🖾	
Remarks: Upland.						
VEGETATION – Use scientific names of plan	nte.					
VEGETATION – Use scientific fiames of plan		Domir	nant Indicator	Dominance Test works	shoot:	
Tree Stratum (Plot size: 15ft radius)			ies? Status	Number of Dominant Sp		
1				That Are OBL, FACW, o		_ (A)
2		-		Total Number of Domina	ant	
3				Species Across All Strat	a: <u>1</u>	_ (B)
4				Percent of Dominant Sp		
Sapling/Shrub Stratum (Plot size: 15ft radius)	0	= 100	ai Cover	That Are OBL, FACW, o	or FAC: <u>100</u>	_ (A/B)
1				Prevalence Index work	sheet:	
2					Multiply by:	
3		-		OBL species		
4				FACW species		
5				FACULARISIS		
Herb Stratum (Plot size: 15ft radius)	0	= 101	ai Cover	FACU species UPL species		
1. Phalaris arundinacea	100	yes	FACW	Column Totals:		
2						
3					= B/A =	
4				Hydrophytic Vegetatio		
5				Rapid Test for Hydro	-	
6				☑ Dominance Test is >☐ Prevalence Index is		
7				☐ Morphological Adapt		ortina
8				data in Remarks	or on a separate shee	et)
9 10				☐ Wetland Non-Vascu	lar Plants ¹	
11.				☐ Problematic Hydropl		•
	100		al Cover	¹ Indicators of hydric soil be present, unless distu		y must
Woody Vine Stratum (Plot size: 15ft radius)		='		be present, unless dista	bed of problematic.	
1		-		Hydrophytic		
2				Vegetation Present? Yes	No 🗆	
% Bare Ground in Herb Stratum <u>0</u>	0	_ = 10t	al Cover	riesent: Tes	s⊠ No □	
Remarks:				1		

Depth	Matrix			Redox Features		_		
(inches)	Color (moist)	%	Colo	or (moist) % Ty	/pe ¹ Lo	<u>c</u> 2	Texture	Remarks
0-18	10YR 3/3	100				<u> </u>	Ls	
								- -
								
¹Type: C=C	Concentration D=D	enletion		uced Matrix, CS=Covered or	Coated Sa	and Gra	ins	² Location: PL=Pore Lining, M=Matrix.
				s, unless otherwise noted.)		ina Ora		cators for Problematic Hydric Soils ³ :
☐ Histosol				Sandy Redox (S5)				2 cm Muck (A10)
	pipedon (A2)			Stripped Matrix (S6)				Red Parent Material (TF2)
☐ Black Hi	istic (A3)		□ I	Loamy Mucky Mineral (F1) (e:	xcept MLF	RA 1)		Very Shallow Dark Surface (TF12)
☐ Hydroge	en Sulfide (A4)		□ I	Loamy Gleyed Matrix (F2)				Other (Explain in Remarks)
	d Below Dark Surfa	ice (A11)		Depleted Matrix (F3)				
	ark Surface (A12)			Redox Dark Surface (F6)				icators of hydrophytic vegetation and
-	Mucky Mineral (S1)			Depleted Dark Surface (F7)				vetland hydrology must be present,
-	Gleyed Matrix (S4)			Redox Depressions (F8)		ı	ι	ınless disturbed or problematic.
Type:	Layer (if present):							
, <u> </u>	nches):							
Deptii (iii	iches)						Hydric	Soil Present? Yes ☐ No ☒
Wetland Hy	drology Indicator							
Wetland Hy	drology Indicator		uired; che					econdary Indicators (2 or more required)
Wetland Hy Primary Indi Surface	ydrology Indicator icators (minimum of Water (A1)		uired; che	☐ Water-Stained Leaves (E	39) (excep	t MLRA		Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary Indi Surface High Wa	ydrology Indicator icators (minimum of Water (A1) ater Table (A2)		uired; che	☐ Water-Stained Leaves (E 1, 2, 4A, and 4B)	39) (excep	t MLRA		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hy Primary Indi ☐ Surface ☐ High Wa ☐ Saturatio	ydrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3)		uired; che	☐ Water-Stained Leaves (E 1, 2, 4A, and 4B) ☐ Salt Crust (B11)	,, .	t MLRÆ		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M	rdrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1)		uired; che	☐ Water-Stained Leaves (E 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B	13)	t MLR#	A [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer	ydrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)		uired; che	☐ Water-Stained Leaves (E 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B: ☐ Hydrogen Sulfide Odor (13) C1)		A [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep	ydrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		uired; che	□ Water-Stained Leaves (B 1, 2, 4A, and 4B) □ Salt Crust (B11) □ Aquatic Invertebrates (B □ Hydrogen Sulfide Odor (C) □ Oxidized Rhizospheres a	13) C1) along Living		A [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	ydrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		uired; che	Water-Stained Leaves (E 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (C Oxidized Rhizospheres a Presence of Reduced Iro	13) (C1) along Livin on (C4)	g Roots	A [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimer Drift Dep Algal Ma	ydrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		uired; che	Water-Stained Leaves (E 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B) Hydrogen Sulfide Odor (I) Oxidized Rhizospheres at Presence of Reduced Iron Reduction in	13) C1) along Living on (C4) n Tilled Soil	g Roots ls (C6)	A [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	ydrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	f one requ		Water-Stained Leaves (E	13) C1) along Living on (C4) n Tilled Soil nts (D1) (LI	g Roots ls (C6)	A [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	ydrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria	f one requ	(B7)	Water-Stained Leaves (E 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B) Hydrogen Sulfide Odor (I) Oxidized Rhizospheres at Presence of Reduced Iron Reduction in	13) C1) along Living on (C4) n Tilled Soil nts (D1) (LI	g Roots ls (C6)	A [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hy Primary Indi Surface High Wa Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati	ydrology Indicator icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca	f one requ	(B7)	Water-Stained Leaves (E	13) C1) along Living on (C4) n Tilled Soil nts (D1) (LI	g Roots ls (C6)	A [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturatie Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatie Sparsely	ydrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Concar rvations:	f one requ I Imagery ve Surfac	(B7) be (B8)	Water-Stained Leaves (E	13) C1) along Living on (C4) n Tilled Soil nts (D1) (Li	g Roots ls (C6)	A [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser	ydrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Concarvations: ter Present?	f one required in the second of the second	e (B7) ee (B8) No 🛭	Water-Stained Leaves (E	13) C1) along Living on (C4) n Tilled Soil nts (D1) (Li	g Roots ls (C6)	A [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturation Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundation Sparsely Field Obser Surface Water Table	ydrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Concar rvations: ter Present?	I Imagery ve Surfac Yes □ Yes □	(B7) te (B8) No 🖂	Water-Stained Leaves (E 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (C Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plar Other (Explain in Remark	13) C1) along Living on (C4) n Tilled Soil nts (D1) (Li	g Roots ls (C6) RR A)	(C3) [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation F	ydrology Indicator: icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca rvations: ter Present? Present?	f one required in the second of the second	e (B7) ee (B8) No 🛭	Water-Stained Leaves (E	13) C1) along Living on (C4) n Tilled Soil nts (D1) (Li	g Roots ls (C6) RR A)	(C3) [Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Iron Dep Inundati Sparsely Field Obser Surface Water Table Saturation F (includes ca	rdrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca rvations: ter Present? Present? apillary fringe)	I Imagery ve Surfac Yes Yes Yes Yes Yes Yes	No 🖂 No 🖂	Water-Stained Leaves (E 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (C Oxidized Rhizospheres a Presence of Reduced Iro Recent Iron Reduction in Stunted or Stressed Plar Other (Explain in Remark	13) C1) along Living on (C4) n Tilled Soil nts (D1) (Li	g Roots ls (C6) RR A) Wetlan	A CC3) CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indi Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wat Water Table Saturation F (includes ca Describe Re	rdrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca rvations: ter Present? Present? apillary fringe)	I Imagery ve Surfac Yes Yes Yes Yes Yes Yes	No 🖂 No 🖂	Water-Stained Leaves (E	13) C1) along Living on (C4) n Tilled Soil nts (D1) (Li	g Roots ls (C6) RR A) Wetlan	A CC3) CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary Indi Surface High Water M Sedimer Drift Dep Algal Mater M Iron Dep Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation F (includes ca	rdrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca rvations: ter Present? Present? apillary fringe)	I Imagery ve Surfac Yes Yes Yes Yes Yes Yes	No 🖂 No 🖂	Water-Stained Leaves (E	13) C1) along Living on (C4) n Tilled Soil nts (D1) (Li	g Roots ls (C6) RR A) Wetlan	A CC3) CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary Indi Surface High Wa Saturatic Water M Sedimer Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation F (includes ca	rdrology Indicators icators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca rvations: ter Present? Present? apillary fringe)	I Imagery ve Surfac Yes Yes Yes Yes Yes Yes	No 🖂 No 🖂	Water-Stained Leaves (E	13) C1) along Living on (C4) n Tilled Soil nts (D1) (Li	g Roots ls (C6) RR A) Wetlan	A CC3) CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

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

Project/Site: Parcel 0519314027	Ci	ity/County:	_ Sam				
Applicant/Owner:				Sam	_ Sampling Point: <u>SP-1_XX</u>		
Investigator(s): <u>Habitat Technologies</u>			Section, Tov	vnship, Range: <u>S31, T</u>	19, R5E		
Landform (hillslope, terrace, etc.):	l	Local relief	(concave, o	convex, none):	vex, none): Slope (%):		
Subregion (LRR): A							
Soil Map Unit Name: Philchuck fine sand				_			
Are climatic / hydrologic conditions on the site typical for t							
	-		•	mal Circumstances" pr	-	Voc ⊠ No □	7
Are Vegetation, Soil, or Hydrology si				•			_
Are Vegetation, Soil, or Hydrology na SUMMARY OF FINDINGS - Attach site map			`	d, explain any answers cations. transect		,	res. etc.
			<u>' ' </u>	•	<u>, , , , , , , , , , , , , , , , , , , </u>		
Hydrophytic Vegetation Present? Yes ☐ No Hydric Soil Present? Yes ☐ No			ne Sampled				
Wetland Hydrology Present? Yes ☐ No	_	with	nin a Wetlar	nd? Yes 🗌	No 🛚		
Remarks: Upland area modified by prior land use actio							
,							
VEGETATION – Use scientific names of pla	nts.						
		Dominant		Dominance Test we	orkshee	t:	
Tree Stratum (Plot size: 15ft radius) 1	% Cover			Number of Dominan That Are OBL, FAC			(A)
2				Total Number of Dor	ninant		
3				Species Across All S	Strata:	2	(B)
4				Percent of Dominant	Species	S	
Sapling/Shrub Stratum (Plot size: 15ft radius)	0	= Total C	Cover	That Are OBL, FAC	V, or FA	C: <u>50</u>	(A/B)
1				Prevalence Index w	orkshe	et:	
2.				Total % Cover of	f:	Multiply b	<u>y:</u>
3.				OBL species		x 1 =	
4				FACW species		x 2 =	
5				FAC species		x 3 =	
	0	= Total C	Cover	FACU species			
Herb Stratum (Plot size: 15ft radius)	400		E 4 (C) 4 /	UPL species			
Phalaris arundinacea Polygonym ayanidatum		yes		Column Totals:		(A)	(B)
Polygonum cuspidatum 3				Prevalence Inc	lex = B/	A =	
4				Hydrophytic Vegeta			
5				☐ Rapid Test for H			
6.				☐ Dominance Test	is >50%)	
7				☐ Prevalence Inde	x is ≤3.0	1	
8.				☐ Morphological A		ns¹ (Provide sur n a separate sh	
9				☐ Wetland Non-Va	scular P	lants¹	
10				☐ Problematic Hyd	rophytic	Vegetation ¹ (Ex	xplain)
11		= Total C		¹ Indicators of hydric			
Woody Vine Stratum (Plot size: 15ft radius)	100	- rotar c	ovei	be present, unless d	isturbed	or problematic.	
1				Hydrophytic			
2				Vegetation			
		T		Present?	Yes 🗌	No 🖾	
% Bare Ground in Herb Stratum 0	0	= Lotal C	over	riesent:	.00 🗀	NO 🖂	

Depth	Matrix				ox Features						_	
(inches)	Color (moist)	%	_ Cold	or (moist)	%	Type'	_Loc ²	<u>Textur</u>	<u>e</u> _		Rem	<u>arks</u>
0-18	10YR 3/3	100						Ls				
										-		
						·——				-		
								· · ·		· ·		
					_							
	Concentration, D=D						ed Sand C					ining, M=Matrix.
Hydric Soil	I Indicators: (App	licable to	all LRR	Rs, unless oth	erwise note	ed.)		In	dicato	ors for F	Problemati	ic Hydric Soils ³
Histoso	, ,			Sandy Redox (n Muck (
	pipedon (A2)			Stripped Matrix	. ,						Material (T	,
☐ Black H	, ,			Loamy Mucky			t MLRA 1) [-			face (TF12)
	en Sulfide (A4)	(* 4 4)		Loamy Gleyed				L	Othe	er (Expla	in in Rem	arks)
	ed Below Dark Surfa	ace (A11)		Depleted Matri				31.	1! 4 .	6 1		
	ark Surface (A12) Mucky Mineral (S1)			Redox Dark Su	, ,	7\		٩II		-		egetation and
-	Gleyed Matrix (S4)			Depleted Dark Redox Depres	•	<i>(</i>)					bed or pro	t be present,
	Layer (if present)			redux Deples	510115 (1-0)				uilles	s uistui	bed of pro	DIEMANC.
Type:	Layer (ii present)											
	nches):			_				1		_		
Denth (ir								Hyari	C SOII	Preser	t? Yes	□ No ⊠
Remarks: A	Area does not exhib	it field ind	icators o	f hydric soil. s	oli generaliy	y loanry s						
Remarks: A			icators o	f hydric soil. s	oli generali	y loaniy s						
Remarks: A	GY	's:				y loaniy s			Secor	ndary In	dicators (2	or more require
Remarks: A DROLOG Wetland Hy Primary Ind	GY ydrology Indicator	's:			oly)			.RA				or more require
DROLOG Wetland Hy Primary Ind	GY ydrology Indicator licators (minimum o	's:		eck all that app	oly)	es (B9) (e		.RA		ater-Sta		
DROLOG Wetland Hy Primary Ind Surface High Wa	GY ydrology Indicator licators (minimum o water (A1) ater Table (A2)	's:		eck all that app	oly) ained Leave	es (B9) (e		.RA	□ w	ater-Sta	ained Leav	es (B9) (MLRA
DROLOG Vetland Hy Primary Ind Surface High Wa	GY ydrology Indicator licators (minimum of Water (A1) ater Table (A2) ion (A3)	's:		eck all that app	oly) ained Leave A, and 4B)	es (B9) (e		.RA	□ W	/ater-Sta 4A, a i rainage	nined Leav	es (B9) (MLRA
DROLOG Wetland Hy Primary Ind Surface High Wa Saturati Water M	GY ydrology Indicator licators (minimum of Water (A1) ater Table (A2) ion (A3)	's:		eck all that app □ Water-Sta 1, 2, 4 □ Salt Crus	oly) ained Leave A, and 4B) (B11) avertebrates	es (B9) (e		.RA	W Dr	/ater-Sta 4A, a rainage ry-Seas	nined Leav nd 4B) Patterns (I on Water 1	es (B9) (MLRA
DROLOG Wetland Hy Primary Ind Surface High Water M Water M Sedime	GY ydrology Indicator licators (minimum of Water (A1) later Table (A2) ion (A3) Marks (B1)	's:		eck all that app Water-Sta 1, 2, 4 Salt Crus	oly) ained Leave A, and 4B) (B11) evertebrates Sulfide Od	es (B9) (e) s (B13) or (C1)	xcept ML		☐ W ☐ Dr ☐ Dr ☐ Sa	/ater-Sta 4A , a l rainage ry-Seas aturation	nined Leav nd 4B) Patterns (I on Water 1	es (B9) (MLRA B10) Fable (C2) n Aerial Imagery
DROLOG Wetland Hy Primary Ind Surface High Water N Water N Sedime Drift De	gydrology Indicator licators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2)	's:		eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir	oly) ained Leave A, and 4B) (B11) evertebrates Sulfide Od Rhizospher	es (B9) (e) s (B13) lor (C1) es along	xcept ML		☐ W ☐ Dr ☐ Dr ☐ Sa	/ater-Sta 4A, ai rainage ry-Seas aturation eomorp	nined Leavend 4B) Patterns (Ion Water Tourns)	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2)
DROLOG Wetland Hy Primary Ind Surface High Water M Sedime Drift De Algal Ma	gydrology Indicator licators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	's:		eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized	oly) ained Leave A, and 4B) (B11) avertebrates Sulfide Od Rhizospher of Reduced	es (B9) (e s (B13) or (C1) es along d Iron (C4	xcept ML Living Ro	ots (C3)	W Dr Dr Sa Ge Sh	/ater-Sta 4A, ai rainage ry-Seas aturation eomorp hallow A	nined Leavend 4B) Patterns (Ion Water To Visible or this Position	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3)
DROLOG Wetland Hy Primary Ind Surface High Water M Sedime Drift De Algal Ma	gydrology Indicator licators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)	's:		eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized Presence	oly) ained Leave A, and 4B) (B11) evertebrates Sulfide Od Rhizospher of Reduced on Reduction	es (B9) (e s (B13) lor (C1) es along d Iron (C4) on in Tille	except ML Living Ro 4) d Soils (C	ots (C3)	W Dr Dr Sa Ge St F#	Vater-Sta 4A, ai rainage ry-Seas aturation eomorp hallow A AC-Neu	nined Leavend 4B) Patterns (Ioon Water Tour Visible or hic Position equitard (Data Trest (East Test (East (East Test (East (East (Ea	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3)
DROLOG Wetland Hy Primary Ind Surface High Water M Sedime Drift De Algal Ma	ydrology Indicator licators (minimum of the Water (A1) later Table (A2) lion (A3) Marks (B1) lent Deposits (B2) leposits (B3) lat or Crust (B4) leposits (B5) le Soil Cracks (B6)	rs: If one requ	uired; ch	eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized Presence	oly) ained Leave A, and 4B) (B11) avertebrates Sulfide Od Rhizospher of Reduced on Reduction	es (B9) (e s (B13) or (C1) es along d Iron (C4 on in Tille Plants (D	except ML Living Ro 4) d Soils (C	ots (C3)	W Dr Dr Sa Go St F# Ra	dater-Sta 4A, al rainage ry-Seas aturation eomorp hallow A AC-Neu aised A	nined Leavend 4B) Patterns (Ioon Water Tour Visible or hic Position equitard (Data Trest (East Test (East (East Test (East (East (Ea	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3) (D5) (D6) (LRR A)
DROLOG Wetland Hy Primary Ind Surface High Water M Sedime Drift De Algal Mater M Iron De Surface Inundati	gy ydrology Indicator licators (minimum o & Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5)	r s: If one requ	uired; ch	eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ire	oly) ained Leave A, and 4B) (B11) avertebrates Sulfide Od Rhizospher of Reduced on Reduction	es (B9) (e s (B13) or (C1) es along d Iron (C4 on in Tille Plants (D	except ML Living Ro 4) d Soils (C	ots (C3)	W Dr Dr Sa Go St F# Ra	dater-Sta 4A, al rainage ry-Seas aturation eomorp hallow A AC-Neu aised A	nined Leavend 4B) Patterns (Ion Water Ton Visible or hic Position equitard (Dotral Test (Ent Mounds	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3) (D5) (D6) (LRR A)
DROLOG Wetland Hy Primary Ind Surface High Water N Sedime Drift De Algal Material Iron De Surface Inundati Sparsel	gyrology Indicator (minimum of the Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) exposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) ion Visible on Aerially Vegetated Conca	r s: If one requ	uired; ch	eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ire	oly) ained Leave A, and 4B) (B11) avertebrates Sulfide Od Rhizospher of Reduced on Reduction	es (B9) (e s (B13) or (C1) es along d Iron (C4 on in Tille Plants (D	except ML Living Ro 4) d Soils (C	ots (C3)	W Dr Dr Sa Go St F# Ra	dater-Sta 4A, al rainage ry-Seas aturation eomorp hallow A AC-Neu aised A	nined Leavend 4B) Patterns (Ion Water Ton Visible or hic Position equitard (Dotral Test (Ent Mounds	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3) (D5) (D6) (LRR A)
DROLOG Wetland Hy Primary Ind Surface High Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel	gyrology Indicator (minimum of the Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) exposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) ion Visible on Aerially Vegetated Conca	r s: If one requ	uired; ch	eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ire Stunted o	oly) ained Leave A, and 4B) (B11) avertebrates Sulfide Od Rhizospher of Reduced on Reduction r Stressed I	es (B9) (es (B13) or (C1) es along d Iron (C4) on in Tille Plants (D marks)	except ML Living Ro 4) d Soils (C	ots (C3)	W Dr Dr Sa Go St F# Ra	dater-Sta 4A, al rainage ry-Seas aturation eomorp hallow A AC-Neu aised A	nined Leavend 4B) Patterns (Ion Water Ton Visible or hic Position equitard (Dotral Test (Ent Mounds	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3) (D5) (D6) (LRR A)
DROLOG Wetland Hy Primary Ind Surface High Water M Sedime Drift De Algal Malgary Iron De Surface Inundati Sparsel Field Obse	ydrology Indicator licators (minimum of Water (A1) later Table (A2) lion (A3) Marks (B1) lent Deposits (B2) lent or Crust (B4) lent or Crust (B4) lent or Crust (B6)	rs: If one required in the second in the se	uired; ch (B7) te (B8) No ⊠	eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex	oly) ained Leave A, and 4B) E (B11) Evertebrates Sulfide Od Rhizospher of Reduced on Reduction r Stressed I plain in Rer	es (B9) (es (B13) or (C1) es along d Iron (C4) on in Tille Plants (Dmarks)	except ML Living Ro 4) d Soils (C	ots (C3)	W Dr Dr Sa Go St F# Ra	dater-Sta 4A, al rainage ry-Seas aturation eomorp hallow A AC-Neu aised A	nined Leavend 4B) Patterns (Ion Water Ton Visible or hic Position equitard (Dotral Test (Ent Mounds	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3) (D5) (D6) (LRR A)
Primary Ind Surface High Water M Sedime Drift De Algal Malgar Mal	ydrology Indicator licators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) cion Visible on Aeria ly Vegetated Concal ervations: ater Present? e Present?	rs: If one requ Il Imagery	uired; ch	eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ire Stunted o	oly) ained Leave A, and 4B) c (B11) evertebrates Sulfide Od Rhizospher of Reduceic on Reductio r Stressed I plain in Rer	es (B9) (e s (B13) for (C1) es along d Iron (C4 on in Tille Plants (D marks)	Living Ro 4) d Soils (C 1) (LRR A	ots (C3) 66) A)	W Dr Sa Sa Sa Sa Sa Sa Sa S	/ater-Sta 4A, and rainage ry-Seas aturation eomorphallow A AC-Neuraised And aised And rost-Hear	nined Leavend 4B) Patterns (Ion Water Ton Visible or hic Position equitard (Dotral Test (Ent Mounds	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3) (D5) (D6) (LRR A) pocks (D7)
Primary Ind Surface High Water M Sedime Drift De Algal M Iron De Inundati Sparsel Field Obse Surface Water Table Saturation F Gincludes ca	gy ydrology Indicator licators (minimum of water (A1) later Table (A2) lion (A3) Marks (B1) lent Deposits (B2) lent or Crust (B4) posits (B5) le Soil Cracks (B6) lion Visible on Aeria ly Vegetated Concal ly	rs: If one required in the second in the se	uired; ch (B7) ce (B8) No 🏽 No 🛣	eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ire Stunted o Other (Ex	oly) ained Leave A, and 4B) i (B11) avertebrates Sulfide Od Rhizospher of Reduceto on Reductio r Stressed I plain in Rer ass): ass): ass):	es (B9) (e s (B13) for (C1) es along d Iron (C4 on in Tille Plants (D marks)	Living Ro 4) d Soils (C 1) (LRR 4	ots (C3) 6) A) tland Hyd	W	/ater-Sta 4A, and rainage ry-Seas aturation eomorphallow A AC-Neuraised And aised And rost-Hear	nined Leavend 4B) Patterns (If on Water If on Visible or hic Position equitard (Detail Test (Ent Mounds ave Hummer)	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3) (D5) (D6) (LRR A) pocks (D7)
CDROLOG Wetland Hy Primary Ind Surface High Water M Sedime Drift De Algal Malgar M Iron De Inundati Sparsel Field Obse Surface Water Table Saturation Fincludes ca	ydrology Indicator licators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) e Soil Cracks (B6) cion Visible on Aeria ly Vegetated Concal ervations: ater Present? e Present?	rs: If one required in the second in the se	uired; ch (B7) ce (B8) No 🏽 No 🛣	eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ire Stunted o Other (Ex	oly) ained Leave A, and 4B) i (B11) avertebrates Sulfide Od Rhizospher of Reduceto on Reductio r Stressed I plain in Rer ass): ass): ass):	es (B9) (e s (B13) for (C1) es along d Iron (C4 on in Tille Plants (D marks)	Living Ro 4) d Soils (C 1) (LRR 4	ots (C3) 6) A) tland Hyd	W	/ater-Sta 4A, and rainage ry-Seas aturation eomorphallow A AC-Neuraised And aised And rost-Hear	nined Leavend 4B) Patterns (If on Water If on Visible or hic Position equitard (Detail Test (Ent Mounds ave Hummer)	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3) (D5) (D6) (LRR A) pocks (D7)
CDROLOG Wetland Hy Primary Ind Surface High Wa Saturati Water N Sedime Drift De Surface Inundati Sparsel Field Obse Surface Wa Water Table Saturation F includes ca	gyrology Indicator licators (minimum of the Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) exposits (B3) lat or Crust (B4) posits (B5) exposits (B5) exposits (B6) ion Visible on Aeria ly Vegetated Conca	rs: If one required in the second se	uired; ch (B7) ce (B8) No \(\text{No}\) No \(\text{No}\)	eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex Depth (inche Depth (inche	oly) ained Leave A, and 4B) (B11) avertebrates Sulfide Od Rhizospher of Reduced on Reduction r Stressed I plain in Rer es): ps): photos, pre	es (B9) (e s (B13) or (C1) es along d Iron (Ca on in Tille Plants (D marks)	Living Ro 4) d Soils (C 1) (LRR 4	ots (C3) 6) A) tland Hyd	W	/ater-Sta 4A, and rainage ry-Seas aturation eomorphallow A AC-Neuraised And aised And rost-Hear	nined Leavend 4B) Patterns (If on Water If on Visible or hic Position equitard (Detail Test (Ent Mounds ave Hummer)	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3) (D5) (D6) (LRR A) pocks (D7)
Primary Ind Surface High Water N Sedime Drift De Surface Inundati Sparsel Field Obse Surface Water Table Saturation Fincludes capescribe Ref	gy ydrology Indicator licators (minimum of water (A1) later Table (A2) lion (A3) Marks (B1) lent Deposits (B2) lent or Crust (B4) posits (B5) le Soil Cracks (B6) lion Visible on Aeria ly Vegetated Concal ly	rs: If one required in the second se	uired; ch (B7) ce (B8) No \(\text{No}\) No \(\text{No}\)	eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex Depth (inche Depth (inche	oly) ained Leave A, and 4B) (B11) avertebrates Sulfide Od Rhizospher of Reduced on Reduction r Stressed I plain in Rer es): ps): photos, pre	es (B9) (e s (B13) or (C1) es along d Iron (Ca on in Tille Plants (D marks)	Living Ro 4) d Soils (C 1) (LRR 4	ots (C3) 6) A) tland Hyd	W	/ater-Sta 4A, and rainage ry-Seas aturation eomorphallow A AC-Neuraised And aised And rost-Hear	nined Leavend 4B) Patterns (If on Water If on Visible or hic Position equitard (Detail Test (Ent Mounds ave Hummer)	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3) (D5) (D6) (LRR A) pocks (D7)
Primary Ind Surface High Water N Sedime Drift De Surface Inundati Sparsel Field Obse Surface Water Table Saturation Fincludes capescribe Ref	gyrology Indicator licators (minimum of the Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) exposits (B3) lat or Crust (B4) posits (B5) exposits (B5) exposits (B6) ion Visible on Aeria ly Vegetated Conca	rs: If one required in the second se	uired; ch (B7) ce (B8) No \(\text{No}\) No \(\text{No}\)	eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex Depth (inche Depth (inche	oly) ained Leave A, and 4B) (B11) avertebrates Sulfide Od Rhizospher of Reduced on Reduction r Stressed I plain in Rer es): ps): photos, pre	es (B9) (e s (B13) or (C1) es along d Iron (Ca on in Tille Plants (D marks)	Living Ro 4) d Soils (C 1) (LRR 4	ots (C3) 6) A) tland Hyd	W	/ater-Sta 4A, and rainage ry-Seas aturation eomorphallow A AC-Neuraised And aised And rost-Hear	nined Leavend 4B) Patterns (If on Water If on Visible or hic Position equitard (Detail Test (Ent Mounds ave Hummer)	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3) (D5) (D6) (LRR A) pocks (D7)
DROLOG Vetland Hy Primary Ind Surface High Wa Saturati Water N Sedime Drift De Surface Inundati Sparsel Field Obse Surface Wa Water Table Saturation Fincludes ca	gyrology Indicator licators (minimum of the Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) exposits (B3) lat or Crust (B4) posits (B5) exposits (B5) exposits (B6) ion Visible on Aeria ly Vegetated Conca	rs: If one required in the second se	uired; ch (B7) ce (B8) No \(\text{No}\) No \(\text{No}\)	eck all that app Water-Sta 1, 2, 4 Salt Crus Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex Depth (inche Depth (inche	oly) ained Leave A, and 4B) (B11) avertebrates Sulfide Od Rhizospher of Reduced on Reduction r Stressed I plain in Rer es): ps): photos, pre	es (B9) (e s (B13) or (C1) es along d Iron (Ca on in Tille Plants (D marks)	Living Ro 4) d Soils (C 1) (LRR 4	ots (C3) 6) A) tland Hyd	W	/ater-Sta 4A, and rainage ry-Seas aturation eomorphallow A AC-Neuraised And aised And rost-Hear	nined Leavend 4B) Patterns (If on Water If on Visible or hic Position equitard (Detail Test (Ent Mounds ave Hummer)	es (B9) (MLRA 2 B10) Fable (C2) In Aerial Imagery In (D2) 3) (D5) (D6) (LRR A) pocks (D7)

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

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

Project/Site: Parcel 0519314027		City/County: Orting/P	Sampling Date: 23 SEPT 2015		
Applicant/Owner:			Sampling Point: SP-2		
Investigator(s): Habitat Technologies		Section, T	, R5E		
Landform (hillslope, terrace, etc.):		Local relief (concave	Slope (%):		
Subregion (LRR): A					
Soil Map Unit Name: Philchuck fine sand					
Are climatic / hydrologic conditions on the site typical for					
Are Vegetation, Soil, or Hydrology s	•		lormal Circumstances" pres	sent? Yes ⊠ No □	
Are Vegetation, Soil, or Hydrology n			ded, explain any answers ir		
SUMMARY OF FINDINGS – Attach site ma				•	
Hydrophytic Vegetation Present? Yes ⊠ No [
Hydric Soil Present? Yes ☐ No [Is the Sample		- 🖂	
Wetland Hydrology Present? Yes ☐ No [\boxtimes	within a Wetla	ınd? Yes ☐ N	0 🖾	
Remarks: Upland.		<u>.</u>			
VECETATION . He asigntific names of all					
VEGETATION – Use scientific names of pla		Dominant Indicator	Daminanaa Taat warks	sh a a fi	
Tree Stratum (Plot size: 15ft radius)		Species? Status	Number of Dominant Sp		
1			That Are OBL, FACW, o		
2.			Total Number of Domina	ant	
3			Species Across All Strat		
4			Percent of Dominant Sp	ecies	
Sapling/Shrub Stratum (Plot size: 15ft radius)	0	= Total Cover	That Are OBL, FACW, o		
1. Cornus stolonifera	40	yes FACW	Prevalence Index work	sheet:	
2.			Total % Cover of:	Multiply by:	
3			OBL species	x 1 =	
4				x 2 =	
5				x 3 =	
Herb Stratum (Plot size: 15ft radius)	40	= Total Cover		x 4 =	
Phalaris arundinacea	60	yes FACW		x 5 =	
2		-	Column Totals:	(A) (B)	
3.			Prevalence Index	= B/A =	
4			Hydrophytic Vegetatio	n Indicators:	
5			Rapid Test for Hydro		
6			□ Dominance Test is > □		
7			☐ Prevalence Index is		
8			data in Remarks	tations ¹ (Provide supporting or on a separate sheet)	
9			☐ Wetland Non-Vascu		
10.			☐ Problematic Hydropl	hytic Vegetation ¹ (Explain)	
11	60	= Total Cover		and wetland hydrology must	
Woody Vine Stratum (Plot size: 15ft radius)	00	- Total Gover	be present, unless distu	rbed or problematic.	
1	_		Hydrophytic		
2			Vegetation		
% Bare Ground in Herb Stratum 0	0	= Total Cover	Present? Yes	i⊠ No □	
Remarks: Red osier dogwood in ditch.			1		

Depth	Matrix		Redox Features		
(inches)	Color (moist)	%	Color (moist) % Type ¹	Loc ²	Texture Remarks
0-8	10YR 3/3	100			Ls
	10YR 3/3	100			
8-18	101R 3/3	100			<u>Gsl</u>
	•				
1					2
		•	I=Reduced Matrix, CS=Covered or Coall I LRRs, unless otherwise noted.)	ited Sand Gra	ains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
-		Cable to a			-
☐ Histosol	pipedon (A2)		☐ Sandy Redox (S5)☐ Stripped Matrix (S6)		☐ 2 cm Muck (A10) ☐ Red Parent Material (TF2)
	istic (A3)		Loamy Mucky Mineral (F1) (exception)	ot MLRA 1)	☐ Very Shallow Dark Surface (TF12)
	en Sulfide (A4)		☐ Loamy Gleyed Matrix (F2)	, <u>-</u>	Other (Explain in Remarks)
	d Below Dark Surfac	ce (A11)	☐ Depleted Matrix (F3)		
☐ Thick Da	ark Surface (A12)	, ,	☐ Redox Dark Surface (F6)		³ Indicators of hydrophytic vegetation and
☐ Sandy N	/lucky Mineral (S1)		□ Depleted Dark Surface (F7)		wetland hydrology must be present,
-	Gleyed Matrix (S4)		☐ Redox Depressions (F8)		unless disturbed or problematic.
_	Layer (if present):				
Type:	- I V				
Deptn (in	nches):				Hydric Soil Present? Yes ☐ No ☒
HYDROLO)GY				
Wetland Hy	drology Indicators):			
Primary Indi	cators (minimum of	one require	ed; check all that apply)		Secondary Indicators (2 or more required)
☐ Surface	Water (A1)		☐ Water-Stained Leaves (B9) (_
☐ High Wa	ater Table (A2)			except MLR	A Water-Stained Leaves (B9) (MLRA 1, 2,
☐ Saturation	(40)		1, 2, 4A, and 4B)	except MLR	A Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
	on (A3)			except MLR	• • • • • • • • • • • • • • • • • • • •
☐ Water M	on (A3) larks (B1)		1, 2, 4A, and 4B)	except MLR	4A, and 4B)
	` ,		1, 2, 4A, and 4B) Salt Crust (B11)	except MLR	4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9)
☐ Sedimer	Marks (B1) nt Deposits (B2) posits (B3)		1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along	g Living Root	4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9)
☐ Sedimer	farks (B1) nt Deposits (B2)		1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	g Living Root	4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9)
☐ Sedimer☐ Drift Dep☐ Algal Ma	Marks (B1) nt Deposits (B2) posits (B3)		1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along	g Living Root C4)	4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9) S (C3) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3)
Sedimer Drift Dep Algal Ma Iron Dep Surface	flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)		1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C	g Living Root C4) ed Soils (C6)	AA, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) s (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A)
Sedimer Drift Dep Algal Ma Iron Dep Surface	Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) Int or	• • •	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (C) Other (Explain in Remarks)	g Living Root C4) ed Soils (C6)	4A, and 4B) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Saturation Visible on Aerial Imagery (C9) Is (C3) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5)
Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati	Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) I	• • •	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (C) Other (Explain in Remarks)	g Living Root C4) ed Soils (C6)	AA, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) s (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A)
Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely	Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B4) Int or Crust (B6) I	e Surface	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Till Stunted or Stressed Plants (I) Other (Explain in Remarks)	g Living Root C4) ed Soils (C6)	AA, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) s (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A)
Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wat	Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) I	re Surface	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (I Other (Explain in Remarks) (B8)	g Living Root C4) ed Soils (C6)	AA, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) s (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A)
Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wat	Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) I	re Surface Yes	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (I Other (Explain in Remarks) B8) Depth (inches): Depth (inches):	g Living Root C4) ed Soils (C6) D1) (LRR A)	AA, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) s (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation F	Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) I	re Surface Yes	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (I Other (Explain in Remarks) (B8)	g Living Root C4) ed Soils (C6) D1) (LRR A)	AA, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) s (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A)
Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wat Water Table Saturation F (includes ca	Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) Int or Crust (B7) I	Yes	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (I Other (Explain in Remarks) B8) Depth (inches): Depth (inches):	g Living Root C4) ed Soils (C6) D1) (LRR A) Wetla	AA, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) s (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wat Water Table Saturation F (includes ca Describe Re	Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) Int or Crust (B7) I	Yes	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (IC) Other (Explain in Remarks) (B8) Depth (inches): Depth (inches):	g Living Root C4) ed Soils (C6) D1) (LRR A) Wetla	AA, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) s (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wat Water Table Saturation F (includes ca	Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) Int or Crust (B7) I	Yes	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (IC) Other (Explain in Remarks) (B8) Depth (inches): Depth (inches):	g Living Root C4) ed Soils (C6) D1) (LRR A) Wetla	AA, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) s (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wat Water Table Saturation F (includes ca Describe Re	Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) Int or Crust (B7) I	Yes	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (IC) Other (Explain in Remarks) (B8) Depth (inches): Depth (inches):	g Living Root C4) ed Soils (C6) D1) (LRR A) Wetla	AA, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) s (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
☐ Sedimer ☐ Drift Dep ☐ Algal Ma ☐ Iron Dep ☐ Surface ☐ Inundati ☐ Sparsely Field Obser Surface Water Table Saturation F (includes ca Describe Re	Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) Int or Crust (B7) I	Yes	1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Stunted or Stressed Plants (IC) Other (Explain in Remarks) (B8) Depth (inches): Depth (inches):	g Living Root C4) ed Soils (C6) D1) (LRR A) Wetla	AA, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) s (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)

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

Project/Site: Parcel 0519314027	C	ity/County: Ci	ity of Orti	ng	Sampling Date: 24	OCT 2016
Applicant/Owner:			Sampling Point: SP-2 XX			
Investigator(s): Habitat Technologies		Sec	ction, Tow	vnship, Range: <u>S31, T19</u>	, R5E	
Landform (hillslope, terrace, etc.):		Local relief (co	oncave, c	convex, none):	Slope	e (%):
Subregion (LRR): A	Lat:	Lat: Long:				·
Soil Map Unit Name: <u>Philchuck fine sand</u>				NWI classifica	ation:	
Are climatic / hydrologic conditions on the site typical fo						
Are Vegetation, Soil, or Hydrology	_		-	mal Circumstances" pres		\ \
	-			d, explain any answers ir		<i>,</i>
Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS - Attach site m			`		,	tures. etc.
Hydrophytic Vegetation Present? Yes ⊠ N Hydric Soil Present? Yes □ N	_	Is the	Sampled	l Area		
Wetland Hydrology Present?		within	a Wetlar	nd? Yes □	No ⊠	
Remarks: Adjacent to Wetland A. Sample plot locat the sample plot in 2015.	ion appears to ha	ve slid to the i	north and	I now include youing red	alder trees that we	re just outside
/EGETATION – Use scientific names of p				1		
<u>Tree Stratum</u> (Plot size: <u>15ft radius</u>)		Dominant Ir Species?		Dominance Test wor Number of Dominant S		
1. Alnus rubra	<u>25</u>	<u>yes</u> F	AC	That Are OBL, FACW,		(A)
2		. <u> </u>		Total Number of Domi	nant	
3				Species Across All Str		(B)
4				Danis and of Danish and C	No 1	
Sapling/Shrub Stratum (Plot size: 15ft radius)		= Total Cov		Percent of Dominant S That Are OBL, FACW,		(A/B)
1. Cornus stolonifera	40	<u>yes F</u>	ACW	Prevalence Index wo	rksheet:	
2		. _		Total % Cover of:	Multiply	<u>y by:</u>
3		. _		OBL species	x 1 =	
4				FACW species	x 2 =	
5				FAC species		
	40	= Total Cov	er	FACU species		
Herb Stratum (Plot size: 15ft radius)		_		UPL species		
1. Phalaris arundinacea		<u>yes</u> F		Column Totals:	(A)	(B)
2. Polygonum cuspidatum				Prevalence Inde	x = B/A =	
3				Hydrophytic Vegetat		
4				☐ Rapid Test for Hyd		n
5				☐ Rapid Test for Try C		•
6				☐ Prevalence Index		
7 8				☐ Morphological Ada	aptations¹ (Provide	
9.					ks or on a separate	sheet)
10				☐ Wetland Non-Vaso		
11.				☐ Problematic Hydro	. , .	,
Woody Vine Stratum (Plot size: 15ft radius)		= Total Cov	er	¹ Indicators of hydric so be present, unless dis		
1.		<u> </u>				
2				Hydrophytic Vegetation		
		= Total Cov	er		es 🛛 No 🗌	
% Bare Ground in Herb Stratum 0						

Depth

Matrix

-
-
- Di Dana Linia a M Matria
ocation: PL=Pore Lining, M=Matrix. tors for Problematic Hydric Soils ³ :
cm Muck (A10)
ed Parent Material (TF2)
ery Shallow Dark Surface (TF12)
her (Explain in Remarks)
,
ators of hydrophytic vegetation and
tland hydrology must be present,
ess disturbed or problematic.
oil Present? Yes □ No ⊠
condary Indicators (2 or more required)
Water-Stained Leaves (B9) (MLRA 1, 2
4A, and 4B)
Drainage Patterns (B10)
Dry-Season Water Table (C2)
Saturation Visible on Aerial Imagery (CS
Geomorphic Position (D2)
, ,
Shallow Aquitard (D3)
Shallow Aquitard (D3) FAC-Neutral Test (D5)
FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
FAC-Neutral Test (D5)
FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) ogy Present? Yes No
FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) ogy Present? Yes No
0

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

Redox Features

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

Project/Site: Parcel 0519314027	c	ity/County: <u>C</u>	ity of Orti	ng	Sampling Date: 24 O	CT 2016
Applicant/Owner:			Sampling Point: SP-3 XX			
Investigator(s): <u>Habitat Technologies</u>		Sec	ction, Tov	vnship, Range: <u>S31, T19</u>	9, R5E	
Landform (hillslope, terrace, etc.):		Local relief (c	oncave, o	convex, none):	Slope (%	%) :
Subregion (LRR): A		•		•		•
Soil Map Unit Name: Philchuck fine sand				_		
Are climatic / hydrologic conditions on the site typical for						
	•		•	mal Circumstances" pre		1
Are Vegetation, Soil, or Hydrology				·		J
Are Vegetation, Soil, or Hydrology i SUMMARY OF FINDINGS - Attach site ma			`	d, explain any answers in cations. transects	,	res. etc.
_					,portant roata.	
Hydrophytic Vegetation Present? Yes ⊠ No Hydric Soil Present? Yes ⊠ No		Is the	Sampled	l Area		
Wetland Hydrology Present? Yes ⊠ No	_	within	a Wetlaı	nd? Yes ⊠	No 🗌	
Remarks: Wetland A. Area dominated by young tree		hin a denress	ion			
Tremane. Wedana 7.1. 711 ou deminiated by young too	o arra ornado ma	iiii a aopioco				
VEGETATION – Use scientific names of pl	ants.					
Tree Stratum (Plot size: 15ft radius)	Absolute	Dominant In Species?		Dominance Test wor		
1. Alnus rubra	0.5	yes F		Number of Dominant : That Are OBL, FACW		(A)
2. Salix sitchensis			AC			_ ()
3. Salix lasiandra		yes F		Total Number of Domi Species Across All Str		(B)
4.				·		(-/
Sapling/Shrub Stratum (Plot size: 15ft radius)		= Total Cov		Percent of Dominant S That Are OBL, FACW	Species , or FAC: <u>83</u>	(A/B)
1. Cornus stolonifera	25	<u>yes</u> F	ACW	Prevalence Index wo	orksheet:	
2		. _		Total % Cover of:	Multiply by	<u>y:</u>
3		· -			x 1 =	
4					x 2 =	
5					x 3 =	
Horb Stratum (Diet size: 45ft radius)	<u>25</u>	= Total Cov	/er		x 4 =	
Herb Stratum (Plot size: 15ft radius) 1. Phalaris arundinacea	<u>50</u>	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	ACW		x 5 =	
Pnalaris arundinacea Polygonum cuspidatum				Column Totals:	(A)	(B)
3				Prevalence Inde	ex = B/A =	
4.				Hydrophytic Vegetat		<u> </u>
5.				☐ Rapid Test for Hy		
6.				☑ Dominance Test is		
7.				☐ Prevalence Index	is ≤3.0¹	
8					aptations¹ (Provide sup	
9				☐ Wetland Non-Vas	cular Plants ¹	•
10				☐ Problematic Hydro	ophytic Vegetation¹ (Ex	plain)
11					oil and wetland hydrolo	gy must
Woody Vine Stratum (Plot size: 15ft radius)	100	= Total Cov	/ei	be present, unless dis	sturbed or problematic.	
1				Hydrophytic		
1						
2				Vegetation		
				Vegetation	′es ⊠ No □	

0-3 3-18	Color (moist)				x Feature							
		%	_ Cold	or (moist)	<u></u> %	Type ¹	Loc ²	<u>Texture</u>	<u> </u>		<u>Remarks</u>	
3-18	10YR 3/2	100						Sil				
	10YR 4/1	80	10Y	R 4/6	20	С	M	Sil				
								<u> </u>				
					-							
_												_
					-							
					-							
	oncentration, D=D						ed Sand C				ore Lining, M=M	
	Indicators: (App	licable to				ed.)					ematic Hydric S	oils ³ :
Histosol	, ,			Sandy Redox (S	-					uck (A10)		
	oipedon (A2)			Stripped Matrix	. ,	1) (、 □		rent Mater		
☐ Black His				Loamy Mucky N			MLRA 1)	-		k Surface (TF12)
	en Sulfide (A4) d Below Dark Surfa	000 (411)		Loamy Gleyed I)		Ш	Otner (i	Explain in l	Remarks)	
•	ark Surface (A12)	ace (ATT)		Depleted Matrix Redox Dark Sui				310	dicators	of hydronh	ytic vegetation a	and
	lucky Mineral (S1)	1		Depleted Dark Sui	, ,	7)		III			must be presen	
-	Gleyed Matrix (S4)			Redox Depress	•	.,					r problematic.	•,
	Layer (if present)				(. 0)						. р. обленицион	
Type:	, ,			_								
Depth (in	iches):			_				Hydri	c Soil Pr	osont?	Yes ⊠ No □	
Domarka, fia	eld evidence of hyd	dria aaila n	racant					,				
/DROLOG	ЭΥ											
Wetland Hy	drology Indicator	rs:										
Primary India	cators (minimum o	of one requ	uired; ch	eck all that appl	v)				Casanda	ry Indicato	(0	
☐ Surface \	Water (A1)				y /				Seconda		ors (2 or more re	quired)
_	` ,			□ Water-Stai		es (B9) (e	xcept ML			r-Stained	,	
M High Wa				☐ Water-Stai	ned Leave		xcept ML		☐ Wate		Leaves (B9) (MI	
_	on (A3)			1, 2, 4	ned Leave A, and 4B		xcept ML		☐ Wate	A, and 4B	Leaves (B9) (MI	
Saturation	` '			1, 2, 4,	ned Leave A, and 4B (B11))	xcept ML	.RA	☐ Wate 4 ☐ Drair	A, and 4B nage Patte	Leaves (B9) (M I i) rns (B10)	
⊠ Saturatio	larks (B1)			1, 2, 4, Salt Crust Aquatic Inv	ned Leave A, and 4B (B11) vertebrates) s (B13)	xcept ML	.RA	☐ Wate 4 ☐ Drair ☐ Dry-	A, and 4B nage Patte Season Wa	Leaves (B9) (MI rns (B10) ater Table (C2)	
✓ Saturation✓ Water Mater✓ Sediment	larks (B1) nt Deposits (B2)			1, 2, 4/ Salt Crust Aquatic Inv	ned Leave A, and 4B (B11) vertebrate Sulfide Oc) s (B13) dor (C1)		.RA	☐ Wate 4 ☐ Drair ☐ Dry-S	A, and 4B nage Patte Season Wa ration Visib	Leaves (B9) (Mi i) rns (B10) ater Table (C2) ble on Aerial Ima	
Saturation Water Mater Mat	larks (B1) nt Deposits (B2) posits (B3)			1, 2, 4/ Salt Crust Aquatic Inv Hydrogen Oxidized F	ned Leave A, and 4B (B11) vertebrate Sulfide Od thizosphe) s (B13) dor (C1) res along	Living Ro	ots (C3)	Wate 4 Drair Dry-S Satu	A, and 4B nage Patter Season Waration Visib morphic Po	Leaves (B9) (MI c) rns (B10) ater Table (C2) ble on Aerial Ima position (D2)	
Saturation Water Mater	larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)			1, 2, 4/ Salt Crust Aquatic Inv Hydrogen Oxidized F	ned Leave A, and 4B (B11) vertebrate: Sulfide Oc thizosphei of Reduce	s (B13) dor (C1) res along d Iron (C4	Living Ro	ots (C3)	Wate 4 Drair Dry-S Satu Geor	A, and 4B nage Patte Season Wa ration Visib norphic Po ow Aquitan	Leaves (B9) (MI c) rns (B10) ater Table (C2) ble on Aerial Ima position (D2) rd (D3)	
Saturation Water Mater	larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)			1, 2, 4, 4, 4 Salt Crust Aquatic Inv Hydrogen Oxidized F Presence co Recent Iro	ned Leave A, and 4B (B11) vertebrates Sulfide Oo thizospher of Reduce in Reduction	s (B13) dor (C1) res along d Iron (C4 on in Tille	Living Ro 4) d Soils (C	ots (C3)	Wate 4 Drair Dry-S Satu Geor Shall	A, and 4B hage Patter Season Waration Visite norphic Poor Aquitan Neutral Te	Leaves (B9) (MI) rns (B10) ater Table (C2) ble on Aerial Imates position (D2) rd (D3) est (D5)	
Saturation Water Management Sediment Drift Dept Algal Mater Management Iron Dept Surface State	larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	ul Imagony	(B7)	1, 2, 4, 4, 4, 5 Salt Crust Aquatic Inv Hydrogen Oxidized F Presence C Recent Iro	ned Leave A, and 4B (B11) vertebrate: Sulfide Oc thizosphei of Reduce in Reduction Stressed	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Ro 4) d Soils (C	ots (C3)	Wate 4 Drair Dry-S Satur Geor Shall FAC-	A, and 4B nage Patte Season Waration Visite norphic Poow Aquitan Neutral Teed Ant Mou	Leaves (B9) (MI c) rns (B10) ater Table (C2) ble on Aerial Ima osition (D2) rd (D3) est (D5) unds (D6) (LRR	
Water Manager Sedimen Sedimen Drift Dep Algal Ma Iron Dep Surface	larks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Cracks (B6)			1, 2, 4, 4, 4 Salt Crust Aquatic Inv Hydrogen Oxidized F Presence co Recent Iro	ned Leave A, and 4B (B11) vertebrate: Sulfide Oc thizosphei of Reduce in Reduction Stressed	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Ro 4) d Soils (C	ots (C3)	Wate 4 Drair Dry-S Satur Geor Shall FAC-	A, and 4B nage Patte Season Waration Visite norphic Poow Aquitan Neutral Teed Ant Mou	Leaves (B9) (MI) rns (B10) ater Table (C2) ble on Aerial Imates position (D2) rd (D3) est (D5)	
Saturation Water Mater	larks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) I			1, 2, 4, 4, 4, 5 Salt Crust Aquatic Inv Hydrogen Oxidized F Presence C Recent Iro	ned Leave A, and 4B (B11) vertebrate: Sulfide Oc thizosphei of Reduce in Reduction Stressed	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Ro 4) d Soils (C	ots (C3)	Wate 4 Drair Dry-S Satur Geor Shall FAC-	A, and 4B nage Patte Season Waration Visite norphic Poow Aquitan Neutral Teed Ant Mou	Leaves (B9) (MI c) rns (B10) ater Table (C2) ble on Aerial Ima osition (D2) rd (D3) est (D5) unds (D6) (LRR	
Saturation Water Management Sediment Drift Dep Algal Management Iron Dep Surface and Inundation Sparsely Field Obser	larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria y Vegetated Concar rvations:	ave Surfac	se (B8)	1, 2, 4/ Salt Crust Aquatic Inv Hydrogen Oxidized F Presence o Recent Iro Stunted or Other (Exp	ned Leave A, and 4B (B11) vertebrate: Sulfide Oo thizospher of Reduce n Reductio Stressed dain in Re	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Ro 4) d Soils (C	ots (C3)	Wate 4 Drair Dry-S Satur Geor Shall FAC-	A, and 4B nage Patte Season Waration Visite norphic Poow Aquitan Neutral Teed Ant Mou	Leaves (B9) (MI c) rns (B10) ater Table (C2) ble on Aerial Ima osition (D2) rd (D3) est (D5) unds (D6) (LRR	
Saturation Water Management Sediment Drift Dep Algal Management Iron Dep Surface Inundation Sparsely Field Obser Surface Water	larks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) I	Yes	e (B8) No ⊠	1, 2, 4, 4, 4, 4, 5 Salt Crust Aquatic Inv Hydrogen Oxidized F Presence C Recent Iro Stunted or Other (Exp	ned Leave A, and 4B (B11) vertebrate: Sulfide Oc Rhizosphei of Reduce n Reductic Stressed slain in Re	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Ro 4) d Soils (C	ots (C3)	Wate 4 Drair Dry-S Satur Geor Shall FAC-	A, and 4B nage Patte Season Waration Visite norphic Poow Aquitan Neutral Teed Ant Mou	Leaves (B9) (MI c) rns (B10) ater Table (C2) ble on Aerial Ima osition (D2) rd (D3) est (D5) unds (D6) (LRR	
Saturation Water Mater M	larks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) I	Yes ☐ Yes ⊠	e (B8) No ⊠ No □	1, 2, 4/ Salt Crust Aquatic Inv Hydrogen Oxidized F Presence C Recent Iro Stunted or Other (Exp	ned Leave A, and 4B (B11) vertebrate: Sulfide Oct chizospher of Reduce n Reduction Stressed slain in Re	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Ro 1) d Soils (C 1) (LRR A	ots (C3) 6)	Wate 4 Drair Dry-S Satur Geor Shall FAC- Raise	A, and 4B hage Patte Season Wa ration Visit morphic Po ow Aquitan Neutral Te ed Ant Mou	Leaves (B9) (MI c) rns (B10) ater Table (C2) ble on Aerial Ima position (D2) rd (D3) est (D5) unds (D6) (LRR ummocks (D7)	
Saturation Sedimen Sedimen Drift Dep Algal Ma Iron Dep Surface : Inundatio Sparsely Field Obser Surface Wat Water Table Saturation P	larks (B1) Int Deposits (B2) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B6) Int or Crust (B6) Int or Crust (B4) I	Yes	e (B8) No ⊠	1, 2, 4, 4, 4, 4, 5 Salt Crust Aquatic Inv Hydrogen Oxidized F Presence C Recent Iro Stunted or Other (Exp	ned Leave A, and 4B (B11) vertebrate: Sulfide Oct chizospher of Reduce n Reduction Stressed slain in Re	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Ro 1) d Soils (C 1) (LRR A	ots (C3) 6)	Wate 4 Drair Dry-S Satur Geor Shall FAC- Raise	A, and 4B nage Patte Season Waration Visite norphic Poow Aquitan Neutral Teed Ant Mou	Leaves (B9) (MI c) rns (B10) ater Table (C2) ble on Aerial Ima position (D2) rd (D3) est (D5) unds (D6) (LRR ummocks (D7)	
Saturation Saturation Water Manager Sediment Drift Dept Algal Manager Iron Dept Surface Saturation Policicudes caped sediment Saturation Policicular Saturation Policicular Sa	larks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B4) Int or Crust (B4) Int or Crust (B6) I	Yes Yes Yes Yes Yes Yes	No No No	1, 2, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	ned Leave A, and 4B (B11) vertebrate: Sulfide Oc Rhizosphei of Reduce n Reductic Stressed slain in Re s): s): s): s):	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Ro 4) d Soils (C 1) (LRR A	ots (C3) 6) A)	□ Wate 4 □ Drair □ Dry-S □ Satur □ Geor □ Shall □ FAC- □ Raise □ Frost	A, and 4B hage Patte Season Wa ration Visit morphic Po ow Aquitan Neutral Te ed Ant Mou	Leaves (B9) (MI c) rns (B10) ater Table (C2) ble on Aerial Ima position (D2) rd (D3) est (D5) unds (D6) (LRR ummocks (D7)	
Saturation Water Mater M	larks (B1) Int Deposits (B2) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B6) Int or Crust (B6) Int or Crust (B4) I	Yes Yes Yes Yes Yes Yes	No No No	1, 2, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	ned Leave A, and 4B (B11) vertebrate: Sulfide Oc Rhizosphei of Reduce n Reductic Stressed slain in Re s): s): s): s):	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Ro 4) d Soils (C 1) (LRR A	ots (C3) 6) A)	□ Wate 4 □ Drair □ Dry-S □ Satur □ Geor □ Shall □ FAC- □ Raise □ Frost	A, and 4B hage Patte Season Wa ration Visit morphic Po ow Aquitan Neutral Te ed Ant Mou	Leaves (B9) (MI c) rns (B10) ater Table (C2) ble on Aerial Ima position (D2) rd (D3) est (D5) unds (D6) (LRR ummocks (D7)	
Saturation Sediment Sediment Drift Dep Algal Ma Iron Dep Surface : Inundation Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap Describe Re	larks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) I	Yes Yes Yes Yes A	No 🖂 No 🗆 No 🗆	1, 2, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	ned Leave A, and 4B (B11) vertebrate: Sulfide Oc Rhizospher of Reduce n Reductio Stressed slain in Re s): s): 1 photos, pr	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Ro 4) d Soils (C 1) (LRR A We	ots (C3) 6) A) tland Hyd), if availab	□ Wate 4 □ Drair □ Dry-S □ Satur □ Geor □ Shall □ FAC- □ Raise □ Frost	A, and 4B hage Patte Season Wa ration Visit morphic Po ow Aquitan Neutral Te ed Ant Mou	Leaves (B9) (MI c) rns (B10) ater Table (C2) ble on Aerial Ima position (D2) rd (D3) est (D5) unds (D6) (LRR ummocks (D7)	
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Saturation Water Management Sediment Drift Dept Algal Mater Management Iron Dept Surface and Inundation Sparsely Field Obser Surface Water Table Saturation Particulates caped to the control of the	larks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) I	Yes Yes Yes Yes A	No 🖂 No 🗆 No 🗆	1, 2, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	ned Leave A, and 4B (B11) vertebrate: Sulfide Oc Rhizospher of Reduce n Reductio Stressed slain in Re s): s): 1 photos, pr	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Ro 4) d Soils (C 1) (LRR A We	ots (C3) 6) A) tland Hyd), if availab	☐ Wate 4 ☐ Drair ☐ Dry-S ☐ Satur ☐ Geor ☐ Shall ☐ FAC-☐ Raise ☐ Frost	A, and 4B hage Patte Season Wa ration Visit morphic Po ow Aquitan Neutral Te ed Ant Mou	Leaves (B9) (MI c) rns (B10) ater Table (C2) ble on Aerial Ima position (D2) rd (D3) est (D5) unds (D6) (LRR ummocks (D7)	
Saturation Sediment Sediment Drift Dep Algal Ma Iron Dep Surface : Inundation Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap Describe Re	larks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int or Crust (B4) Int or Crust (B4) Int or Crust (B5) Int or Crust (B6) I	Yes Yes Yes Yes A	No 🖂 No 🗆 No 🗆	1, 2, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	ned Leave A, and 4B (B11) vertebrate: Sulfide Oc Rhizospher of Reduce n Reductio Stressed slain in Re s): s): 1 photos, pr	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D marks)	Living Ro 4) d Soils (C 1) (LRR A We	ots (C3) 6) A) tland Hyd), if availab	☐ Wate 4 ☐ Drair ☐ Dry-S ☐ Satur ☐ Geor ☐ Shall ☐ FAC-☐ Raise ☐ Frost	A, and 4B hage Patte Season Wa ration Visit morphic Po ow Aquitan Neutral Te ed Ant Mou	Leaves (B9) (MI c) rns (B10) ater Table (C2) ble on Aerial Ima position (D2) rd (D3) est (D5) unds (D6) (LRR ummocks (D7)	

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

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

Project/Site: Parcel 0519314030	C	City/Coun	ty: City of Ord	ing	_ Sampling Date: <u>24</u>	1 OCT 2016
Applicant/Owner:			Sampling Point: SP-4_XX			
Investigator(s): Habitat Technologies			Section, Tov	vnship, Range: <u>S31, T19</u>	9, R5E	
Landform (hillslope, terrace, etc.):		Local rel	ief (concave, o	convex, none):	Slop	e (%):
Subregion (LRR): A						
Soil Map Unit Name: Aquic xerofluvents				_		
Are climatic / hydrologic conditions on the site typical for t						
Are Vegetation, Soil, or Hydrology s	-		•	mal Circumstances" pre		\Box
Are Vegetation, Soil, or Hydrology na				d, explain any answers i		
SUMMARY OF FINDINGS – Attach site ma			•		,	tures, etc.
		Ī			<u> </u>	<u> </u>
Hydrophytic Vegetation Present? Yes ⊠ No Hydric Soil Present? Yes ⊠ No		Is	the Sampled	l Area		
Wetland Hydrology Present? Yes ⊠ No	_	w	ithin a Wetlar	nd? Yes ⊠	No 🗌	
Remarks: Northeast property boundary.						
VEGETATION – Use scientific names of pla	ants.					
Tree Stratum (Plot size: 15ft radius)	Absolute % Cover		ant Indicator	Dominance Test wo		
1. <u>Salix lasiandra</u>			FACW	Number of Dominant That Are OBL, FACW		(A)
2. Picea sitchensis		yes	FAC	Total Number of Dom	inant	
3				Species Across All St		(B)
4				Percent of Dominant	Species	
Sapling/Shrub Stratum (Plot size: 15ft radius)	60	_ = Tota	l Cover	That Are OBL, FACW		(A/B)
1. Cornus stolonifera	<u>25</u>	yes	FACW	Prevalence Index wo	orksheet:	
2					: Multiply	
3				OBL species		
4				FACW species		
5				FAC species		
Herb Stratum (Plot size: 15ft radius)	<u>25</u>	_ = Tota	l Cover	FACU species		
1. Ranunculus repens	100	ves	FAC	UPL species Column Totals:		
2. Equisetum arvense				Column Totals.	(^)	(D)
3.		-		Prevalence Inde	ex = B/A =	
4				Hydrophytic Vegeta	tion Indicators:	
5				☐ Rapid Test for Hy	drophytic Vegetation	n
6				□ Dominance Test i	s >50%	
7				☐ Prevalence Index		
8				Morphological Ad	aptations¹ (Provide : rks or on a separate	
9				☐ Wetland Non-Vas	•	onoot)
10				☐ Problematic Hydro		(Explain)
11				¹Indicators of hydric s	. ,	` ' '
Woody Vine Stratum (Plot size: 15ft radius)	<u>100</u>	_ = Tota	l Cover	be present, unless dis		
1. Rubus armenicus	20	ves	FAC			
2.				Hydrophytic Vegetation		
	20	= Tota	l Cover		′es ⊠ No 🗆	
% Bare Ground in Herb Stratum <u>0</u>						
% Bare Ground in Herb Stratum <u>0</u> Remarks: Wetland BC						

0-3 10	olor (moist)	%	Colo	or (moist)	%	Tvpe ¹	Loc ²	Texture	<u>Remarks</u>
	YR 3/2			. (<u>.,,,,,,,</u>			
		100		-					
<u>3-18 10</u>)YR 4/1	80	<u>10Y</u>	R 4/6	20	<u>C</u>	<u>M</u>	<u>Sil</u>	-
		-							-
		-							
Type: C=Conce	entration, D=Dep	oletion, R	RM=Red	uced Matrix,	CS=Covere	d or Coat	ed Sand G	rains. ² Lo	cation: PL=Pore Lining, M=Matrix.
lydric Soil Indi	icators: (Applic	cable to	all LRR	s, unless oth	erwise not	ted.)		Indicato	ors for Problematic Hydric Soils ³ :
☐ Histosol (A1))			Sandy Redox	(S5)			☐ 2 cm	Muck (A10)
☐ Histic Epipedon (A2) ☐ Stripped Matrix (S6)								Parent Material (TF2)	
Black Histic				Loamy Mucky			t MLRA 1)		Shallow Dark Surface (TF12)
Hydrogen Su				Loamy Gleyed	-	2)		☐ Othe	er (Explain in Remarks)
•	elow Dark Surfac	e (A11)		Depleted Matr				31 11 1	
☐ Thick Dark S	, ,			Redox Dark S					ors of hydrophytic vegetation and
☐ Sandy Muck☐ Sandy Gleye				Depleted Dark Redox Depres		-7)			nd hydrology must be present, s disturbed or problematic.
Restrictive Lay	. ,			Redux Depres	SIONS (FO)			T	s disturbed of problematic.
_	er (ii present).								
	s):								D
	ndicators of hydr			•				Hydric Soil	Present? Yes ⊠ No □
DROLOGY									
•	logy Indicators								
<u>Primary Indicato</u>	ors (minimum of	one requi	ired; ch						ndary Indicators (2 or more required)
☐ Surface Wat	` '			☐ Water-St			xcept MLF	RA 🗆 W	ater-Stained Leaves (B9) (MLRA 1, 2
⊠ High Water ੋ					4A, and 4B	3)			4A, and 4B)
\boxtimes Saturation (A				☐ Salt Crus	st (B11)				
☐ Water Marks									rainage Patterns (B10)
	eposits (B2)				nvertebrate	. ,		□ D	ry-Season Water Table (C2)
				☐ Hydroger		. ,		□ D	• ,
☐ Sediment De☐ Drift Deposit	ts (B3)			Hydroger Oxidized	n Sulfide O Rhizosphe	dor (C1) eres along	J	D Sots (C3) G	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2)
☐ Drift Deposit☐ Algal Mat or	Crust (B4)			☐ Hydrogel ☐ Oxidized ☐ Presence	n Sulfide O Rhizosphe of Reduce	dor (C1) eres along ed Iron (C	4)	□ D □ S: ots (C3) □ G □ S:	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3)
☐ Drift Deposit☐ Algal Mat or☐ Iron Deposits	Crust (B4) s (B5)			Hydrogen Oxidized Presence Recent In	n Sulfide O Rhizosphe of Reduce on Reducti	dor (C1) eres along ed Iron (Ca don in Tille	4) d Soils (C6	D Sots (C3) G G G	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (CS eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5)
☐ Drift Deposit ☐ Algal Mat or ☐ Iron Deposits ☐ Surface Soil	Crust (B4) cs (B5) Cracks (B6)			Hydroger Oxidized Presence Recent Ir	n Sulfide Oo Rhizosphe e of Reduce on Reducti or Stressed	dor (C1) eres along ed Iron (Ca ion in Tille Plants (D	4) d Soils (C6	□ D □ S ots (C3) □ G □ S □ S □ S □ F C □ R	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
☐ Drift Deposit☐ Algal Mat or☐ Iron Deposit☐ Surface Soil☐ Inundation V	Crust (B4) ss (B5) Cracks (B6) /isible on Aerial I			Hydrogen Oxidized Presence Recent In	n Sulfide Oo Rhizosphe e of Reduce on Reducti or Stressed	dor (C1) eres along ed Iron (Ca ion in Tille Plants (D	4) d Soils (C6	□ D □ S ots (C3) □ G □ S □ S □ S □ F C □ R	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (CS eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5)
Drift Deposit Algal Mat or Iron Deposits Surface Soil Inundation V Sparsely Ve	Crust (B4) s (B5) Cracks (B6) /isible on Aerial I getated Concave			Hydroger Oxidized Presence Recent Ir	n Sulfide Oo Rhizosphe e of Reduce on Reducti or Stressed	dor (C1) eres along ed Iron (Ca ion in Tille Plants (D	4) d Soils (C6	□ D □ S ots (C3) □ G □ S □ S □ S □ F C □ R	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
☐ Drift Deposit ☐ Algal Mat or ☐ Iron Deposit ☐ Surface Soil ☐ Inundation V ☐ Sparsely Veg Field Observati	Crust (B4) cs (B5) Cracks (B6) /isible on Aerial I getated Concave ions:			Hydroger Oxidized Presence Recent Ir	n Sulfide Oo Rhizosphe e of Reduce on Reducti or Stressed	dor (C1) eres along ed Iron (Ca ion in Tille Plants (D	4) d Soils (C6	□ D □ S ots (C3) □ G □ S □ S □ S □ F C □ R	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
☐ Drift Deposit☐ Algal Mat or☐ Iron Deposits☐ Surface Soil☐ Inundation V☐ Sparsely Ve	Crust (B4) ss (B5) Cracks (B6) /isible on Aerial I	e Surface		Hydroger Oxidized Presence Recent Ir	n Sulfide O Rhizosphe e of Reduce on Reducti or Stressed xplain in Re	dor (C1) eres along ed Iron (C- ion in Tille I Plants (C- emarks)	4) d Soils (C6	□ D □ S ots (C3) □ G □ S □ S □ S □ F C □ R	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
☐ Drift Deposit ☐ Algal Mat or ☐ Iron Deposit ☐ Surface Soil ☐ Inundation V ☐ Sparsely Veg Field Observati	Crust (B4) (S (B5) Cracks (B6) /isible on Aerial I getated Concave ions:	e Surface	e (B8)	Hydrogei Oxidized Presence Recent II Stunted o	n Sulfide O Rhizosphe e of Reduce on Reducti or Stressed xplain in Re	dor (C1) eres along ed Iron (C- ion in Tille I Plants (C- emarks)	4) d Soils (C6	D S. S S S S S S S S	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
☐ Drift Deposit ☐ Algal Mat or ☐ Iron Deposits ☐ Surface Soil ☐ Inundation V ☐ Sparsely Verical Observati ☐ Surface Water P Water Table Presesturation Preses	Crust (B4) Is (B5) Cracks (B6) Visible on Aerial Ingetated Concave Itoria: Present? Present?	e Surface ∕es □ ∕es ⊠	(B8) No ⊠	Hydrogel Oxidized Presence Recent II Stunted of Other (E:	n Sulfide O Rhizosphe e of Reduce on Reducti or Stressed xplain in Re es):	dor (C1) eres along ed Iron (C- ion in Tille I Plants (D emarks)	4) d Soils (C6	D S. S S S S S S S S	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
☐ Drift Deposit☐ Algal Mat or☐ Iron Deposit☐ Surface Soil☐ Inundation V☐ Sparsely VerField Observati☐ Surface Water PWater Table Presetincludes capillate	Crust (B4) Is (B5) Cracks (B6) Visible on Aerial Ingetated Concave Itoria: Present? Present?	e Surface /es /es /es /es /es	No 🖂	Hydrogel Oxidized Presence Recent II Stunted of Other (Ex	n Sulfide On Rhizosphe e of Reduce on Reduction Stressed explain in Research ses):	dor (C1) eres along ed Iron (C- ion in Tille I Plants (C- emarks)	4) d Soils (C6 1) (LRR A	D S. S S S S S S S S	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
☐ Drift Deposit☐ Algal Mat or☐ Iron Deposit☐ Surface Soil☐ Inundation V☐ Sparsely VegField Observati☐ Surface Water PWater Table PreSaturation Prese(includes capillation)	Crust (B4) S (B5) Cracks (B6) /isible on Aerial I getated Concave ions: Present? esent? ent? ory fringe) ded Data (stream	e Surface /es □ /es ⊠ /es ⊠ n gauge,	No 🖂 No 🖂 No 🖂 no 🖂 monitor	Hydrogel Oxidized Presence Recent II Stunted of Other (E: Depth (inch Depth (inch Depth (inch	n Sulfide Or Rhizosphe e of Reduce on Reducti or Stressed xplain in Re es): 	dor (C1) eres along ed Iron (C- ion in Tille I Plants (C- emarks)	4) d Soils (C6 1) (LRR A	D S. S S S S S S S S	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
☐ Drift Deposit☐ Algal Mat or☐ Iron Deposit☐ Surface Soil☐ Inundation V☐ Sparsely VegField Observati☐ Surface Water PWater Table PreSaturation Prese(includes capillation)	Crust (B4) Is (B5) Cracks (B6) Visible on Aerial Ingetated Concave ions: Present? Pesent? Peresent?	e Surface /es □ /es ⊠ /es ⊠ n gauge,	No 🖂 No 🖂 No 🖂 no 🖂 monitor	Hydrogel Oxidized Presence Recent II Stunted of Other (E: Depth (inch Depth (inch Depth (inch	n Sulfide Or Rhizosphe e of Reduce on Reducti or Stressed xplain in Re es): 	dor (C1) eres along ed Iron (C- ion in Tille I Plants (C- emarks)	4) d Soils (C6 1) (LRR A	D S. S S S S S S S S	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
☐ Drift Deposit☐ Algal Mat or☐ Iron Deposit☐ Surface Soil☐ Inundation V☐ Sparsely VegField Observati☐ Surface Water PWater Table PreSaturation Prese(includes capillation)	Crust (B4) S (B5) Cracks (B6) /isible on Aerial I getated Concave ions: Present? esent? ent? ory fringe) ded Data (stream	e Surface /es □ /es ⊠ /es ⊠ n gauge,	No 🖂 No 🖂 No 🖂 no 🖂 monitor	Hydrogel Oxidized Presence Recent II Stunted of Other (E: Depth (inch Depth (inch Depth (inch	n Sulfide Or Rhizosphe e of Reduce on Reducti or Stressed xplain in Re es): 	dor (C1) eres along ed Iron (C- ion in Tille I Plants (C- emarks)	4) d Soils (C6 1) (LRR A	D S. S S S S S S S S	ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)

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

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

Project/Site: Parcel 0519314030	c	ity/Cour	nty: City of Orti	ng	Sampling Date: 2	4 OCT 2016
Applicant/Owner:			Sampling Point: SP-5 XX			
Investigator(s): <u>Habitat Technologies</u>			_ Section, Tov	vnship, Range: <u>S31, T1</u>	9, R5E	
Landform (hillslope, terrace, etc.):	ı	Local re	lief (concave, o	convex, none):	Slop	oe (%):
Subregion (LRR): A						
Soil Map Unit Name: <u>Aquic xerofluvents</u>				-		
Are climatic / hydrologic conditions on the site typical for thi						
	-		•	mal Circumstances" pre		۵ 🗆
Are Vegetation, Soil, or Hydrology sig				•		о 🗆
Are Vegetation, Soil, or Hydrology nate SUMMARY OF FINDINGS - Attach site map			•	d, explain any answers i		atures etc
			ng point io		, important rot	
Hydrophytic Vegetation Present? Yes No		Is	s the Sampled	l Area		
Hydric Soil Present? Yes ☐ No ☑ Wetland Hydrology Present? Yes ☐ No ☑	_	W	vithin a Wetlar	nd? Yes □	No ⊠	
Remarks: Eastern portion of parcel	7					
remarks. Eastern person of pareer						
VEGETATION – Use scientific names of plan	its.					
	Absolute		ant Indicator	Dominance Test wo	rksheet:	
Tree Stratum (Plot size: 15ft radius) 1			es? Status	Number of Dominant That Are OBL, FACW		(A)
2		· ——		Total Number of Dom	inant	
3				Species Across All St	rata: <u>4</u>	(B)
4				Percent of Dominant	Species	
Sapling/Shrub Stratum (Plot size: 15ft radius)	0	= Tota	al Cover	That Are OBL, FACW		(A/B)
1. Cytisus scoparius	60	ves	UPL	Prevalence Index we	orksheet:	
2.				Total % Cover of	: Multip	ly by:
3.				OBL species		
4.				FACW species	x 2 =	
5				FAC species	x 3 =	
	25			FACU species	x 4 =	
Herb Stratum (Plot size: 15ft radius)				UPL species	x 5 =	
1. Plantago major			<u>FACU</u>	Column Totals:	(A)	(B)
2. Agrostis tenuis		-		Provolence Inde	ex = B/A =	
3				Hydrophytic Vegeta		
4				☐ Rapid Test for Hy		n
5				☐ Dominance Test i		,,,,
6 7				☐ Prevalence Index		
8.				☐ Morphological Ad		
9				☐ Wetland Non-Vas	•	3 011001)
10				☐ Problematic Hydr		(Explain)
11				¹Indicators of hydric s	. ,	` ' '
Woody Vine Stratum (Plot size: 15ft radius)	90	= Tota	al Cover	be present, unless dis		
1. Rubus armeniacus	35	yes	FAC			
2				Hydrophytic Vegetation		
	35	= Tota	al Cover		′es □ No ⊠	

Profile Description: (Descri	be to the dep	th needed to document the indicator or o	confirm th	ne absence of indicators.)
Depth <u>Matri</u>		Redox Features		
(inches) Color (moist)	%	Color (moist) % Type ¹ L	.oc² T	<u>Fexture</u> <u>Remarks</u>
<u>0-18</u> <u>10YR 3/2</u>	100		<u>G</u>	Mixed fill
				<u></u>
				
				
		Reduced Matrix, CS=Covered or Coated S	Sand Grain	
	olicable to all	LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Redox (S5)		2 cm Muck (A10)
Histic Epipedon (A2)		Stripped Matrix (S6)	54.4	Red Parent Material (TF2)
Black Histic (A3)		Loamy Mucky Mineral (F1) (except ML	-RA 1)	☐ Very Shallow Dark Surface (TF12)
☐ Hydrogen Sulfide (A4)☐ Depleted Below Dark Sur	iaco (Δ11)	□ Loamy Gleyed Matrix (F2)□ Depleted Matrix (F3)		Other (Explain in Remarks)
☐ Thick Dark Surface (A12)		Redox Dark Surface (F6)		³ Indicators of hydrophytic vegetation and
☐ Sandy Mucky Mineral (S1		Depleted Dark Surface (F7)		wetland hydrology must be present,
☐ Sandy Gleyed Matrix (S4)		Redox Depressions (F8)		unless disturbed or problematic.
Restrictive Layer (if present				·
Type:				
Depth (inches):				Hydric Soil Present? Yes □ No ⊠
/DROLOGY				
Wetland Hydrology Indicato				
Primary Indicators (minimum	of one required			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 (
Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
☐ Iron Deposits (B5)		Recent Iron Reduction in Tilled Sc	, ,	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) (I	LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aeri				☐ Frost-Heave Hummocks (D7)
Sparsely Vegetated Conc	ave Surface (E	38)	ı	
Field Observations:	· -	5		
Surface Water Present?		Depth (inches):		
Water Table Present?		Depth (inches):		
Saturation Present? (includes capillary fringe)		Depth (inches):		d Hydrology Present? Yes ☐ No ⊠
Describe Recorded Data (stre	am gauge, mo	onitoring well, aerial photos, previous inspec	ctions), if a	available:
·				
Remarks: Record rainfall in O	ctober 2016	no field indicators of wetland hydrology patt	erns prese	ent
Remarks: Record rainfall in O	ctober 2016. ı	no field indicators of wetland hydrology patt	erns prese	ent.
Remarks: Record rainfall in O	ctober 2016. ı	no field indicators of wetland hydrology patt	erns prese	ent.
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