CITY OF ORTING

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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
Consulting Wetland Biologist

JC Hungerford, PE
Consulting Civil Engineer

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-foot-wide 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.

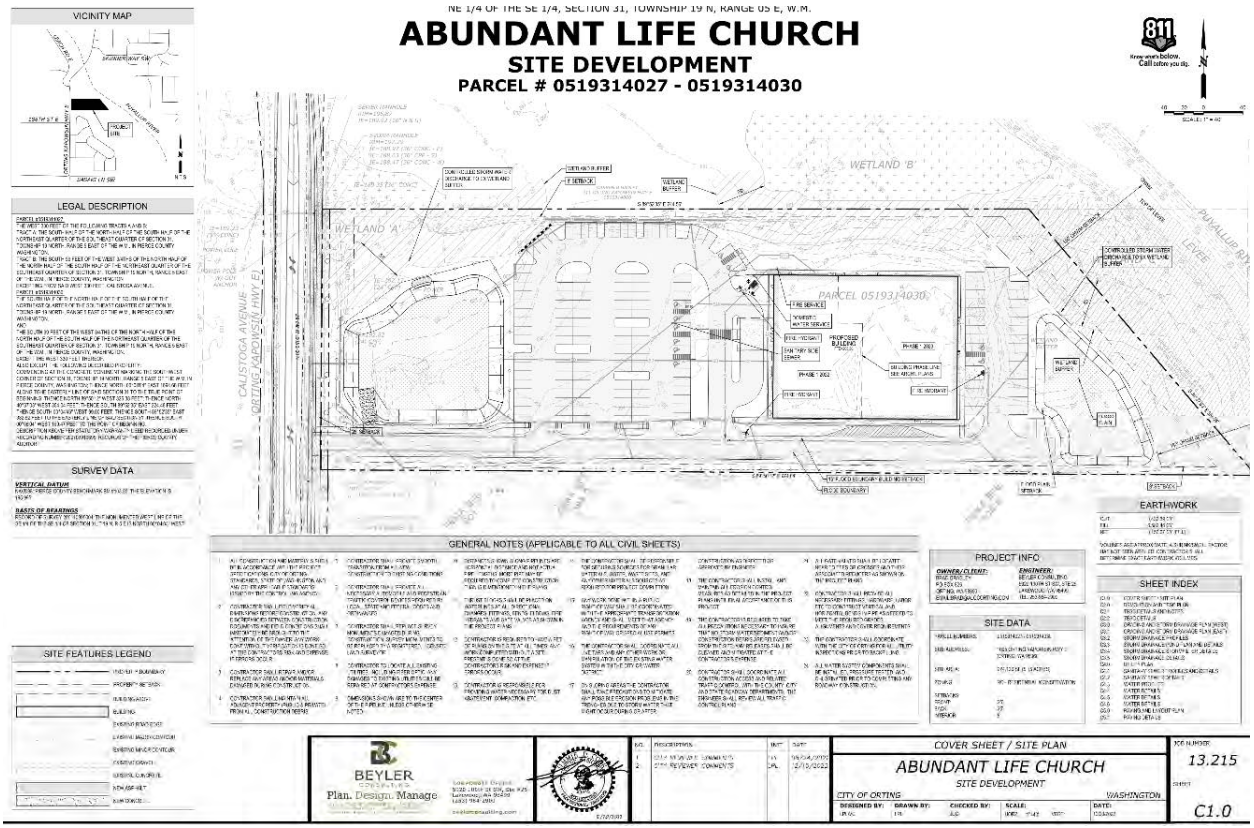
Public Comment Periods: A combined Notice of Application and a SEPA Determination of Nonsignificance was issued on September 8, 2023, with a comment period ending on September 22, 2023, at 5:00 pm.

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).

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 not 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 not be materially detrimental to the public welfare, would not be injurious to the property or improvements within the vicinity, and would not 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

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 not 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 (USFWS)	ORTING CATEGORY	ORTING RATED BUFFER WIDTH	WDOE CATEGORY	WDOE RATED 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
B	**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 aquatic 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 11-3-2 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

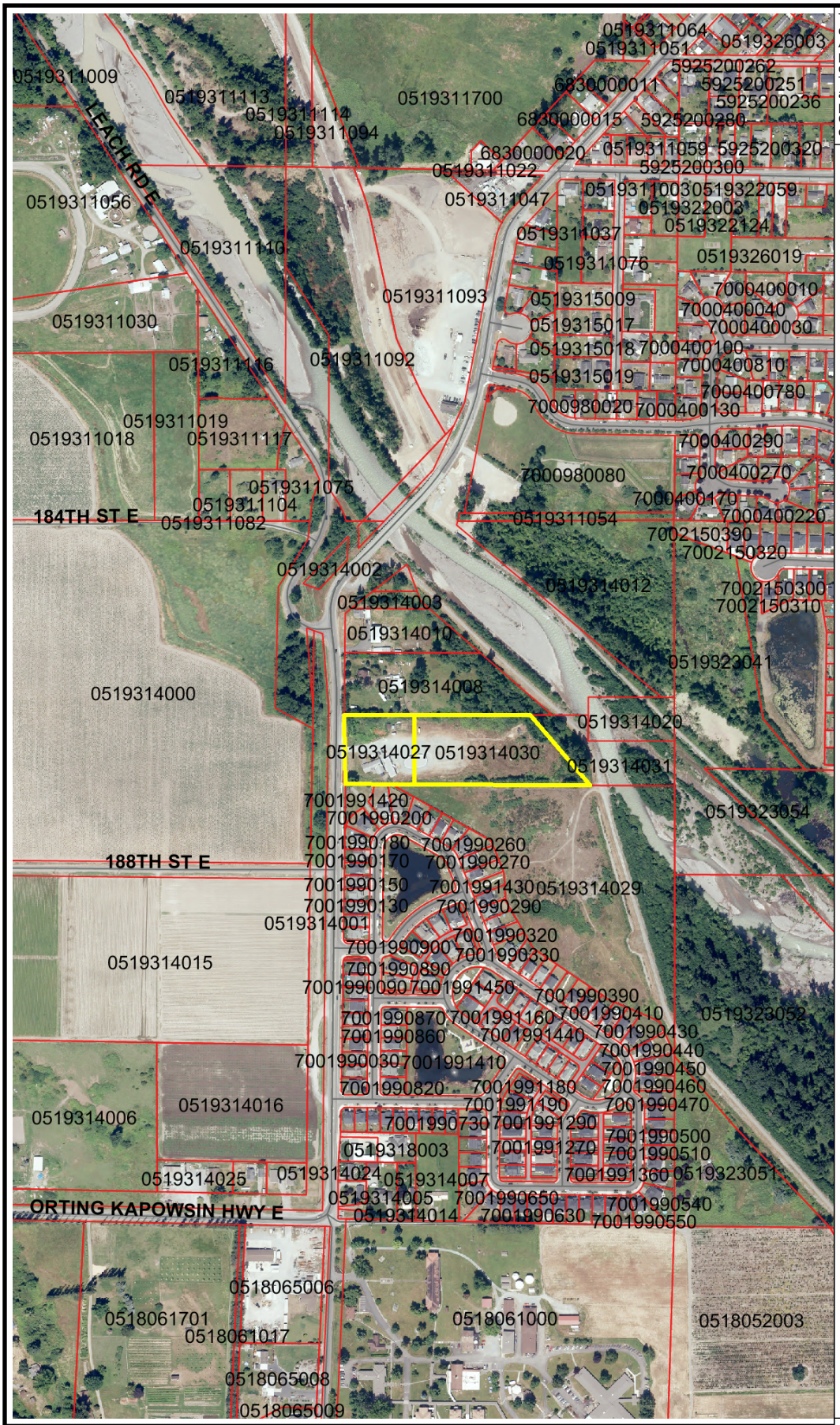
This document has been completed by Habitat Technologies for use by Abundant Life Church. Prior to extensive site planning the defined critical habitats should be reviewed and verified by Pierce County Planning and Land Services personnel and potentially other resource and permitting agencies. Habitat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



The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The orthophotos and other data may not align. Pierce County and Habitat Technologies assume no liability for variations ascertained by actual survey. All data is expressly provided AS IS and WITH ALL FAULTS. Pierce County and Habitat Technologies make no warranty of fitness for a particular purpose.

Map Legend

- **Highlighted Tax Parcels**
- **Tax Parcels**
- **Roads**
- **County - 2014 - Ortho**

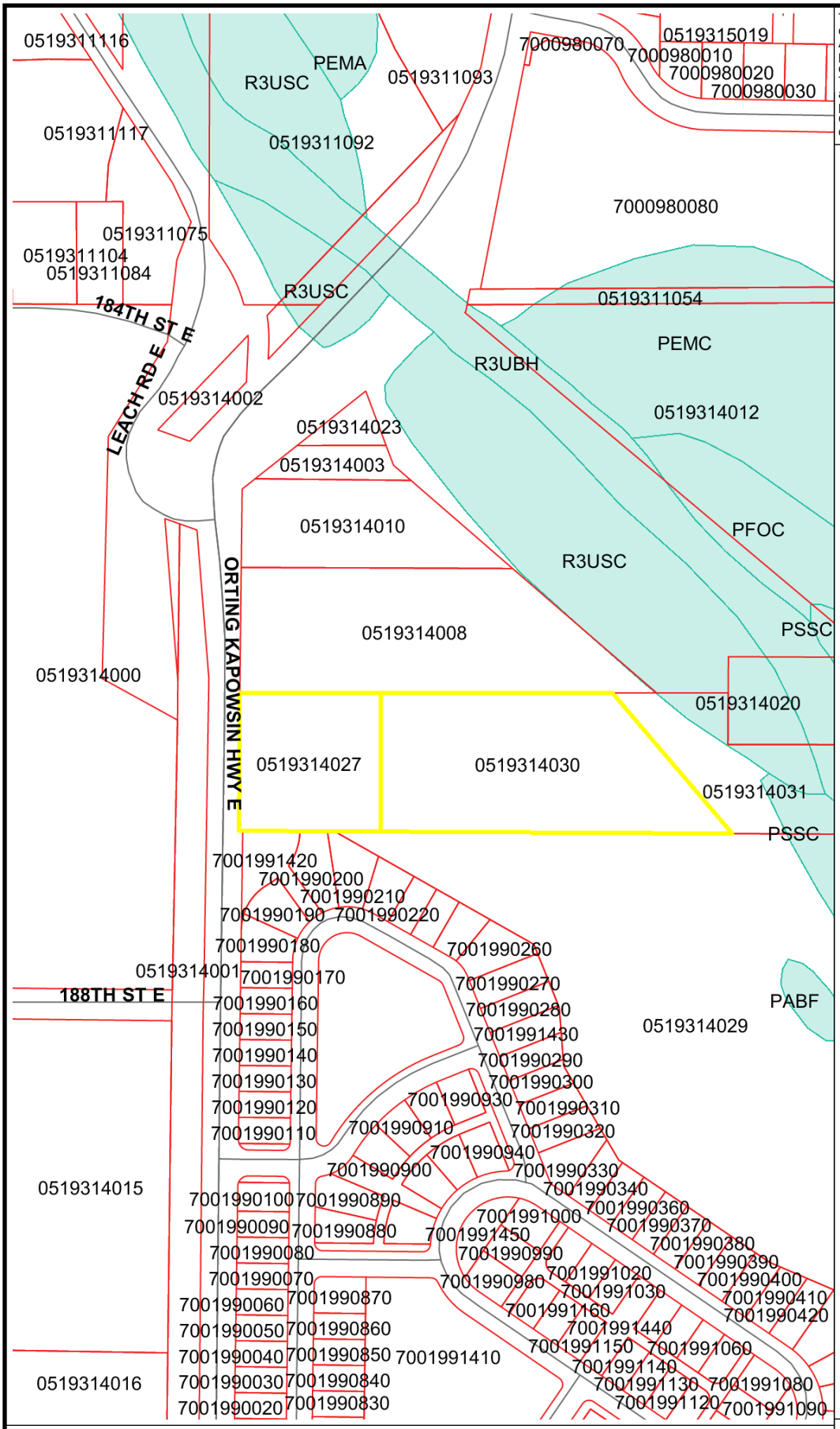
Figure 1 Site Vicinity

0 300 600 ft.

N

10/6/15 1:42 PM

Habitat Technologies



The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The orthophotos and other data may not align. Pierce County and Habitat Technologies assume no liability for variations ascertained by actual survey. All data is expressly provided AS IS and WITH ALL FAULTS. Pierce County and Habitat Technologies make no warranty of fitness for a particular purpose.

Map Legend

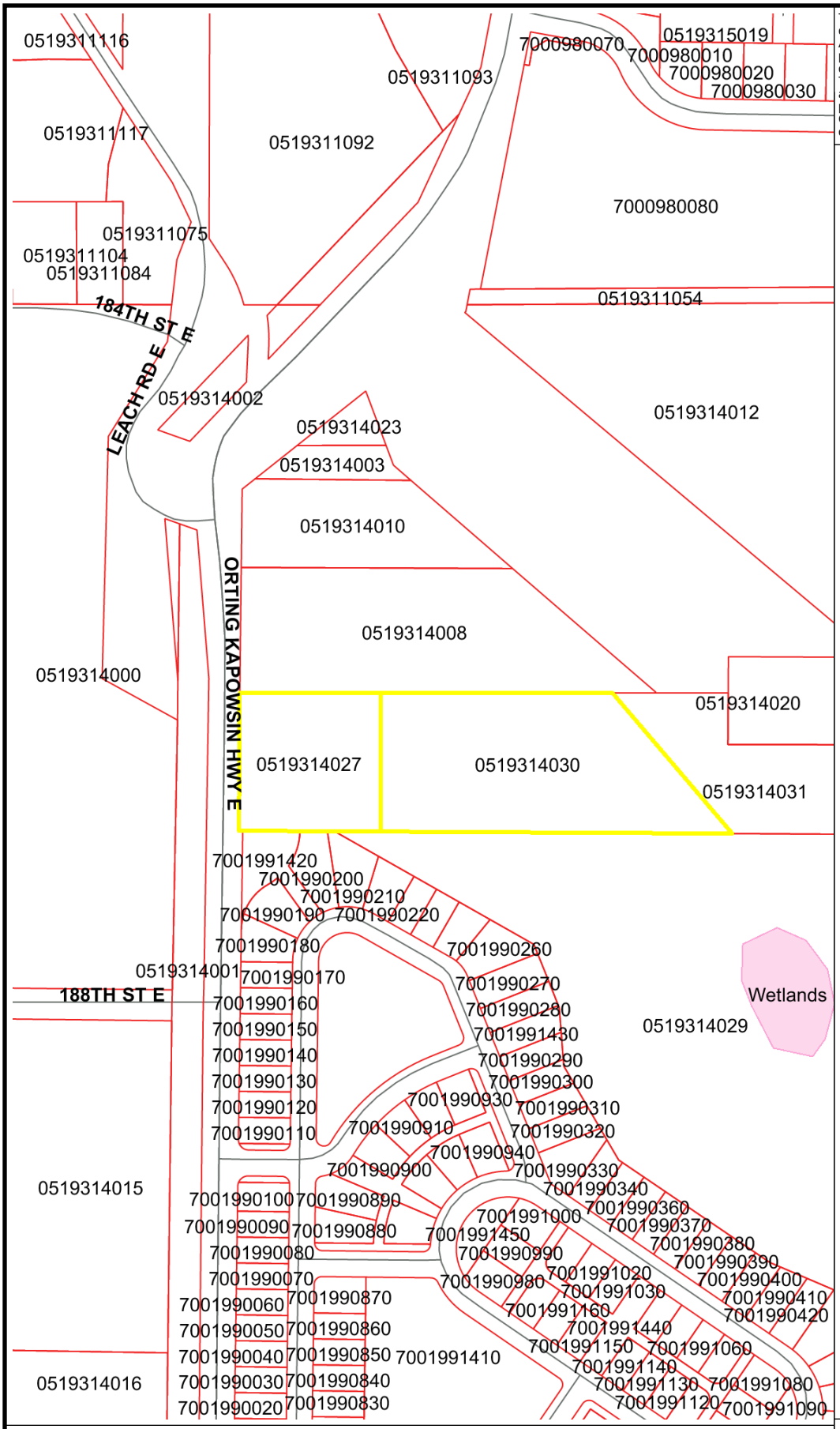
- **Highlighted Tax Parcels**
- **Tax Parcels**
- **Roads**
- **National Wetlands Inventory**

Figure 2 NWI Mapping

0 150 300 ft.

10/6/15 1:44 PM

Habitat Technologies



The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The orthophotos and other data may not align. Pierce County and Habitat Technologies assume no liability for variations ascertained by actual survey. All data is expressly provided AS IS and WITH ALL FAULTS. Pierce County and Habitat Technologies make no warranty of fitness for a particular purpose.

Map Legend

- **Highlighted Tax Parcels**
- **Tax Parcels**
- **Roads**
- **Priority Habitat/Species**

Figure 3 PHS Mapping

0 150 300 ft.

N

10/6/15 1:47 PM

Habitat Technologies

Figure 4 WDFW Mapping

October 6, 2015

1:9,028

0 0.075 0.15 0.3 mi

0 0.1 0.2 0.4 km

Water Resource Inventory Area (WRIA)

Township

Section

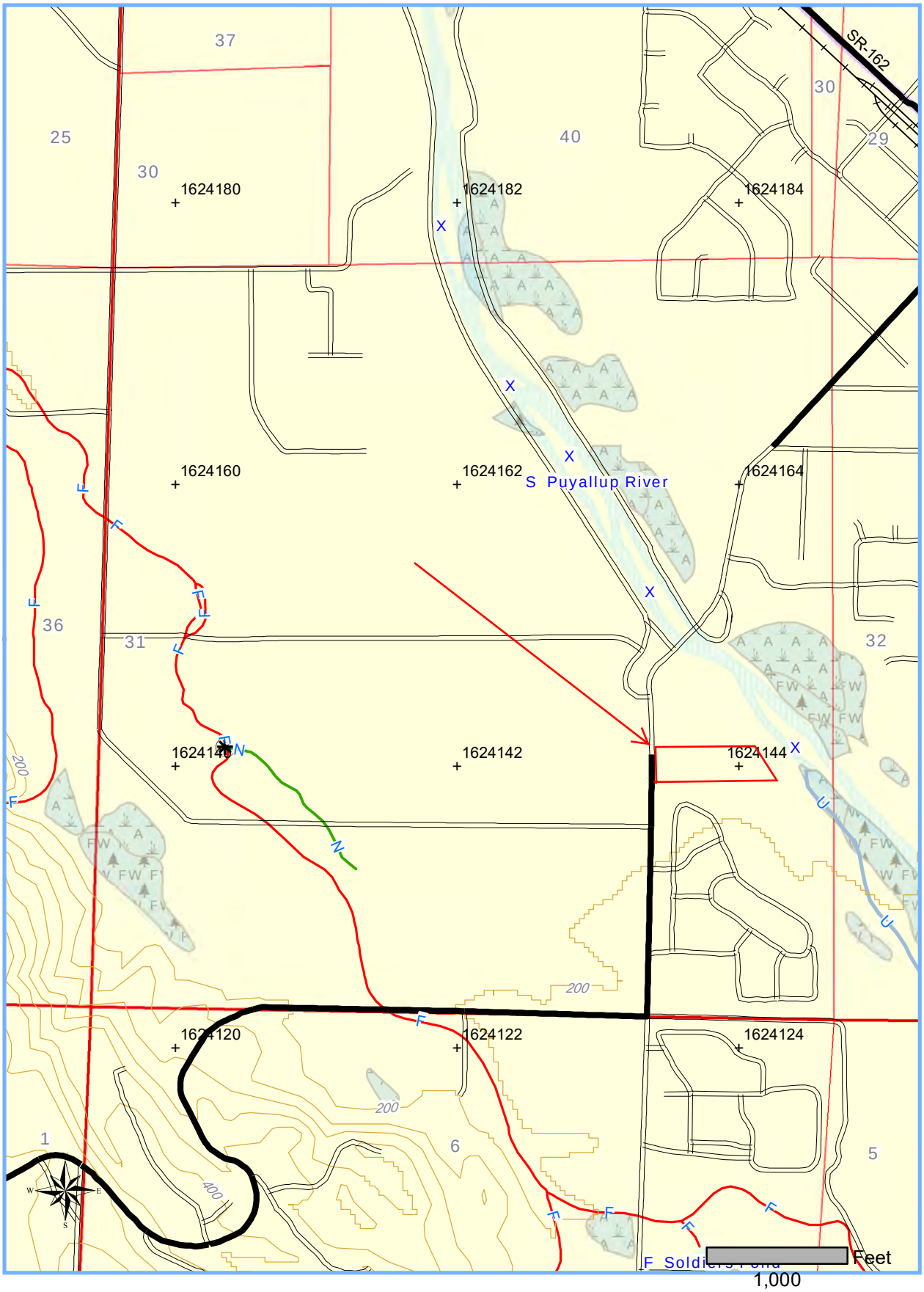
All SalmonScape Species

USGS/NHD
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
WDFW

FOREST PRACTICE WATER TYPE MAP

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

Application #: _____



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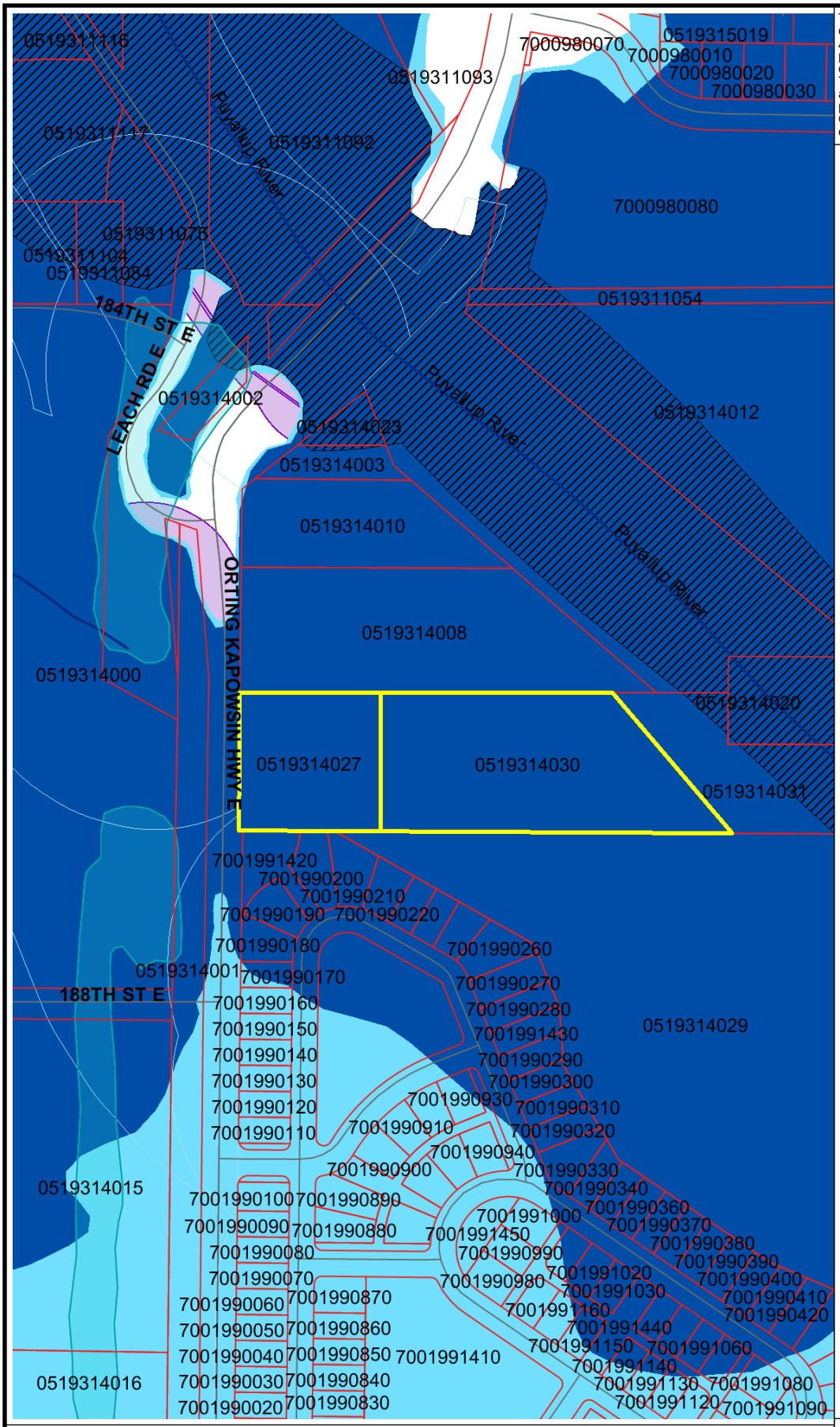
NAD 83
Contour Interval: 40 Feet



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Map Legend

- Highlighted Tax Parcels
- Tax Parcels
- CWI Wetlands Delineation
- Hydro - Centerlines
- Roads
- Possible Wetlands
- CWI Wetlands
- County Floodways
- County Floodplains
- 1% Annual Chance Flood
- VE - Coastal High Hazard Areas
- X - 0.2% Annual Chance Flood
- Possible F+W Habitat Areas

Figure 6 Pierce County Mapping

0 150 300 ft.

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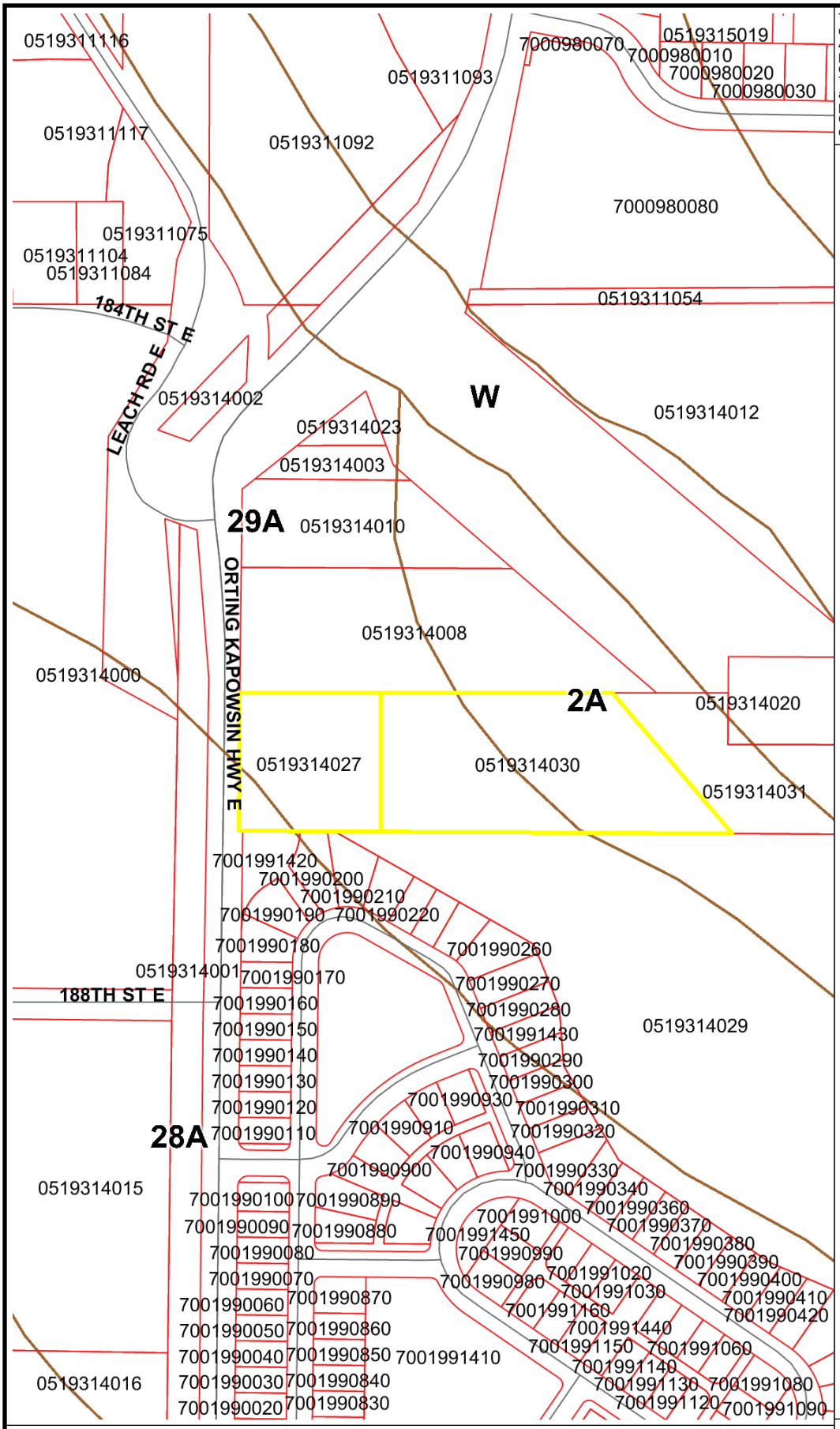
Habitat Technologies



The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The orthophotos and other data may not align. Pierce County and Habitat Technologies assume no liability for variations ascertained by actual survey. All data is expressly provided AS IS and WITH ALL FAULTS. Pierce County and Habitat Technologies make no warranty of fitness for a particular purpose.

Map Legend

- Highlighted Tax Parcels
- Tax Parcels
- Roads
- Soils

Figure 7 Soils Mapping

0 150 300 ft.

10/6/15 1:52 PM

Habitat Technologies

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/County: Orting/Pierce Sampling Date: 23 SEPT 2015

Applicant/Owner: _____ State: Washington Sampling Point: SP-1

Investigator(s): Habitat Technologies Section, Township, Range: S31, T19, R5E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): A Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Philchuck fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 15ft radius)			
1. Phalaris arundinacea	100	yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 15ft radius)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks:

SOIL

Sampling Point: SP-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/3	100					Ls	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:_____

Depth (inches):_____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ 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 Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

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

Project/Site: Parcel 0519314027 City/County: Orting/Pierce Sampling Date: 23 SEPT 2015

Applicant/Owner: _____ State: Washington Sampling Point: SP-2

Investigator(s): Habitat Technologies Section, Township, Range: S31, T19, R5E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): A Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Philchuck fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1. Cornus stolonifera	40	yes	FACW
2.			
3.			
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: 15ft radius)			
1. Phalaris arundinacea	60	yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: 15ft radius)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: Red osier dogwood in ditch.

SOIL

Sampling Point: SP-2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/3	100					Ls	
8-18	10YR 3/3	100					Gsl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:_____

Depth (inches):_____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ 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 Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

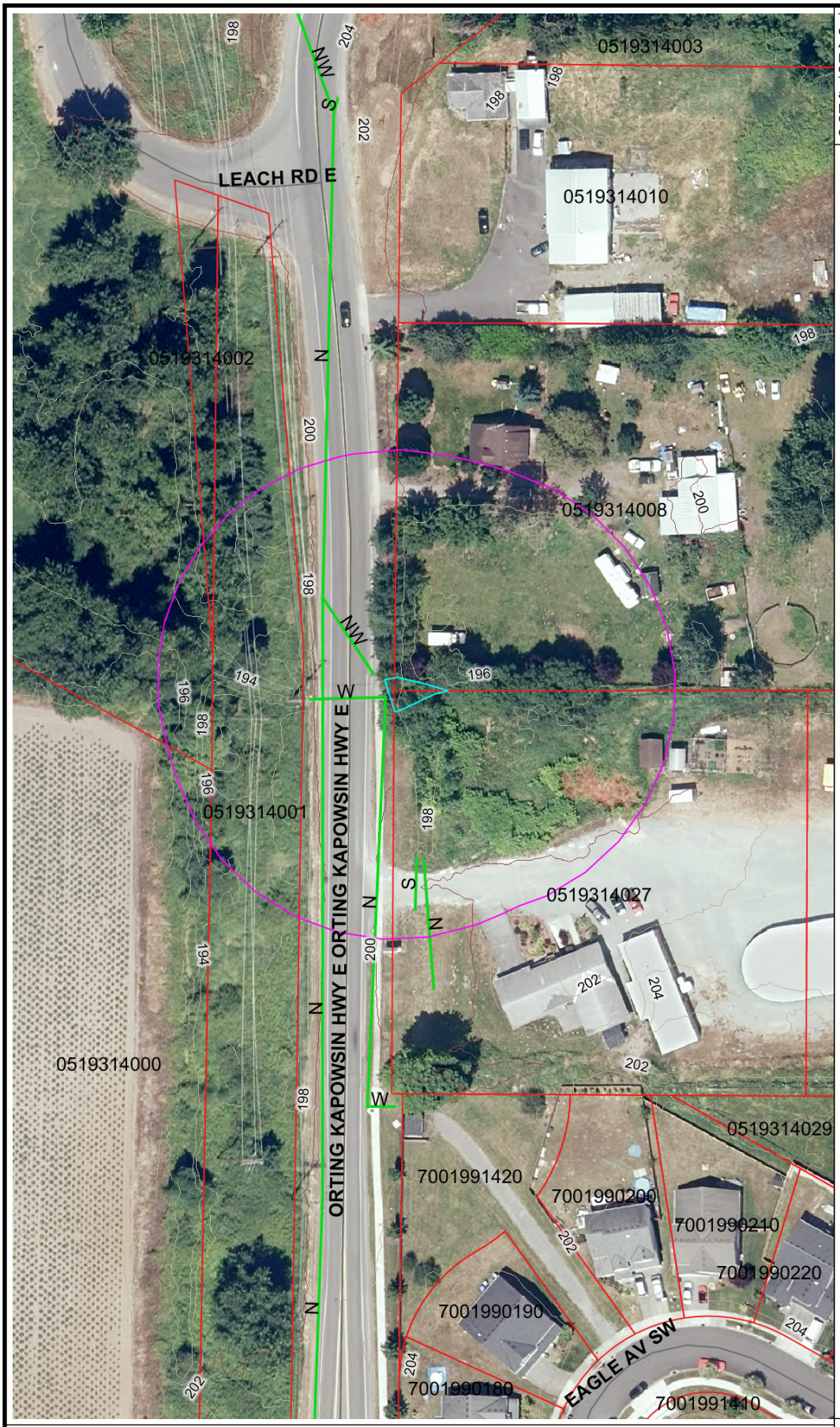
Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

APPENDIX B – WETLAND RATING FORM



The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The orthophotos and other data may not align. Pierce County and Habitat Technologies assume no liability for variations ascertained by actual survey. All data is expressly provided AS IS and WITH ALL FAULTS. Pierce County and Habitat Technologies make no warranty of fitness for a particular purpose.

Map Legend

- Highlighted Tax Parcels
- Tax Parcels
- Drainage - Main Lines
- Roads
- Contours - 2011
  - 10' Contour Line
  - 2' Contour Line
- County - 2014 - Ortho

Figure WA1

0 50 100 ft.

10/7/15 12:44 PM

Habitat Technologies

Wetland name or number A

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 visit: 23 SEPT 2015

Rated by Habitat Technologies Trained by Ecology? Yes x No___ Date of training 2006

SEC: 31 TWNSHP: 19 RNGE: 5E Is S/T/R in Appendix D? Yes___ No x

Map of wetland unit: Figure W1 Estimated size 3,000 sqft

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I___ II___ III x IV___

Category I = Score >=70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for Water Quality Functions	14
Score for Hydrologic Functions	16
Score for Habitat Functions	12
TOTAL score for Functions	42

Category based on SPECIAL CHARACTERISTICS of wetland

I___ II___ Does not Apply x

Final Category (choose the "highest" category from above) 3

Summary of basic information about the wetland unit

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		**Depressional**	x
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	

Wetland name or number A

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.		x
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).		x
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.

Wetland name or number A

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)**

4. Does the entire wetland unit **meet all** of the following criteria?

____The wetland is on a slope (*slope can be very gradual*),

____The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

____The water leaves the wetland **without being impounded**?

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**

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 wetland	Treat as ESTUARINE under 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.

Wetland name or number A

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 potential to improve water quality?**	***(see p.38)***
D	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 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	**Figure ___** 2
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic *(use NRCS definitions)* YES points = 4 NO points = 0	0
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation > = 95% of area points = 5 Wetland has persistent, ungrazed, vegetation > = 1/2 of area points = 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	**Figure ___** 3
D	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 > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0 Map of Hydroperiods	**Figure ___** 2
D	**Total for D 1** *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**	***(see p. 44)*** multiplier 2
D	**TOTAL - Water Quality Functions** Multiply the score from D1 by D2 ***Add score to table on p. 1***	14

Wetland name or number A

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 potential 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) points = 4 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 points = 1 (*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
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**	***(see p. 49)*** multiplier 2
D	**TOTAL - Hydrologic Functions** Multiply the score from D 3 by D 4 ***Add score to table on p. 1***	16

Wetland name or number A

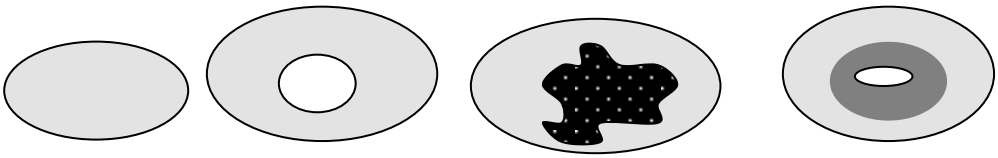
These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat	**Points** (only 1 score per box)
H 1. Does the wetland unit have the <u>potential</u> to provide habitat for many species?	
H 1.1 <u>Vegetation structure</u> ***(see p. 72)***	**Figure ___**
Check the types of vegetation classes present (as defined by Cowardin)- Size threshold for each class is ¼ acre or more than 10% of the area if unit is smaller than 2.5 acres. ____Aquatic bed ____Emergent plants ____Scrub/shrub (areas where shrubs have >30% cover) _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 (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon *Add the number of vegetation structures that qualify. If you have:* 4 structures or more points = 4 3 structures points = 2 2 structures points = 1 1 structure points = 0 Map of Cowardin vegetation classes	1
H 1.2. <u>Hydroperiods</u> ***(see p. 73)***	**Figure ___**
Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods) ____Permanently flooded or inundated — 4 or more types present points = 3 _X_Seasonally flooded or inundated — 3 types present points = 2 ____Occasionally flooded or inundated — 2 types present point = 1 _X_Saturated only — 1 type present points = 0 ____ Permanently flowing stream or river in, or adjacent to, the wetland _X_ Seasonally flowing stream in, or adjacent to, the wetland ____ ***Lake-fringe wetland* = 2 points** ____***Freshwater tidal wetland* = 2 points** Map of hydroperiods	2
H 1.3. <u>Richness of Plant Species</u> ***(see p. 75)*** Count the number of plant species in the wetland that cover at least 10 ft^2. (*different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* *Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle* If you counted: > 19 species points = 2 *List species below if you want to:* 5 - 19 species points = 1 < 5 species points = 0	1

Total for page 4

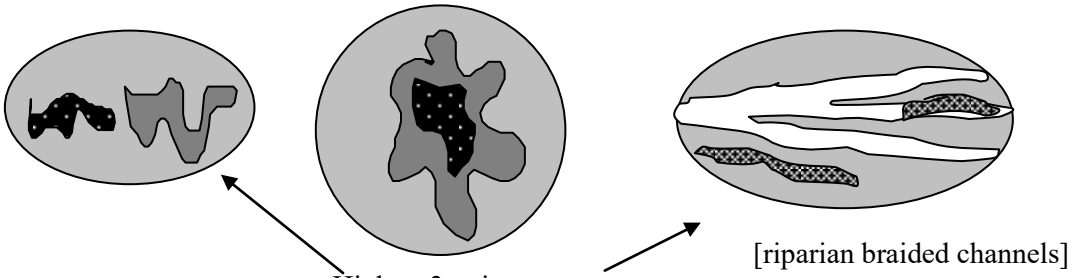
Wetland name or number A

H 1.4. Interspersion of habitats ***(see p. 76)*** **Figure ___**

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.



None = 0 points Low = 1 point Moderate = 2 points



[riparian braided channels]

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 (>30degree 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

Wetland name or number A

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 Buffers ***(see p. 80)*** *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% 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	**Figure ___** 1
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 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**	1

Total for page 2

Wetland name or number A

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)*** Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ____**Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ____**Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ____**Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). X **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ____**Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). ____**Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ____**Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____**Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 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) long. 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

Wetland name or number A

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. points = 5 The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5 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. points = 0	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 B

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 0519314008 Date of site visit: 23 SEPT 2015

Rated by Habitat Technologies Trained by Ecology? Yes x No___ Date of training 2006

SEC: 31 TWNSHP: 19 RNGE: 5E Is S/T/R in Appendix D? Yes___ No x

Map of wetland unit: Figure WB1 **Estimated size** 0.5 Acre

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I___ II___ III x IV___

Category I = Score >=70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for Water Quality Functions	16
Score for Hydrologic Functions	18
Score for Habitat Functions	17
TOTAL score for Functions	51

Category based on SPECIAL CHARACTERISTICS of wetland

I___ II___ Does not Apply x

Final Category (choose the "highest" category from above) 3

Summary of basic information about the wetland unit

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		**Depressional**	x
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	

Wetland name or number B

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.		x
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).		x
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

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 B

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)**

4. Does the entire wetland unit **meet all** of the following criteria?

____The wetland is on a slope (*slope can be very gradual*),

____The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

____The water leaves the wetland **without being impounded**?

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**

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 wetland	Treat as ESTUARINE under 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.

Wetland name or number B

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 potential to improve water quality?**	***(see p.38)***
D	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 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	**Figure ___** 3
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic *(use NRCS definitions)* YES points = 4 NO points = 0	0
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation > = 95% of area points = 5 Wetland has persistent, ungrazed, vegetation > = 1/2 of area points = 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	**Figure ___** 3
D	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 > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0 Map of Hydroperiods	**Figure ___** 2
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_____ **YES** multiplier is **2** **NO** multiplier is **1**	***(see p. 44)*** multiplier 2
D	**TOTAL - Water Quality Functions** Multiply the score from D1 by D2 ***Add score to table on p. 1***	16

Wetland name or number B

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 potential 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) points = 4 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 points = 1 (*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	**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 — 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 — Other_____ **YES** multiplier is **2** **NO** multiplier is **1**	***(see p. 49)*** multiplier 2
D	**TOTAL - Hydrologic Functions** Multiply the score from D 3 by D 4 ***Add score to table on p. 1***	18

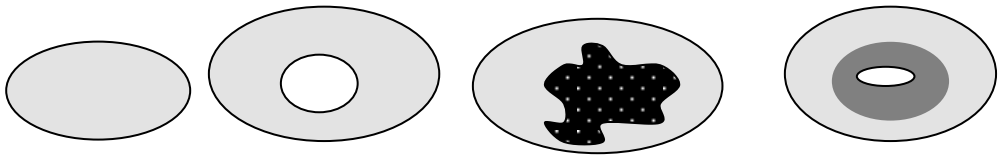
Wetland name or number B

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat	**Points** (only 1 score per box)
H 1. Does the wetland unit have the <u>potential</u> to provide habitat for many species?	
H 1.1 <u>Vegetation structure</u> ***(see p. 72)***	**Figure ___**
Check the types of vegetation classes present (as defined by Cowardin)- Size threshold for each class is ¼ acre or more than 10% of the area if unit is smaller than 2.5 acres. ____Aquatic bed _x_Emergent plants ____Scrub/shrub (areas where shrubs have >30% cover) _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 (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon *Add the number of vegetation structures that qualify. If you have:* 4 structures or more points = 4 3 structures points = 2 2 structures points = 1 1 structure points = 0 Map of Cowardin vegetation classes	2
H 1.2. <u>Hydroperiods</u> ***(see p. 73)***	**Figure ___**
Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods) ____Permanently flooded or inundated 4 or more types present points = 3 _x_Seasonally flooded or inundated 3 types present points = 2 ____Occasionally flooded or inundated 2 types present point = 1 _x_Saturated only 1 type present points = 0 ____ Permanently flowing stream or river in, or adjacent to, the wetland _x_ Seasonally flowing stream in, or adjacent to, the wetland ____ ***Lake-fringe wetland* = 2 points** ____***Freshwater tidal wetland* = 2 points** Map of hydroperiods	2
H 1.3. <u>Richness of Plant Species</u> ***(see p. 75)*** Count the number of plant species in the wetland that cover at least 10 ft^2. (*different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* *Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle* If you counted: > 19 species points = 2 *List species below if you want to:* 5 - 19 species points = 1 < 5 species points = 0	2

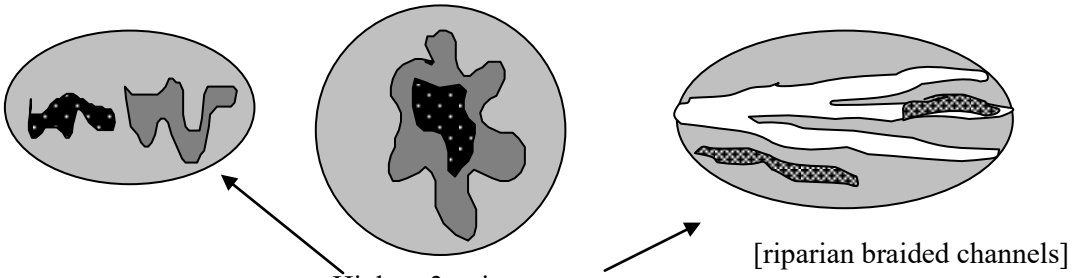
Total for page 6

H 1.4. Interspersion of habitats ***(see p. 76)*** — **Figure ___**

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.



None = 0 points Low = 1 point Moderate = 2 points



High = 3 points [riparian braided channels]

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 (>30degree 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
Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5

10

Comments

Wetland name or number B

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 Buffers ***(see p. 80)*** *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% 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	**Figure ___** 2
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 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**	1

Total for page 3

Wetland name or number B

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)*** Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ____**Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ____**Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ____**Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). X **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ____**Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). ____**Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ____ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ____**Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____**Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 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) long. 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

Wetland name or number B

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. points = 5 The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5 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. points = 0	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/County: Orting/Pierce Sampling Date: 23 SEPT 2015

Applicant/Owner: _____ State: Washington Sampling Point: SP-1

Investigator(s): Habitat Technologies Section, Township, Range: S31, T19, R5E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): A Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Philchuck fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 15ft radius)			
1. Phalaris arundinacea	100	yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 15ft radius)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks:

SOIL

Sampling Point: SP-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/3	100					Ls	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:_____

Depth (inches):_____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ 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 Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

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

Project/Site: Parcel 0519314027 City/County: City of Orting Sampling Date: 24 OCT 2016

Applicant/Owner: _____ State: Washington Sampling Point: SP-1 XX

Investigator(s): Habitat Technologies Section, Township, Range: S31, T19, R5E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): A Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Philchuck fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Upland area modified by prior land use actions.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 15ft radius)			
1. Phalaris arundinacea	100	yes	FACW
2. Polygonum cuspidatum	20	yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 15ft radius)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks:

SOIL

Sampling Point: SP-1 XX

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/3	100					Ls	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:_____

Depth (inches):_____

Hydric Soil Present? Yes ☐ No ☒

Remarks: Area does not exhibit field indicators of hydric soil. soil generally loamy sand fill

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ 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 Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Area does not exhibit field indicators of wetland hydrology patterns

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

Project/Site: Parcel 0519314027 City/County: Orting/Pierce Sampling Date: 23 SEPT 2015

Applicant/Owner: _____ State: Washington Sampling Point: SP-2

Investigator(s): Habitat Technologies Section, Township, Range: S31, T19, R5E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): A Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Philchuck fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1. Cornus stolonifera	40	yes	FACW
2.			
3.			
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: 15ft radius)			
1. Phalaris arundinacea	60	yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: 15ft radius)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: Red osier dogwood in ditch.

SOIL

Sampling Point: SP-2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/3	100					Ls	
8-18	10YR 3/3	100					Gsl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:_____

Depth (inches):_____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ 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 Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

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

Project/Site: Parcel 0519314027 City/County: City of Orting Sampling Date: 24 OCT 2016

Applicant/Owner: _____ State: Washington Sampling Point: SP-2 XX

Investigator(s): Habitat Technologies Section, Township, Range: S31, T19, R5E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): A Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Philchuck fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Adjacent to Wetland A. Sample plot location appears to have slid to the north and now include youing red alder trees that were just outside the sample plot in 2015.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	25	yes	FAC
2.			
3.			
4.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1. Cornus stolonifera	40	yes	FACW
2.			
3.			
4.			
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 15ft radius)			
1. Phalaris arundinacea	60	yes	FACW
2. Polygonum cuspidatum	45	yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 15ft radius)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Red osier dogwood in northern ditch line. Young red alder added to sample plot also along northern ditch line.

SOIL

Sampling Point: SP-2 XX

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/3	100					Ls	
8-18	10YR 3/3	100					Gsl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:_____

Depth (inches):_____

Hydric Soil Present? Yes ☐ No ☒

Remarks: soil appears to be fill from prior site grading and management. no field indicators of hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ 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 Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): 17

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Record October rainfall. No field indicators of wetland hydrology patterns. appears to driain moderately well.

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

Project/Site: Parcel 0519314027 City/County: City of Orting Sampling Date: 24 OCT 2016

Applicant/Owner: _____ State: Washington Sampling Point: SP-3 XX

Investigator(s): Habitat Technologies Section, Township, Range: S31, T19, R5E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): A Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Philchuck fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks: Wetland A. Area dominated by young trees and shrubs within a depression

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	35	yes	FAC
2. Salix sitchensis	30	yes	FAC
3. Salix lasiandra	20	yes	FACW
4.			
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1. Cornus stolonifera	25	yes	FACW
2.			
3.			
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 15ft radius)			
1. Phalaris arundinacea	50	yes	FACW
2. Polygonum cuspidatum	50	yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 15ft radius)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Wetland A area domianted by hydrophytic vegetation established since piror ditch maintenance.

SOIL

Sampling Point: SP-3 XX

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100					Sil	
3-18	10YR 4/1	80	10YR 4/6	20	C	M	Sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks: field evidence of hydric soils present

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ 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 Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☒ No ☐ Depth (inches): 1

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: Record rainfall in October 2016/ field indicators of wetland hydrology patterns present.

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

Project/Site: Parcel 0519314030 City/County: City of Ording Sampling Date: 24 OCT 2016

Applicant/Owner: _____ State: Washington Sampling Point: SP-4 XX

Investigator(s): Habitat Technologies Section, Township, Range: S31, T19, R5E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): A Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Aquic xerofluvents NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks: Northeast property boundary.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiandra	40	yes	FACW
2. Picea sitchensis	20	yes	FAC
3.			
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1. Cornus stolonifera	25	yes	FACW
2.			
3.			
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 15ft radius)			
1. Ranunculus repens	100	yes	FAC
2. Equisetum arvense	20	yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 15ft radius)			
1. Rubus armenicus	20	yes	FAC
2.			
	20	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Wetland BC

SOIL

Sampling Point: SP-4 XX

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100					Ls	
3-18	10YR 4/1	80	10YR 4/6	20	C	M	Sil	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:_____

Depth (inches):_____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks: field indicators of hydric soil present

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ 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 Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☒ No ☐ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): surface

Wetland Hydrology Present? **Yes** ☒ **No** ☐

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

Remarks: Record October rainfall. field indicators of wetland hydrology patterns present..

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

Project/Site: Parcel 0519314030 City/County: City of Orting Sampling Date: 24 OCT 2016

Applicant/Owner: _____ State: Washington Sampling Point: SP-5 XX

Investigator(s): Habitat Technologies Section, Township, Range: S31, T19, R5E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): A Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Aquic xerofluvents NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Eastern portion of parcel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft radius)			
1. Cytisus scoparius	60	yes	UPL
2.			
3.			
4.			
5.			
	25 = Total Cover		
Herb Stratum (Plot size: 15ft radius)			
1. Plantago major	20	yes	FACU
2. Agrostis tenuis	70	yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: 15ft radius)			
1. Rubus armeniacus	35	yes	FAC
2.			
	35 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: area domianted by invasive shrubs following prior clearing and grading actions.

SOIL

Sampling Point: SP-5 XX

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					Gl	Mixed fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:_____

Depth (inches):_____

Hydric Soil Present? Yes ☐ No ☒

Remarks: area of mixed fill. no field indicators of hydric soils present

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ 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 Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Record rainfall in October 2016. no field indicators of wetland hydrology patterns present.