



7. Critical Areas Assessment and Preliminary Mitigation Plan

Stella Ridge Subdivision Critical Areas Assessment and Preliminary Mitigation Plan Camas, Washington

Date: August 2025

Prepared for: Allied Development, LLC
16430 N Scottsdale Road, Suite 210
Scottsdale, Arizona 85254

Prepared by: AKS Engineering & Forestry, LLC
Stacey Reed, PWS, Senior Wetland Scientist
Eli Pogue, Natural Resources Specialist

Study Area: Clark County Parcels 125193-000, 986055-381,
and 125185-000
Camas, Washington

AKS Job Number: 12107



9600 NE 126th Avenue, Suite 2520
Vancouver, WA 98682
(360) 882-0419

Table of Contents

Introduction	1
Site Description and Land Use History	2
Background Mapping	2
Soils.....	2
Wetland and Waters Mapping	2
Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) Mapping .	2
Washington State Department of Natural Resources (DNR) Mapping.....	3
Delineation Methodology	3
Precipitation Prior to Site Visit	3
Delineation Results.....	4
Wetlands	4
Wetland A.....	4
Wetland B	4
Wetland C.....	4
Wetland D (Off-Site).....	5
Buffer Widths	5
Wetland Category Rating and Applicable Buffer.....	5
Project Critical Area Impacts	6
Category IV Wetland Direct Impacts	6
Category III Wetland Direct and Indirect Impacts.....	6
Wetland Buffer Impacts for Stormwater Facilities.....	6
Wetland Buffer Impacts for Streets and Residential Lot.....	7
Wetland Buffer Width Reduction Plan	7
Wetland Buffer Averaging	7
Temporary Wetland Buffer Impacts.....	8
Mitigation Sequencing	8
Preliminary Mitigation Plan.....	10
Preliminary Mitigation Plan Goals and Objectives	10
Goal 1 – Ensure no net loss of wetland functions	10
Goal 2 – Ensure no net loss of wetland buffer functions	10
Goal 3 – Provide long-term protection for the on-site wetland and buffers.....	10
Preliminary Project Schedule	11
Preliminary Mitigation Monitoring and Contingency.....	12
Statement of Preparation.....	13
Literature Cited and Referenced	14

Tables

Table 1: Critical Area Delineated and Required Buffer Widths	6
Table 2: Preliminary Mitigation Measures Schedule.....	11

Figures

- Figure 1. Vicinity Map
- Figure 2. Parcel Map
- Figure 3. NRCS Soils Map
- Figure 4. National Wetlands Inventory Map
- Figure 5. Clark County Modeled and Permitted Wetland Map
- Figure 6. Priority Habitat and Species Map
- Figure 7. DNR Water Type Map
- Figures 8. Critical Areas Delineation Map
- Figures 9. Critical Areas Site Plan

Appendices

- Appendix A:** Wetland Determination Data Forms
 - Appendix B:** Representative Site Photographs
 - Appendix C:** Wetland Rating Form and Figures
 - Appendix D:** APT Information
 - Appendix E:** Buffer Enhancement Species and Quantities
-

Introduction

AKS Engineering & Forestry, LLC (AKS) was contracted by Allied Development, LLC (Applicant) to conduct a critical areas assessment on ±24.26 acres site consisting of Clark County Parcels 125193-000, 986055-381, and 125185-000 of Township 1 North, Range 3 East, Section 5, Willamette Meridian, Clark County, Washington. The site is addressed at 4511 NW 18th Avenue, Camas, Washington (Figures 1 and 2; latitude 45.594088, longitude -122.456633). This report addresses the City of Camas (City) Code of Ordinances (CCO) Chapter 16.51–General Provisions and Chapter 16.53–Wetlands. No other critical areas, such as critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, or fish and wildlife habitat conservation areas, are addressed in this report. No priority Oregon white oaks (*Quercus garryana*) or potentially jurisdictional streams or priority species or habitat were identified on the site.

AKS conducted a site visit on May 15, 2025, and delineated two Palustrine Emergent (PEM) wetlands referred to as Wetlands A and B, and one Palustrine Forested (PFO)/PEM wetland referred to as Wetland C in the study area. According to the Washington State Department of Ecology's (ECY's) *Washington State Wetland Rating System for Western Washington: 2014 Update, Version 2* (Hruby 2023), Wetland A was rated as a Category III wetland with a habitat score of 3. Wetland B was rated as Category IV wetland with a habitat score of 3. Wetland C was rated as a Category III wetland with a habitat score of 4. An off-site wetland to the west, referred to as Wetland D, was rated as a Category IV wetland with a habitat score of 3. The project proposes residential development, which is considered high-intensity land use. Per CCO, Category IV wetlands (Wetlands B and D) with high-intensity land use require a 50-foot-wide water quality buffer. Category III wetlands (Wetlands A and C) require an 80-foot-wide high-intensity land use buffer.

The project consists of a residential subdivision, referred to as Stella Ridge, and includes attached single-family homes, new public roads, stormwater facilities, and open space. Unavoidable permanent direct and indirect impacts to a portion of Category III Wetland A are necessary for a new public road. Unavoidable permanent direct impacts to all of Category IV Wetland B is unavoidable for road alignment access from NW 18th Avenue. Direct and indirect permanent wetland impacts will be compensated through the purchase of wetland mitigation bank credits at the Terrace Wetland Mitigation Bank, per CCO 16.61.030.3a. Allied Development, LLC (Applicant) will obtain approval from ECY prior to direct and indirect non-federally regulated wetland impacts.

Unavoidable impacts to the buffer adjacent to Wetland A are necessary for stormwater facilities and the new public access road. According to CCO, 16.53.050.C.4, crossing buffers for new roads is allowed if buffer functions are replaced and impacts have been minimized.

A buffer width reduction adjacent to Wetlands A and C is proposed to accommodate the layout consistent with City standards. The buffer width reduction will not exceed 25 percent of the standard Category III wetland buffer width and portions of the buffer will be enhanced by removing invasive vegetation species followed by dense native woody plantings, in accordance with CCO 16.53.050.C.1. To compensate for the minor encroachment within the reduced buffer width, the buffer will be widened in another area through buffer averaging in accordance with CCO 16.53.050.C.2, exceeding the minimum requirements resulting in a net gain of on-site wetland buffer habitat.

All remaining critical areas will be set aside in a separate non-buildable tract with a conservation covenant for protection against future development. Permanent fencing and signage will be installed along the outer limits of the final wetland buffer.

Site Description and Land Use History

The project site is undeveloped. A gravel driveway is present in the southern portion of the project area adjacent to NW 18th Avenue. The project area is surrounded by residential and Light Industrial Park/Business Park (LI/BP) land uses.

The eastern and western portions of the project area (Parcels 125193-000 and 125185-000) has been used for agriculture (hay and pasture). Vegetation in these areas were dominated by large sweet vernal grass (*Anthoxanthum odoratum*; FACU), Kentucky blue grass (*Poa pratensis*; FAC), field meadow foxtail (*Alopecurus pratensis*; FAC), and garden vetch (*Vicia sativa*; UPL). The central portion of the project area (Parcel 986055-381) consists of a forested area dominated by Oregon ash (*Fraxinus latifolia*; FACW), bigleaf maple (*Acer macrophyllum*; FACU), Pacific ninebark (*Physocarpus capitatus*; FACW), Nootka rose (*Rosa nutkana*; FAC), California dewberry (*Rubus ursinus*; FACU), common snowberry (*Symphoricarpos albus*; FACU), pineland sword fern (*Polystichum munitum*; FACU), Siberian spring beauty (*Claytonia siberica*; FAC) and fragrant fringe cup (*Tellima grandiflora*; FACU).

Topography in the study area slopes gently to the east. The project area lies within the Lake River-Frontal Columbia River sub-watershed of the Salmon Creek-Frontal Columbia River watershed, located in the Salmon-Washougal Water Resource Inventory Area (WRIA).

Background Mapping

Soils

The following soils are mapped within the study area, according to the Natural Resources Conservation Service (NRCS) Clark County, Washington Area Soil Survey Map and hydric soils list (Figure 3):

- Powell silt loam (Unit PoB), 0 to 8 percent slopes; Non-hydric
- Odne silt loam (Unit OdB), 0 to 5 percent slopes; Hydric

Wetland and Waters Mapping

According to the US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Map, no wetlands are mapped in the project area (Figure 4). A Freshwater Emergent Wetland is mapped off-site to the west within 300 feet of the project area (referred to as Wetland D under this study).

According to Clark County's Geographic Information Services (GIS) MapsOnline portal, no modeled wetlands are mapped within the project area. An area of modeled wetland is mapped in the vicinity of the NWI-mapped wetland within 300 feet of the project area (Figure 5).

Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) Mapping

According to the Clark County GIS MapsOnline Priority Habitats and Species (PHS) map, a potential riparian habitat area is mapped in the northeastern portion of the project area (Figure 6). The potential riparian area appears to be associated with stream located off-site to the east (see Figure 7). The riparian habitat buffer associated with the off-site stream is functionally severed by existing NW Brady Road and does not extend into the project area. Intact riparian habitat is not present in the project area.

According to a Washington Department of Fish and Wildlife (WDFW) PHS webmap, caves or cave-rich Areas are mapped within the township the project area is located in. No caves are present in the project area. Evidence of priority habitat or priority species was not observed by AKS species during the site visit on May 15, 2025.

Washington State Department of Natural Resources (DNR) Mapping

According to the Washington State Department of Natural Resources (DNR) Forest Practices Application Mapping Tool, no waters are mapped within the project area. A Type F stream is mapped within 300 feet off-site to the east (Figure 7). No wetlands of high conservation value are mapped within or adjacent to the study area by DNR.

Delineation Methodology

Fieldwork was conducted on May 15, 2025, by AKS' qualified professional Natural Resource Specialists Emma Eichhorn and Margret Harburg.

The methodology used to determine the presence of wetlands followed the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (Wakeley et al. 2010). The *National Wetland Plant List* (USACE 2022) was used to assign wetland indicator status to plants for the appropriate region. ECY's *Washington State Wetland Rating System for Western Washington: 2014 Update, Version 2* (Hruby 2023) was used to determine the hydrogeomorphic (HGM) classification for each wetland. The USFWS Cowardin classification system (Cowardin et al. 1979) was used to describe the wetland in terms of the vegetation community (e.g. emergent, scrub-shrub, and forested community types).

Soils, vegetation, and indicators of hydrology were recorded at 33 sample plot locations on standardized wetland determination data forms to document conditions (Appendix A). Sample plot locations and the boundaries of the wetlands were flagged in the field and mapped using a Trimble R8 Global Navigation Satellite System (GNSS) and ArcGIS Field Maps with submeter accuracy.

Maps illustrating the surveyed wetland boundaries are included as Figures 8 and 8A. Representative ground level site photographs are included in Appendix B. References cited and literature used are listed at the end of this report.

Precipitation Prior to Site Visit

Recent precipitation data were obtained from the Applied Climate Information System (ACIS) Vancouver Pearson AP Weather Station. According to the Vancouver Pearson Weather Station data, 0.08 inches of rainfall was recorded on the day of the May 2025 site visit, and 0.32 inches were recorded in the two weeks prior. The water year to date (since October 1, 2024) was 28.93 inches, which was 90 percent of normal. Precipitation data is available upon request.

Precipitation for the three-month period leading up to the site visit was analyzed using the US Army Corps of Engineers (USACE) Antecedent Precipitation Tool (APT), Version 2.0 (USACE 2023). Based on the APT reports, monthly observed precipitation for the three months preceding the site visit on May 15, 2025, were considered normal. The APT report is included in Appendix D. According to the APT, the site visit was conducted within normal precipitation conditions.

Delineation Results

Wetlands

Wetland A

Wetland A is a seasonally saturated PEM wetland located in the eastern part of the project area. The primary sources of wetland hydrology are a seasonally high groundwater table and direct precipitation. Wetland A is on a gentle slope where water flows freely in one direction, lacking outflow. Therefore, Wetland A was rated under the Depressional HGM classification.

Vegetation within the wetland is dominated by reed canary grass (*Phalaris arundinacea*; FACW) and garden bird's-foot trefoil (*Lotus corniculatus*; FAC). There is a small area (less than 10 percent of total wetland area) dominated by Oregon ash, Hooker's willow (*Salix hookeriana*; FACW), Nootka rose, and English hawthorn (*Crataegus monogyna*; FAC) located in the northeastern portion of the wetland, as documented at Plot 11. No special habitat features such as large, downed woody debris or priority snags were observed within the wetland.

The wetland boundary was delineated based on a distinct change in topography that coincided with a change in vegetation along with a lack of hydric soil indicators in the adjacent upland. The adjacent upland is slightly higher in elevation and dominant in large sweet vernal grass and garden vetch. Wetland A does not extend off-site.

Wetland B

Wetland B is an isolated seasonally saturated PEM wetland located in the western portion of the project site, located upslope and hydrologically disconnected from Wetland A. The primary sources of wetland hydrology are a seasonally high groundwater table and direct precipitation. Wetland B is on a gentle slope where water flows freely in one direction, lacking a surface outlet. Therefore, Wetland B was rated under the Slope HGM classification.

Vegetation within the wetland is dominated by reed canary grass, field meadow foxtail, and garden bird's-foot trefoil. The wetland boundary was delineated based on a distinct change in topography that coincided with a change in vegetation. The wetland is within a lower elevation concave landform dominant in reed canary grass, with lesser amounts of large sweet vernal grass, and lacking garden vetch. The adjacent upland is on a higher elevation convex landform with vegetation dominant in large sweet vernal grass and garden vetch. Upland plots lacked hydric soils. Wetland B does not extend off-site.

Wetland C

Wetland C is an isolated seasonally saturated PFO/PEM wetland located in the central portion of the project site, also upslope and hydrologically disconnected from Wetland A. The primary sources of wetland hydrology are a seasonally high groundwater table and direct precipitation. Wetland C is on a gentle slope where water flows freely in one direction. Therefore, Wetland C was rated under the Slope HGM classification.

Vegetation in the wetland is dominated by Oregon ash, Pacific ninebark, Nootka rose, taperfruit shortscales sedge (*Carex leptopoda*; FAC), thick-head sedge (*Carex pachystachya*; FAC), and American brooklime

(*Veronica americana*; OBL) in the PFO portion of the wetland and reed canary grass and creeping buttercup (*Ranunculus repens*; FAC) in the PEM portion of the wetland.

The wetland boundary was delineated based on a subtle change in topography that coincided with a change in vegetation along with a lack of hydric soils in the upland. The PEM portion of the wetland is within a lower elevation, slightly concave in shape, and is dominant in reed canary grass and creeping buttercup. The adjacent upland is slightly higher in elevation and dominant in large sweet vernal grass and garden vetch. The PFO portion of the wetland is dominant in Oregon ash, Pacific ninebark, and sedge species. The adjacent upland is slightly higher in elevation than the wetland and dominated by bigleaf maple, vine maple, California dewberry, pineland sword fern, common snowberry, and fragrant fringe cup. Upland plots lacked hydric soil indicators. Wetland C does not extend off-site.

Wetland D (Off-Site)

Wetland D is an isolated wetland mapped on the NWI off-site to the west. The property west of the project area was not accessible by AKS; therefore, the approximate boundary of Wetland D was digitized based on GIS data derived from USFWS. The wetland rating was based on high-resolution aerial imagery and available background mapping. Conditions associated with Wetland D do not extend onto the project area. This off-site wetland was mapped in order to be in compliance with CCO 16.53.030.B.2 and determine if wetland buffer extends onto project site.

Buffer Widths

Wetland Category Rating and Applicable Buffer

Protective wetland buffers were assigned based on wetland category, habitat function score, and proposed land use intensity of the project in accordance with CCO 16.53.040.B. Wetlands were rated according to ECY's *Washington State Wetland Rating System for Western Washington: 2014 Update Version 2* (Hruby 2023). Wetland A was rated as a Category III wetland with a habitat score of 3, Wetlands B and D were rated as Category IV wetlands with a habitat score of 3. Wetland C was rated as a Category III wetland with a habitat score of 4. Wetland rating forms and figures are included in Appendix C.

The residential development proposed is considered *high* land use intensity. According to CCO Table 16.53.040-1, Category IV wetlands have a required water quality buffer width of 50 feet. Category III wetlands have a required water quality buffer width of 80 feet. Figures 8 and 8A illustrate the extent of wetland buffers on the project site. The eastern portion of the buffer associated with Wetland A is functionally severed by existing NW Brady Road, resulting in a buffer width less than 50 feet per CCO 16.53.040.B.4.b.ii.

Table 1: Critical Area Delineated and Required Buffer Widths

Critical Area	On-site Wetland Area	Wetland Category	Camas Criteria	Standard Buffer Width
Wetland A	2.26 acres	III	Low habitat score, high intensity land use	80 feet
Wetland B	0.19 acres	IV	Low habitat score, high intensity land use	50 feet
Wetland C	0.35 acres	III	Low habitat score, high intensity land use	80 feet
Wetland D (off-site)	0.21 acres	IV	Low habitat score, high intensity land use	50 feet

Project Critical Area Impacts

This project consists of a ±158-lot attached single-family subdivision. The project will provide needed housing within the City of Camas and will not result in a net loss of wetland functions. The Critical Areas Site Plan is included as Figures 9 and 9A.

Category IV Wetland Direct Impacts

The project requires direct permanent impacts to the entirety of Wetland B for Street A and NW 20th Avenue. The extension of NW 20th Avenue is fixed based on its existing location. The north-south Street A connection is also fixed, as the City requires connection to existing NW 18th Avenue to the south. An existing water tower and residential development are present on the adjacent parcel to the south, making an alignment to the east to avoid wetland for a south connection to NW 18th Avenue not feasible.

Category III Wetland Direct and Indirect Impacts

The project requires direct permanent impacts to a portion of Wetland A for the intersection of Street D and NW Brady Road. The intersection of Street D and NW Brady Road is fixed based on City requirements, making wetland avoidance not feasible. Direct and indirect wetland impacts will be mitigated through a bank credit purchase in accordance with CCO 16.53.050.D.5.a. The project area is within the Terrace Wetland Mitigation Bank service area. Therefore, purchasing credits from the Terrace Wetland Mitigation Bank will ensure there is no net loss of wetland function or values within the local watershed.

Wetland Buffer Impacts for Stormwater Facilities

Impacts to the outermost portion of Wetland A's buffer are necessary for the construction of stormwater facilities. According to CCO 16.53.050.C.3, stormwater facilities are allowed within buffers of wetlands with low habitat (habitat score of less than 4) if they are built on the outer edge of the wetland buffer, are designed to blend in with the natural landscape, and will not degrade the existing buffer function. Buffer impacts for stormwater facilities near Wetland A will be adjacent to areas of direct wetland impacts, resulting in no direct loss of wetland buffer function post construction. Construction of the stormwater facilities will not result in the disturbance of plant species listed as rare, threatened, or endangered by the City or any state or federal management agency. No removal of trees greater than 4 inches diameter breast height (DBH) will occur for the construction of the stormwater facility in wetland buffer. Grading for the stormwater facilities will not result in slopes steeper than 4:1 horizontal to vertical. No concrete

structures, maintenance access roads, or pretreatment facilities will be constructed within the buffer. Buffer impacts for the stormwater facilities will be mitigated by utilizing buffer averaging.

Wetland Buffer Impacts for Streets and Residential Lot

Impacts within buffers adjacent to Wetlands A, B, and C are necessary for new roads (referred to as Street A, Street C, and Street D). Crossing buffers with new roads is allowed if buffer and wetland impacts are minimized and if buffer functions are replaced, according to CCO 16.53.050.C.4. Steps to avoid and minimize buffer impacts for the roads are described in the following section (Mitigation Sequencing).

Buffer impacts for Street D will occur adjacent to an area of Wetland A that will be filled (wetland impact mitigated through purchase of wetland bank credits) and the buffer impacts will be mitigated through on-site buffer width reduction and buffer averaging in accordance with CCO 16.53.050.C.2.

Since Wetland B will be filled in its entirety, wetland buffer impacts adjacent to Wetland B will be mitigated by purchase of wetland mitigation bank credits.

Wetland Buffer Width Reduction Plan

The standard buffer width for Category III Wetlands A and C is 80 feet under a high-intensity land use buffer. We are proposing a buffer width reduction to the 60-foot (25 percent) buffer reduction with buffer restoration in tandem with buffer averaging in compliance with CCO 16.53.050.C.1. The reduced buffer width will not interfere with the functions and values of the wetlands. Portions of the remaining on-site buffer will be restored by removing invasive species and installing native species. The removal of invasive vegetation and installation of native plantings will provide increased structural complexity to support diverse biological habitat and greater ecosystem functions when compared to existing conditions. The buffer enhancement areas will be monitored for invasive species cover for a minimum of five years after planting.

Wetland Buffer Averaging

The project requires minor unavoidable encroachment in the reduced 60-foot-wide moderate intensity land use buffer for Street C, stormwater facility, and a portion of Lot 83.

According to CCO 16.53.50.C.2, buffer averaging is allowed if the following criteria are met:

- a. The total area contained in the buffer after averaging is no less than that contained within the buffer prior to averaging;
- b. Decreases in width are generally located where wetland functions may be less sensitive to adjacent land uses, and increases are generally located where wetland functions may be more sensitive to adjacent land uses, to achieve no net loss or a net gain in functions;
- c. The averaged buffer, at its narrowest point, shall not result in a width less than seventy-five percent of the required width, provided that minimum buffer widths shall never be less than fifty feet for all Category I, Category II, and Category III wetlands, and twenty-five feet for all Category IV wetlands; and
- d. **Effect of Mitigation.** If wetland mitigation occurs such that the rating of the wetland changes, the requirements for the category of the wetland after mitigation shall apply.

Response: A wider buffer will be provided in the northern section adjacent to the reduced area, which will exceed the area of buffer impact resulting in a net positive of wetland buffer. To compensate for Wetland C's reduced buffer width adjacent to Street C, a wider buffer will be provided on the northern side of Wetland C. The buffer averaging area will be

within a forested area contiguous with Wetland C where a diverse cover of native trees, shrubs, and herbaceous vegetation are dominant and would benefit from protection. Buffer averaging exceeds the minimum requirement, resulting in a net gain of wetland buffer on the site.

Temporary Wetland Buffer Impacts

Temporary encroachment within the buffer associated with Wetland A is required to install the stormwater outfall. According to CCO Section 16.53.050.C.5, the activity within buffer is temporary (will be completed within three months), and will not result in permanent structure in the buffer. The temporarily disturbed area will be restored to preexisting contours and planted with native vegetation and will therefore not result in a reduction in buffer functions and can be considered an allowed use within the buffer without mitigation.

Mitigation Sequencing

The project requires unavoidable wetland and buffer encroachment for stormwater facilities, streets, and residential lots. Mitigation sequencing outlined in CCO 16.51.170 is demonstrated below:

- A. **Avoiding the impact altogether by not taking a certain action or parts of an action (usually by either finding another site or changing the location on the site);**

Response: **Street D and NW Brady Road Intersection:** Impacts to Wetland A and its adjacent buffer are unavoidable due to the required alignment for Street D and NW Brady Road intersection. There is no opportunity to realign Street D to the north to avoid wetland as it would not meet the City's intersection spacing requirements from the existing NW 20th Avenue intersection to the south.

Street A and NW 20th Avenue: The location of Wetland B makes wetland impacts for Street A unavoidable. The connection for Street A must come from existing NW 18th Avenue located to the south of the project site. Due to the location of an existing water tower on the adjacent parcel to the south, shifting Street A to the west is not possible. Shifting Street A to the east would still result in impacts to the entirety of the wetland, either directly or indirectly.

Street C: Impacts to the buffer adjacent to Wetland C are unavoidable because Street C is necessary to provide access to ±20 residential lots. Street C cannot be realigned to the west to avoid the buffer because residential lots are located on the west side of the street. The lots are designed to meet the City's density requirements and cannot be reconfigured or located elsewhere on the project area.

Stormwater Facility: Impacts to Wetland A's buffer for the stormwater facilities are unavoidable due to existing topographic conditions in the project area. The stormwater facilities must be located in the lowest areas on the site to receive runoff from upslope impervious areas.

Residential Lot 83: Impact to Wetland C's buffer for Lot 83 is unavoidable. The lots are designed to meet the City's requirements and cannot be reconfigured or located elsewhere in the project area. The lot layout chosen is the layout that resulted in the least amount of impacts to the existing wetlands on-site.

- B. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project design, developable area configuration, relocation, or timing, to avoid or reduce impacts;

Response: The site plan has been designed to minimize wetland and buffer impacts to the greatest extent practical. Wetland impacts for the streets are minimized by improving the minimum width required by the City. The stormwater facilities are the minimum size necessary to serve the subdivision and cannot be reduced in size.

- C. Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods;

Response: This is not applicable. No hazard areas are present on the project site.

- D. Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action;

Response: The remaining wetland and buffer areas will be preserved in separate tracts in accordance with CCO 16.51.240 and CCO 16.53.040.B.3.

- E. Compensating for the impact to critical areas by replacing, enhancing, or providing substitute resources or environments;

Response: Unavoidable direct and indirect wetland impacts will be mitigated through the purchase of wetland credits from the Terrace Wetland Mitigation Bank, which is within the same watershed as the project site. The purchase of mitigation bank credits will offset the loss of wetland functions and values by creating, restoring, enhancing, and preserving higher functioning wetlands in the watershed. Mitigation for impacts for wetland impacts will be in-kind with regard to Cowardin and HGM classifications.

A combination of on-site buffer width reduction and averaging will compensate for unavoidable buffer encroachment. The buffer averaging and enhancement will ensure no net loss of buffer area or function, and will provide a wider, high function buffer between Wetland C and Street D.

- F. Monitoring the hazard or other required mitigation and taking remedial action when necessary; and

Response: The on-site buffer enhancement area will be monitored in accordance with CCO 16.51.180.D. If performance standards are not met, a contingency plan in accordance with CCO 16.51.180.E will be implemented.

- G. Rectifying the impact to critical areas by repairing, rehabilitating, or restoring the affected environment to the historical conditions, or the conditions existing at the time of the initiation of the project.

Response: Functional loss from direct and indirect permanent wetland impacts, as well as temporary impacts will be replaced by purchasing bank credits from the Terrace Wetland Mitigation Bank, which restores wetland to pre-settlement conditions. Unavoidable buffer encroachment will be rectified by providing a wider buffer elsewhere through buffer averaging.

Preliminary Mitigation Plan

Preliminary Mitigation Plan Goals and Objectives

The following mitigation environmental goals and objectives have been established to ensure no net loss of wetland functions and values resulting from the project:

Goal 1 – Ensure no net loss of wetland functions

Mitigation Objective 1: Purchase 0.24 wetland credits from the Terrace Wetland Mitigation Bank. The project site is within the same local watershed as the mitigation bank and within the service area described in the Mitigation Banking Instrument. The project will result in 0.17 acres of direct permanent impacts to Category IV PEM Slope Wetland B. According to the MBI, the typical credit-debit ratio for Category IV Wetlands is 0.85:1 bank credit to impact acreage, requiring the purchase of 0.14 wetland bank credits.

The project will also require 0.03 acres of direct permanent impacts and 0.14 acres indirect impacts to Category III PEM Depressional Wetland A. According to the MBI, the credit-debit ratio for direct impacts to Category III Wetlands is 1:1 bank credit to impact acreage. According to the MBI, the credit-debit ratio for indirect impacts is 0.5:1, requiring the purchase of 0.10 credits to account for impacts to Wetland A.

The bank provides credits for re-establishment and rehabilitation of the PFO, Palustrine, scrub-shrub (PSS), and PEM wetlands of the Slope and Depressional HGM class. Therefore, the mitigation will be in-kind with regard to Cowardin and HGM classification and will fully compensate for wetland functions and values lost as a result of the project. The purchase of bank credits prior to the project will ensure no temporal loss of wetland functions and values.

Buffers at the Terrace Mitigation Bank provide protection of high-quality wetland within the local watershed, as well as their own inherent ecological functions and values. Therefore, the purchase of wetland bank credits (Mitigation Objective 1) will fully compensate for buffer impacts associated with the direct wetland impacts.

Mitigation Objective 1 Performance Standard: Submittal of proof of wetland mitigation bank credit purchase to the City.

Goal 2 – Ensure no net loss of wetland buffer functions

Mitigation Objective 2: Enhance a minimum of 1.09 acres of remaining degraded condition buffer associated with Wetland A. A table including recommendations for enhancement species and quantities is included in Appendix E. The existing condition of the wetland buffer enhancement area consists of non-native grasses and offers little benefit to the wetland.

Mitigation Objective 2 Performance Standard: A minimum of 80 percent survival of planted native woody plantings will occur within the enhancement area during a three-year monitoring period.

Goal 3 – Provide long-term protection for the on-site wetland and buffers

Mitigation Objective 3a: The remaining on-site wetlands and buffers will be placed in separate tracts with conservation covenants. The conservation covenants will be designated on the face of a plat or recorded drawing in a format approved by the City. The conservation covenants will include assurance that native vegetation will be preserved for the purpose of preventing harm to property and the environment, including but not limited to controlling surface water runoff and erosion, buffering, and protecting plants and wildlife habitat.

Mitigation Objective 3a Performance Standard: Submittal of a recorded plat designation to the City.

Mitigation Objective 3b: Install permanent boundary fencing and signage along the outer boundary of the final averaged wetland buffers. Fencing will consist of a minimum 42-inch-high vinyl-coated chain-link or wooden split rail style. Signs will be placed at an interval of at least one per lot or every 100 feet. The signs will be 12 inches by 18 inches in size and posted on 6-foot-high green steel posts. The signage will be worded as follows:

Wetland and Buffer Area —
Retain in a natural state.

Mitigation Objective 3b Performance Standard: Evidence of wetland buffer signage submitted with Year 1 monitoring report.

Preliminary Project Schedule

The following preliminary project schedule outlines the proposed timeline for project development and implementation of mitigation measures. Construction of the project may begin in the summer of 2026. The buffer enhancement planting areas will be planted in the fall of 2026, serving as Year 0.

Table 2: Preliminary Mitigation Measures Schedule

Activity	Date
Year 0 (2026)	
Purchase of Terrace Mitigation Bank credits	Spring Year 0
Project construction	Begins Summer Year 0
Installation of buffer enhancement planting	Late Fall Year 0
Install irrigation	Fall Year 0
Enhancement as-built report including copy of recorded protection instruments and financial assurance	90 days following completion of planting; Winter Year 0
Year 1 (2027)	
First year monitoring site visit	Spring/Summer Year 1
Invasive species control	Spring/Summer/Fall Year 1
Supplemental seeding/planting (if needed)	Fall Year 1
Supplemental irrigation (if needed)	Summer Year 1
First year monitoring report, including establishment of permanent monitoring plot and photo point locations	November 1 of Year 1
Year 2 (2028)	
Second year monitoring site visit	Spring/Summer Year 2
Invasive species control	Spring/Summer/Fall Year 2
Supplemental seeding/planting (if needed)	Fall Year 2
Supplemental irrigation (if needed)	Summer Year 2
Second year monitoring report, including evaluation of performance standards and recommendations	November 1 of Year 2
Year 3 (2029)	
Third year monitoring site visit	Spring/Summer Year 3
Invasive species control	Spring/Summer/Fall Year 3
Supplemental seeding/planting (if needed)	Fall Year 3
Remove irrigation	End of Fall Year 3

Activity	Date
Third year final monitoring report documenting self-sustaining conditions	November 1 of Year 3

Preliminary Mitigation Monitoring and Contingency

The Applicant will monitor the on-site buffer enhancement area for a minimum of three full growing seasons. Monitoring will consist of establishing an appropriate number of monitoring plot locations across the buffer averaging area to be assessed. At each plot, absolute cover of invasive and non-native species, along with general site observations, will be recorded. Representative site photographs will be taken from established photo points across the buffer enhancement areas. Vegetation monitoring plot and photo point locations will be determined during the first monitoring year.

Monitoring reports will be submitted to the City by November 1 following each growing season. Each monitoring report will consist of photographs and a discussion of performance standards, maintenance activities, problems and successes, and any maintenance needs or contingency actions necessary to ensure success of the mitigation project. Success will be achieved when monitoring results indicate that performance standards are being met at the end of the third-year monitoring period, or thereafter as necessary.

Contingency actions to ensure the performance standards are met include the following:

- Removal of invasive species if invasive species cover is greater than 20 percent.
- If removal of invasive species results in bare ground areas larger than 25 square feet, the area should be replanted with native shrubs and seeded with native grasses suitable for site conditions.
- Replacement of wetland buffer boundary signage that has gone missing or become damaged or illegible.

Statement of Preparation

This assessment was prepared in accordance with US Army Corps of Engineers and Washington State Department of Ecology wetland delineation reporting standards and with the City of Camas critical areas ordinance (CCO 16.51 and 16.53). Fieldwork and reporting were conducted by wetland professionals qualified to conduct natural resource projects in Washington. Information contained in this document should be considered preliminary and used at your own risk until it has been reviewed and approved in writing by the appropriate local, state, or federal agencies with jurisdiction over natural resources on the site.

This report was prepared by the following:



Emma Eichhorn
Natural Resource Specialist
Fieldwork and Report Preparation



Stacey Reed, PWS
Senior Wetland Scientist
Report QA/QC



Eli Pogue
Natural Resources Specialist
Report Preparation

Literature Cited and Referenced

- Cowardin, Lewis L.M., Virginia V. Carter, Francis F.C. Golet, and Edward E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. Washington, DC (Jamestown, ND): US Department of the Interior Fish and Wildlife Service. Available at: <https://mtnhp.org/nwi/Cowardin.pdf> [Accessed May 2025].
- DNR. 2018. *National Heritage Program Rare Plants and High-Quality Wetlands Database*. Olympia (WA): Washington State Department of Natural Resources. Available at: <https://www.dnr.wa.gov/NHPwetlandviewer> [Accessed May 2025].
- DNR. 2018. *Forest Practices Application Mapping Tool*. Olympia (WA): Washington State Department of Natural Resources. Available at: <https://fpamt.dnr.wa.gov/> [Accessed May 2025].
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual Wetlands Research Program Technical Report Y-87-1*. Vicksburg (MS): US Army Engineer Waterways Experiment Station.
- Hitchcock, C.L., and A. Cronquist. 1973. *Flora of the Pacific Northwest*. Seattle (WA): University of Washington Press.
- Hruby, T. 2014. *Washington State Wetland Rating System for Western Washington: 2014 Update*. (Publication #14-06-029). Olympia (WA): Washington Department of Ecology.
- NRCS. 2021b. *Web soil survey*. Washington (DC): Natural Resources Conservation Service. Available at: <http://websoilsurvey.nrcs.usda.gov/app/> [Accessed May 2025].
- Schoeneberger, P.J., D.A. Wysocki, E.C. Benham, and W.D. Broderson, eds. 2002. *Field Book for Describing and Sampling Soils* (Version 3.0). Lincoln (NE): Natural Resources Conservation Service, National Soil Survey Center.
- USACE. 2022. *National Wetland Plant List, version 3.6*. Washington (DC): US Army Corps of Engineers. Available at: <http://wetland-plants.usace.army.mil/> [Accessed May 2025].
- USACE. 2011. *Components of a Complete Wetland Delineation Report*. Seattle (WA): US Army Corps of Engineers, Seattle District. Available at: [https://www.nws.usace.army.mil/Portals/27/docs/regulatory/Forms/Components%20a%20Wetland%20Delineation%20Report%20\(1-20-11\).pdf](https://www.nws.usace.army.mil/Portals/27/docs/regulatory/Forms/Components%20a%20Wetland%20Delineation%20Report%20(1-20-11).pdf) [Accessed May 2025].
- USFWS. 2018. *National Wetlands Inventory website*. Washington (DC): US Department of the Interior, Fish and Wildlife Service. Available at: <http://www.fws.gov/wetlands/> [Accessed May 2025].
- Vasilas, L.M., G.W. Hurt, and C.V. Noble, eds. 2024. *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils*. Version 9.0. Washington (DC): Natural Resources Conservation Service. Available at: https://www.nrcs.usda.gov/sites/default/files/2025-04/Field-Indicators-of-Hydric-Soils-in-the-United-States-Version-9_0.pdf. [Accessed May 2025].
- Wakeley, J.S., R.W. Lichvar, and C.V. Noble, eds. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version*

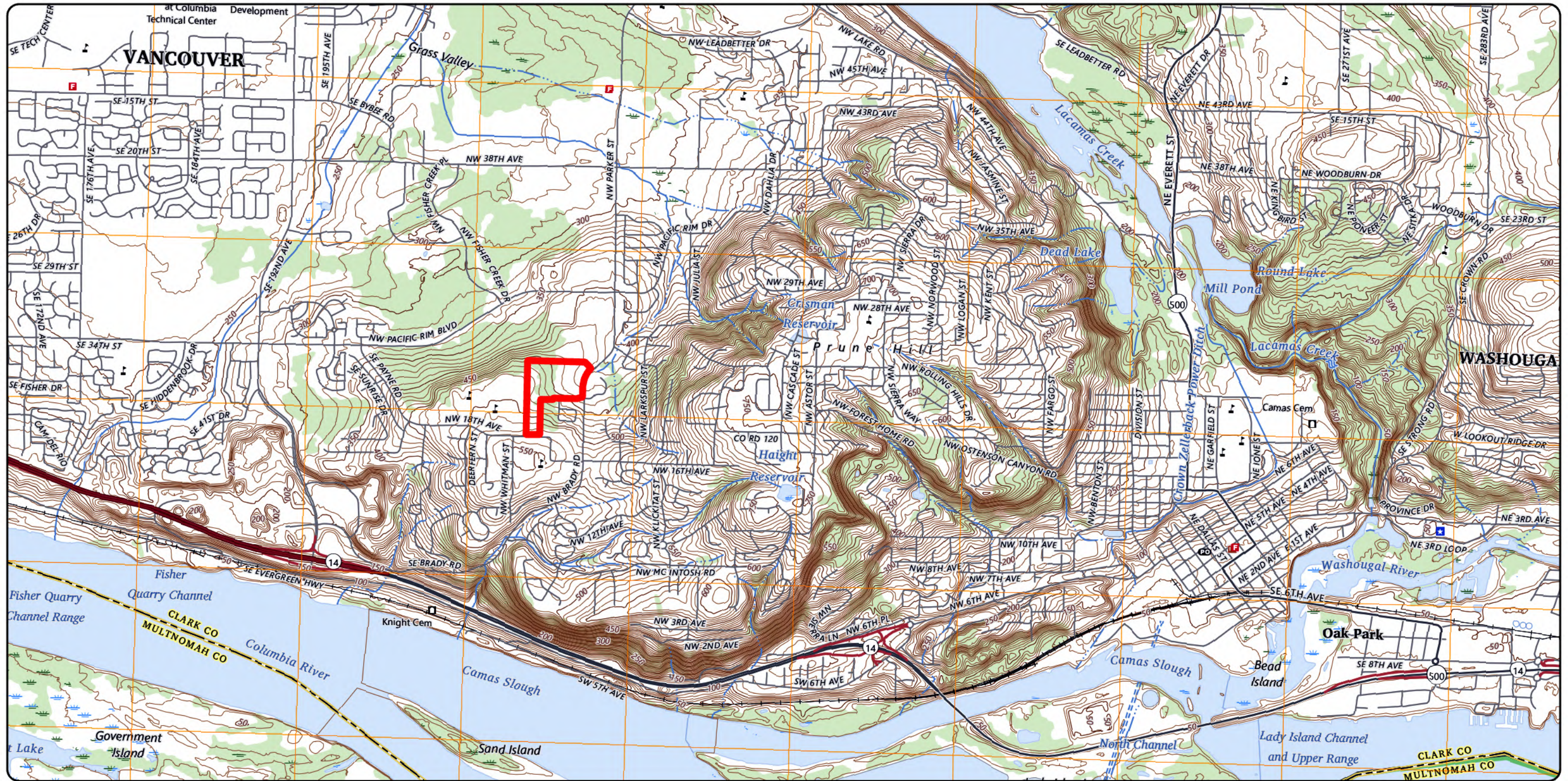
2.0). ERDC/EL TR-10-3. Vicksburg (MS): US Army Engineer Research and Development Center, US Army Corps of Engineers.

WDFW. 2018. *Priority Habitats and Species Data*. Olympia (WA): Washington Department of Fish and Wildlife. Available at: <https://wdfw.wa.gov/conservation/phs/> [Accessed May 2025].

X-Rite. 2000. Year 2000 revised washable edition, Munsell soil color charts. Grand Rapids, MI: X-Rite.



Report Figures: Figure 1-9



Legend
▭ Study Area Boundary

Figure 1
USGS Vicinity Map

AKS Job: 12107
 Stella Ridge
 Critical Areas Report

Source: USGS 7.5' topographic series quadrangle for Camas, WA obtained from USGS.gov (2023).

AKS Engineering & Forestry, LLC
 9600 NE 126th Avenue, Suite 2520
 Vancouver, WA 98682
 P:360.882.0419 | aks-eng.com

N
 0 1,000 2,000

 Printed on 11" x17"



Legend




-  Parcels
-  Study Area (Surveyed Property Boundary)

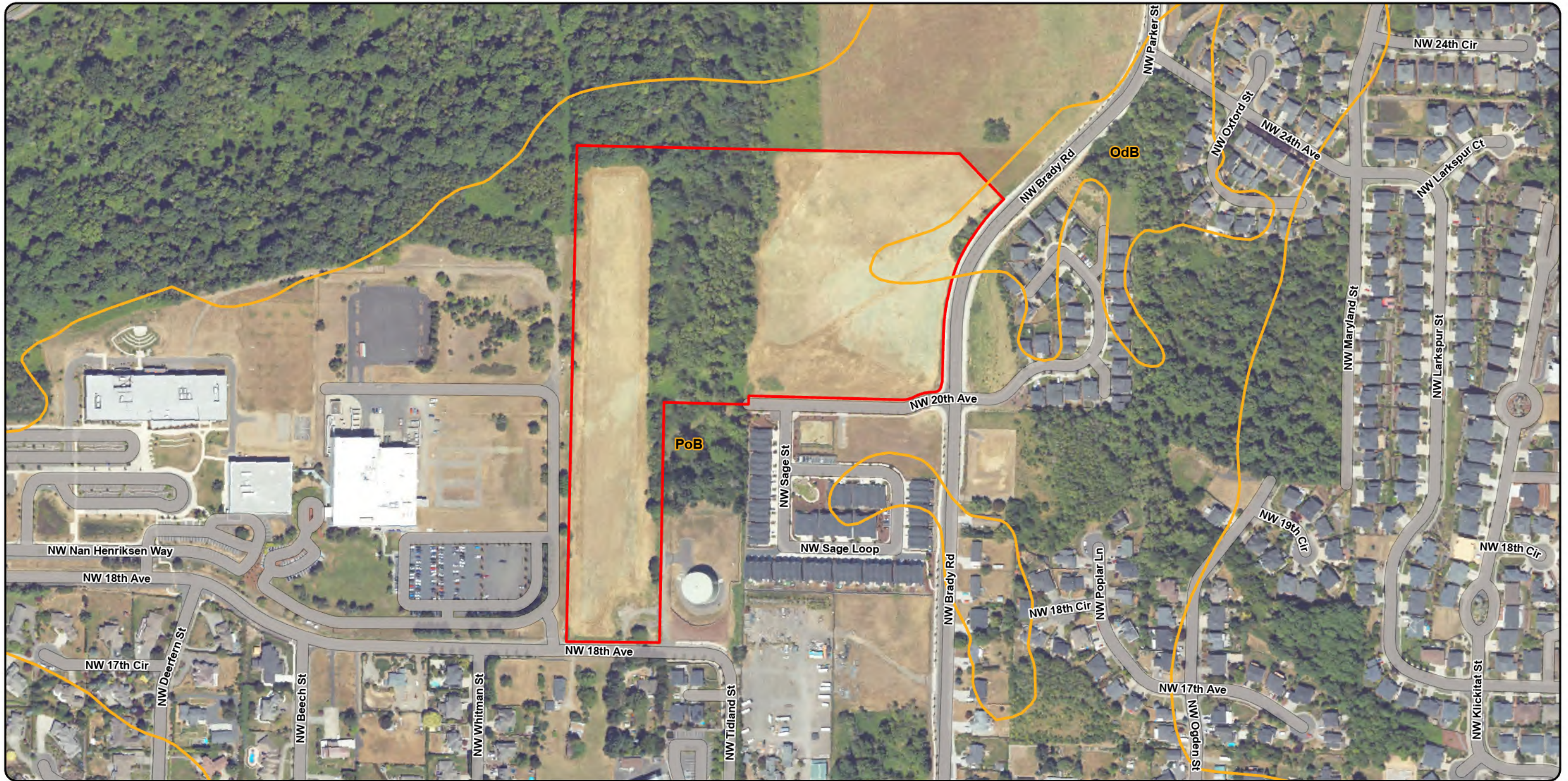
Figure 2
Parcels Map

AKS Job: 12107
Stella Ridge
Critical Areas Report

Source: 2023 Aerial Photograph
obtained from National Agricultural
Imagery Program. Parcels obtained
from Clark County.




AKS Engineering & Forestry, LLC
 9600 NE 126th Avenue, Suite 2520
 Vancouver, WA 98682
 P:360.882.0419 | aks-eng.com

N
 0 150 300

 Printed on 11" x17"



Legend

NRCS Soil Units

-  OdB: Odne silt loam, 0 to 5 percent slopes - Hydric
-  PoB: Powell silt loam, 0 to 8 percent slopes - Non-hydric
-  Study Area (Surveyed Property Boundary)

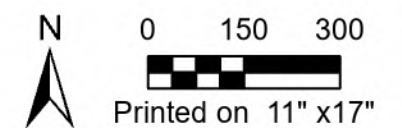
**Figure 3
NRCS Soils Map**

AKS Job: 12107
Stella Ridge
Critical Areas Report

Source: 2023 Aerial Photograph obtained from National Agricultural Imagery Program. Soils obtained from National Resources Conservation Service (NRCS).



AKS Engineering & Forestry, LLC
9600 NE 126th Avenue, Suite 2520
Vancouver, WA 98682
P:360.882.0419 | aks-eng.com





Legend

- Wetlands**
- Freshwater Emergent Wetland
 - Riverine
 - Study Area (Surveyed Property Boundary)

**Figure 4
NWI Map**

AKS Job: 12107
Stella Ridge
Critical Areas Report

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

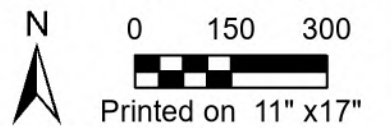
Source: 2023 Aerial Photograph obtained from National Agricultural Imagery Program. Wetlands obtained from National Wetland Inventory (NWI).



- Legend**
- Wetlands Modeled by Clark County
 - Study Area Boundary

Figure 5
Clark County Modeled and Permitted Wetland Map

AKS Job: 12107
 Stella Ridge
 Critical Areas Report



This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

Source: 2023 Aerial Photograph obtained from National Agricultural Imagery Program. Modeled Wetlands obtained from Clark County.

AKS Engineering & Forestry, LLC
 9600 NE 126th Avenue, Suite 2520
 Vancouver, WA 98682
 P:360.882.0419 | aks-eng.com



Legend



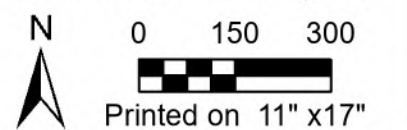
-  Riparian Habitat Area
-  Study Area Boundary

Figure 6
Clark County Priority Habitat
and Species Map

AKS Job: 12107
 Stella Ridge
 Critical Areas Report



Source: 2023 Aerial Photograph
 obtained from National Agricultural
 Imagery Program. Riparian Habitat
 Area obtained Clark County.

AKS Engineering & Forestry, LLC
 9600 NE 126th Avenue, Suite 2520
 Vancouver, WA 98682
 P:360.882.0419 | aks-eng.com



Legend

- Streams
- F - Fish
- N - Non-fish
- Study Area Boundary

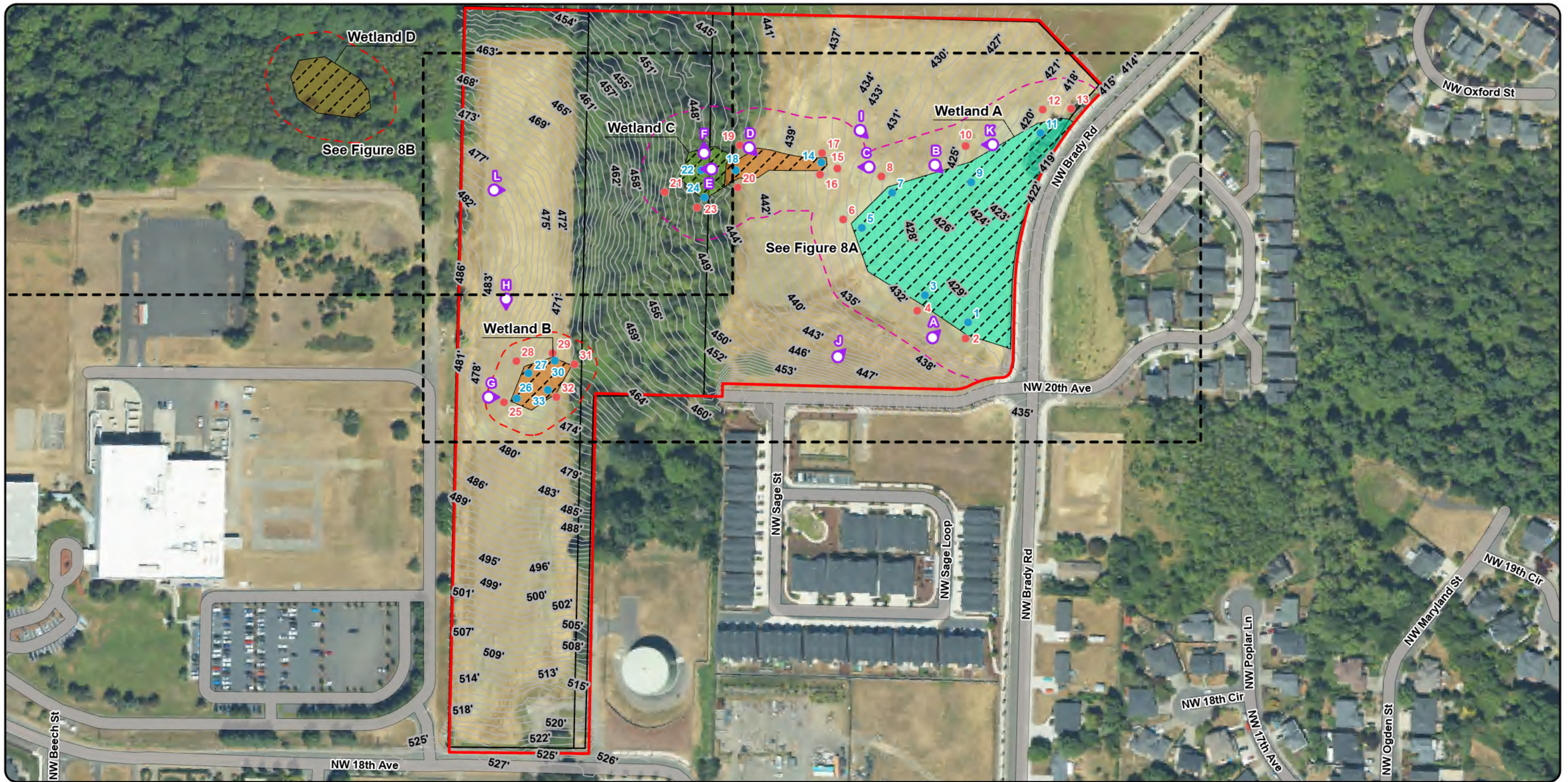
Figure 7
WA DNR Water Type Map

AKS Job: 12107
Stella Ridge
Critical Areas Report

Source: 2023 Aerial Photograph
obtained from National Agricultural
Imagery Program. Streams from
Washington Department of Natural
Resources.

AKS Engineering & Forestry, LLC
 9600 NE 126th Avenue, Suite 2520
 Vancouver, WA 98682
 P:360.882.0419 | aks-eng.com

N
 0 150 300
 Printed on 11" x17"



AKS wetland boundaries shown were delineated by AKS Engineering & Forestry, LLC (AKS) on May 15, 2025. Wetland boundaries and plots shown were mapped with sub-meter accuracy using a Trimble R8S GPS receiver and ArcGIS Field Maps.

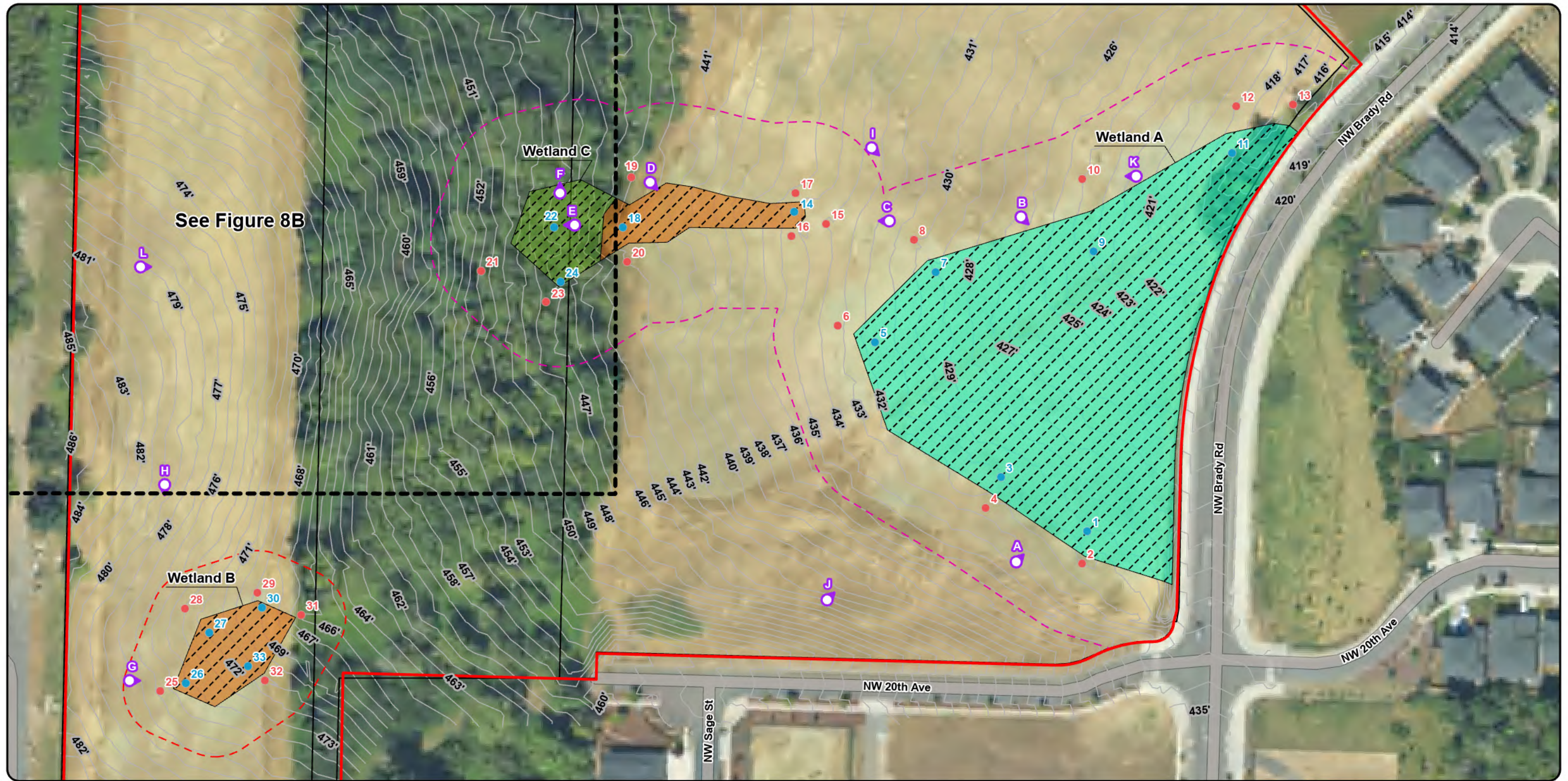
Source: Aerial Photograph obtained from ESRI, ArcGIS Online. Taxlots obtained from Clark County. 1ft interval contours derived from AKS professional land survey from May 7 to June 12, 2025.

- | | | | |
|--|--|--|---|
| <p>Sample Plots</p> <ul style="list-style-type: none"> ● Upland ● Wetland ● Photo Point Contours 1ft Project Area Taxlots | <p>Onsite Wetlands</p> <ul style="list-style-type: none"> Wetland A, Category III, PEM/ Depressional - 2.25 acres Wetland B, Category IV, PEM/ Slope - 0.17 acres Wetland C, Category III, PFO/ Slope - 0.16 acres Wetland C, Category III, PEM/ Slope - 0.18 acres | <p>Legend</p> <p>Offsite Wetlands</p> <ul style="list-style-type: none"> Wetland D, Category IV, PSS/ Slope - 0.31 acres | <ul style="list-style-type: none"> 50-foot Category IV Wetland High Intensity Land Use Water Quality Buffer 80-foot Category III Wetland High Intensity Land Use Water Quality Buffer |
|--|--|--|---|

Figure 8
Critical Areas Delineation Overview Map

AKS Job: 12107
Stella Ridge
Critical Areas Report





See Figure 8B

Sample Plots

- Upland
- Wetland
- Photo Point
- Contours 1ft
- Project Area
- Taxlots

Legend

Onsite Wetlands

- Wetland A, Category III, PEM/Depressional - 2.25 acres
- Wetland B, Category IV, PEM/Slope - 0.17 acres
- Wetland C, Category III, PFO/Slope - 0.16 acres
- Wetland C, Category III, PEM/Slope - 0.18 acres

- 50-foot Category IV Wetland High Intensity Land Use Water Quality Buffer
- 80-foot Category III Wetland High Intensity Land Use Water Quality Buffer

Figure 8A
Critical Areas Delineation Map

AKS Job: 12107
Stella Ridge
Critical Areas Report



AKS wetland boundaries shown were delineated by AKS Engineering & Forestry, LLC (AKS) on May 15, 2025. Wetland boundaries and plots shown were mapped with sub-meter accuracy using a Trimble R8S GPS receiver and ArcGIS Field Maps.

Source: Aerial Photograph obtained from ESRI, ArcGIS Online. Taxlots obtained from Clark County. 1ft interval contours derived from AKS professional land survey from May 7 to June 12, 2025.

AKS Engineering & Forestry, LLC
9600 NE 126th Avenue, Suite 2520
Vancouver, WA 98682
P:360.882.0419 | aks-eng.com

Project: 12107
Print Date: 8/28/2025



Figure 8B
Critical Areas Delineation Map

AKS Job: 12107
Stella Ridge
Critical Areas Report

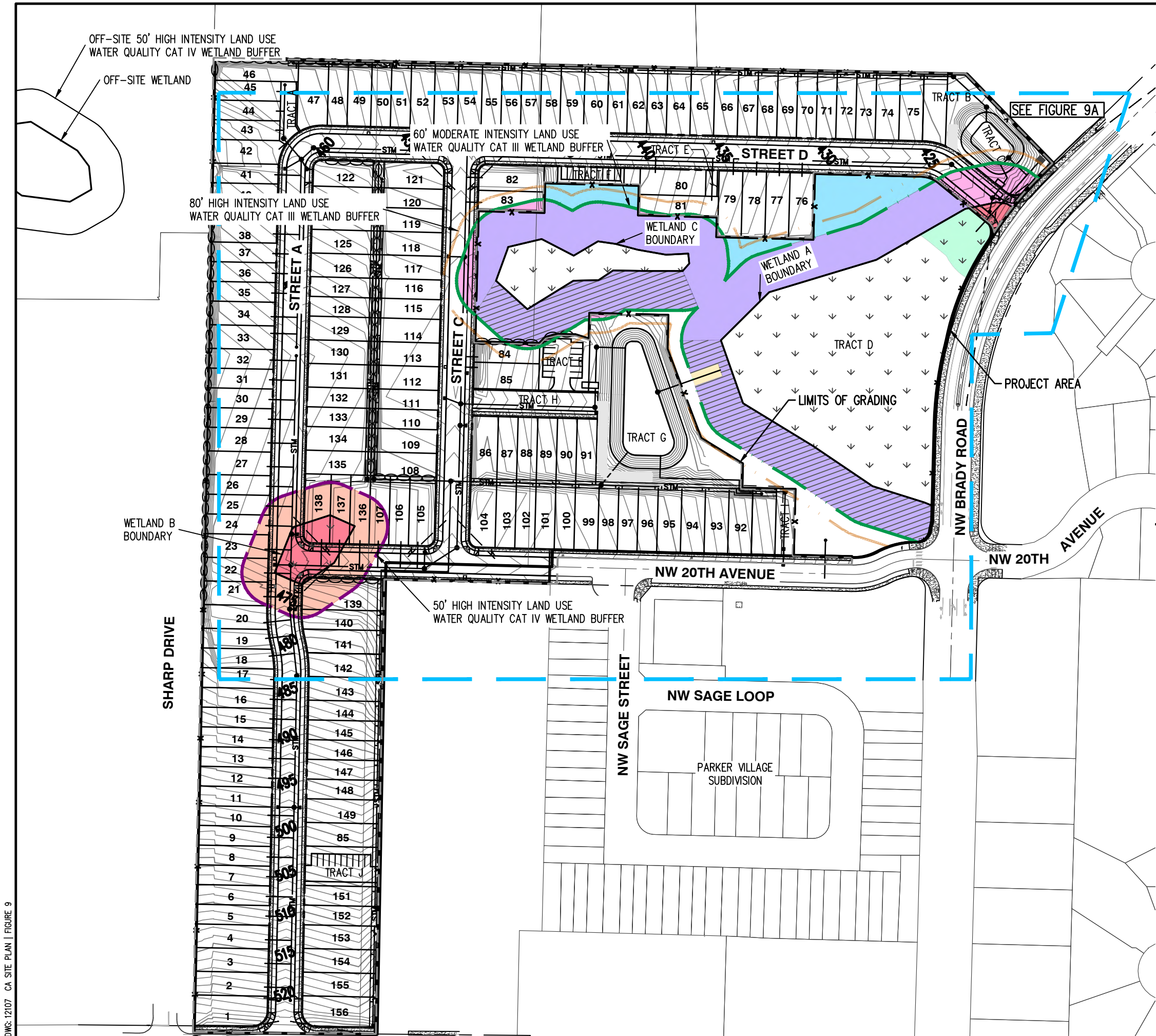







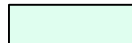







- Legend**
- | | | |
|--|---|--|
| <p>Sample Plots</p> <ul style="list-style-type: none"> ● Upland ● Wetland ● Photo Point Contours 1ft Project Area Taxlots | <p>Onsite Wetlands</p> <ul style="list-style-type: none"> Wetland C, Category III, PFO/
Slope - 0.16 acres Wetland D, Category IV, PSS/
Slope - 0.31 acres | <p>Offsite Wetlands</p> <ul style="list-style-type: none"> 50-foot Category IV Wetland
High Intensity Land Use Water
Quality Buffer 80-foot Category III Wetland
High Intensity Land Use Water
Quality Buffer |
|--|---|--|

AKS wetland boundaries shown were delineated by AKS Engineering & Forestry, LLC (AKS) on May 15, 2025. Wetland boundaries and plots shown were mapped with sub-meter accuracy using a Trimble R8S GPS receiver and ArcGIS Field Maps.

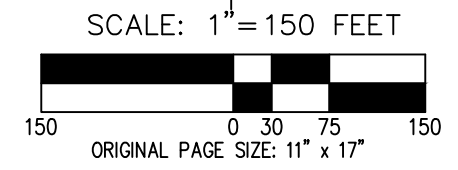
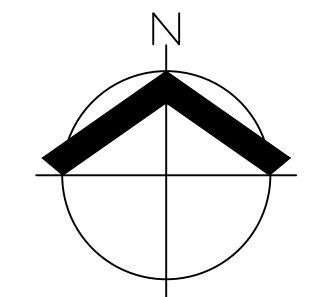
Source: Aerial Photograph obtained from ESRI, ArcGIS Online. Taxlots obtained from Clark County. 1ft interval contours derived from AKS professional land survey from May 7 to June 12, 2025.

AKS Engineering & Forestry, LLC
9600 NE 126th Avenue, Suite 2520
Vancouver, WA 98682
P:360.882.0419 | aks-eng.com



- LEGEND (COLOR COPY):**
-  TOTAL ON-SITE WETLAND AREA TO REMAIN:
 CAT III PEM/DEPRESSIONAL WETLAND A AREA:
 83,216 SF± (1.91 ACRES±)
 CAT III PFO/PEM/SLOPE WETLAND C AREA: 437 SF± (0.01 ACRES±)
 -  EXISTING 50' HIGH INTENSITY LAND USE WATER QUALITY CATEGORY IV WETLAND BUFFER
 -  EXISTING 80' HIGH INTENSITY LAND USE WATER QUALITY CATEGORY III WETLAND BUFFER
 -  PROPOSED 60' MODERATE INTENSITY LAND USE WATER QUALITY CATEGORY III WETLAND BUFFER
 -  DIRECT PERMANENT WETLAND IMPACT AREA TO BE MITIGATED THROUGH WETLAND BANK CREDITS: 8,824 SF± (0.20 ACRES±)
 -  INDIRECT PERMANENT WETLAND IMPACT AREA TO BE MITIGATED THROUGH WETLAND BANK CREDITS: 6,218 SF± (0.14 ACRES±)
 -  WETLAND BUFFER AREA TO REMAIN: 55,522 SF± (1.28 ACRES±)
 -  WETLAND BUFFER AREA TO BE ENHANCED: 47,628 SF± (1.09 ACRES±)
 -  WETLAND BUFFER AREA TO BE MITIGATED THROUGH WETLAND BANK CREDITS: 25,022 SF± (0.57 ACRES±)
 -  WETLAND BUFFER TEMPORARY IMPACT AREA TO BE ENHANCED: 881 SF± (0.02 ACRES±)
 -  WETLAND BUFFER PERMANENT IMPACT AREA TO BE MITIGATED THROUGH BUFFER AVERAGING: 11,222 SF± (0.26 ACRES±)
 -  WETLAND BUFFER AVERAGING: 18,906 SF± (0.43 ACRES±)
 -  PERMANENT PERIMETER FENCING AND SIGNAGE

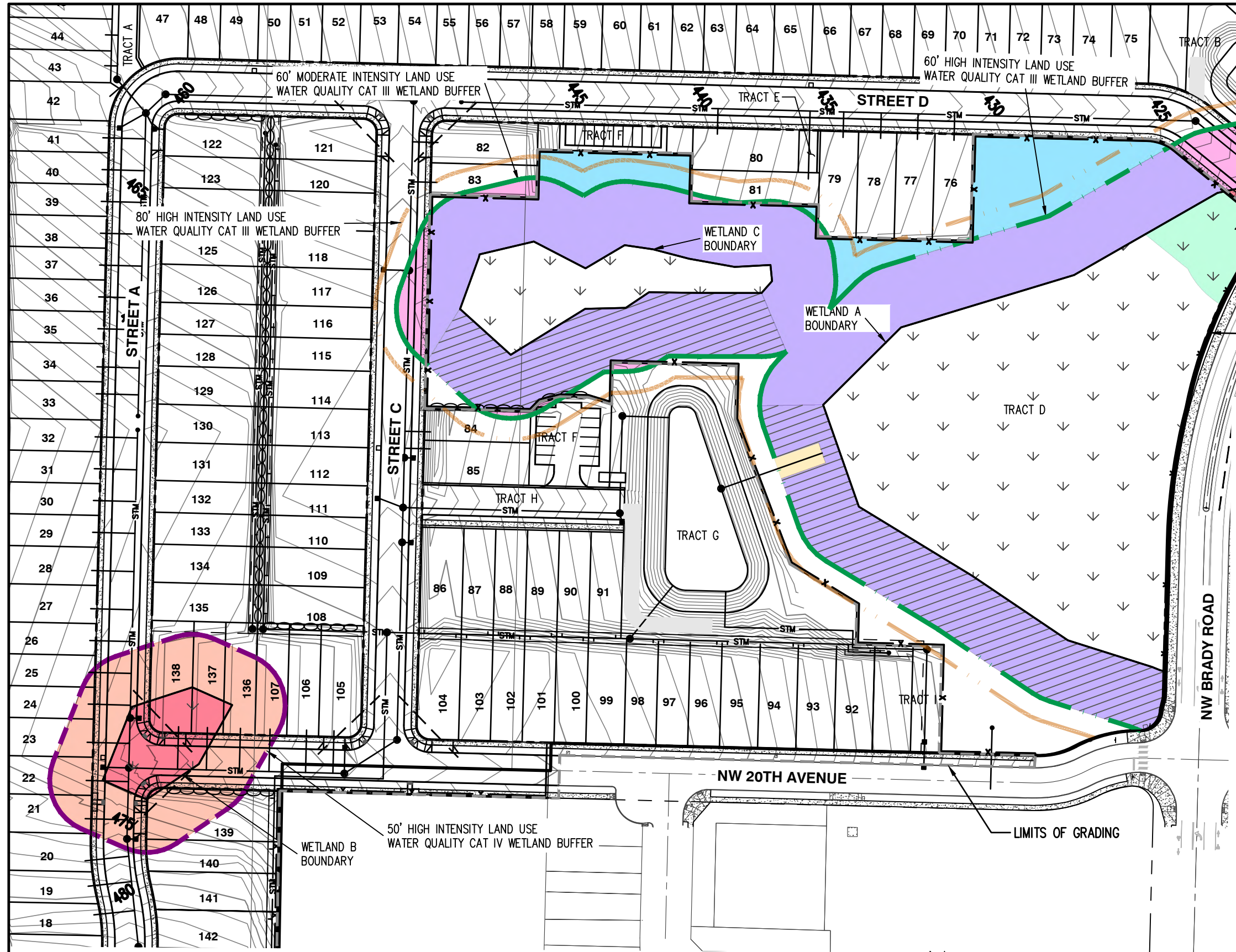
WETLAND BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC (AKS) ON MAY 15, 2025. WETLAND BOUNDARIES WERE LOCATED WITH SUB-METER ACCURACY USING AN R10 GPS RECEIVER AND ARCGIS FIELD MAPS.



DATE: 08/28/2025

CRITICAL AREAS SITE PLAN (OVERVIEW)	FIGURE
STELLA RIDGE CRITICAL AREAS REPORT	9
AKS ENGINEERING & FORESTRY, LLC 9600 NE 126TH AVE, STE 2520 VANCOUVER, WA 98682 360.882.0419 WWW.AKS-ENG.COM	DRWN: GPM CHKD: SAR AKS JOB: 12107

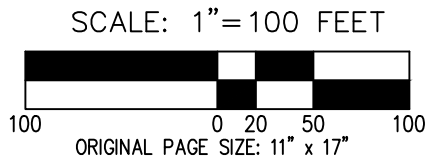
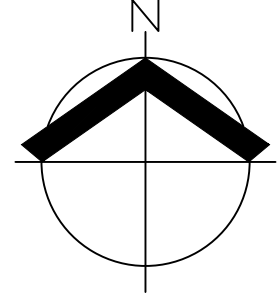




- LEGEND (COLOR COPY):**
- TOTAL ON-SITE WETLAND AREA TO REMAIN:
CAT III PEM/DEPRESSIONAL WETLAND A AREA:
83,216 SF± (1.91 ACRES±)
CAT III PFO/PEM/SLOPE WETLAND C AREA: 437 SF± (0.01 ACRES±)
 - EXISTING 50' HIGH INTENSITY LAND USE WATER QUALITY CATEGORY IV WETLAND BUFFER
 - EXISTING 80' HIGH INTENSITY LAND USE WATER QUALITY CATEGORY III WETLAND BUFFER
 - PROPOSED 60' MODERATE INTENSITY LAND USE WATER QUALITY CATEGORY III WETLAND BUFFER
 - DIRECT PERMANENT WETLAND IMPACT AREA TO BE MITIGATED THROUGH WETLAND BANK CREDITS: 8,824 SF± (0.20 ACRES±)
 - INDIRECT PERMANENT WETLAND IMPACT AREA TO BE MITIGATED THROUGH WETLAND BANK CREDITS: 6,218 SF± (0.14 ACRES±)
 - WETLAND BUFFER AREA TO REMAIN: 55,522 SF± (1.28 ACRES±)
 - WETLAND BUFFER AREA TO BE ENHANCED: 47,628 SF± (1.09 ACRES±)
 - WETLAND BUFFER AREA TO BE MITIGATED THROUGH WETLAND BANK CREDITS: 25,022 SF± (0.57 ACRES±)
 - WETLAND BUFFER TEMPORARY IMPACT AREA TO BE ENHANCED: 881 SF± (0.02 ACRES±)
 - WETLAND BUFFER PERMANENT IMPACT AREA TO BE MITIGATED THROUGH BUFFER AVERAGING: 11,222 SF± (0.26 ACRES±)
 - WETLAND BUFFER AVERAGING: 18,906 SF± (0.43 ACRES±)
 - PERMANENT PERIMETER FENCING AND SIGNAGE

DWG: 12107 CA SITE PLAN | FIGURE 9A

WETLAND BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC (AKS) ON MAY 15, 2025. WETLAND BOUNDARIES WERE LOCATED WITH SUB-METER ACCURACY USING AN R10 GPS RECEIVER AND ARCGIS FIELD MAPS.



DATE: 08/28/2025

CRITICAL AREAS SITE PLAN		FIGURE
STELLA RIDGE CRITICAL AREAS REPORT		9A
AKS ENGINEERING & FORESTRY, LLC 9600 NE 126TH AVE, STE 2520 VANCOUVER, WA 98682 360.882.0419 WWW.AKS-ENG.COM		DRWN: GPM CHKD: SAR AKS JOB: 12107





Appendix A: Wetland Determination Data Forms

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

Project/Site: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 1
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>75</u> x 2 = <u>150</u>
1. _____	_____	_____	_____	FAC species <u>23</u> x 3 = <u>69</u>
2. _____	_____	_____	_____	FACU species <u>2</u> x 4 = <u>8</u>
3. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>227</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.27</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Phalaris arundinacea</u>	<u>75%</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Lotus corniculatus</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Poa pratensis</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Anthoxanthum odoratum</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>0%</u>				

Remarks:

SOIL							Sampling Point:	1
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-5	10YR 3/2	100					SiL	
5-9	10YR 3/2	95	7.5YR 3/4	5	C	M	SiL	
9-13	10YR 3/2	90	7.5YR 3/4	10	C	M	SiL	
13-16	10YR 4/2	90	7.5YR 3/4	10	C	M	SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay) 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):						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input checked="" type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
Restrictive Layer (if present):						Hydric Soil Present?		
Type: _____						Yes <input checked="" type="checkbox"/> No _____		
Depth (inches): _____								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>						<u>Secondary Indicators (2 or more required)</u>		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input checked="" type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)			<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Frost-Heave Hummocks (D7)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)								
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
Field Observations:						Wetland Hydrology Present?		
Surface Water Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches):	_____		Yes <input checked="" type="checkbox"/> No _____		
Water Table Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches):	_____ >16				
Saturation Present? (includes capillary fringe)	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches):	_____ >16				
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 2
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>10</u> x 2 = <u>20</u>
1. _____	_____	_____	_____	FAC species <u>32</u> x 3 = <u>96</u>
2. _____	_____	_____	_____	FACU species <u>58</u> x 4 = <u>232</u>
3. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>348</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.48</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Anthoxanthum odoratum</u>	<u>58%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Lotus corniculatus</u>	<u>15%</u>	<u>No</u>	<u>FAC</u>	
3. <u>Phalaris arundinacea</u>	<u>10%</u>	<u>No</u>	<u>FACW</u>	
4. <u>Cirsium arvense</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Alopecurus pratensis</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
6. <u>Poa pratensis</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100% = Total Cover				1 - Rapid Test for Hydrophytic Vegetation
Woody Vine Stratum (Plot Size: 10' r or _____)				2 - Dominance Test is >50%
1. _____	_____	_____	_____	3 - Prevalence Index is ≤3.0 ¹
2. _____	_____	_____	_____	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
0% = Total Cover				5 - Wetland Non-Vascular Plants ¹
% Bare Ground in Herb Stratum <u>0%</u>				Problematic Hydrophytic Vegetation (Explain) ¹
				¹ Indicators of hydric soil and wetland hydrology must be present.
				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>

Remarks:

SOIL							Sampling Point:	2
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-10	10YR 3/2	100	_____	_____	_____	_____	SiL	_____
10-16	10YR 3/2	97	7.5YR 3/4	3	C	M	SiL	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)								
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):						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> _____			<input type="checkbox"/> _____					
Restrictive Layer (if present):						Hydric Soil		
Type: _____ Depth (inches): _____						Present? Yes _____ No X _____		
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>						<u>Secondary Indicators (2 or more required)</u>		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)			<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Frost-Heave Hummocks (D7)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> _____			<input type="checkbox"/> _____		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<input type="checkbox"/> _____			<input type="checkbox"/> _____		
Field Observations:								
Surface Water Present? Yes _____ No X _____		Depth (inches): _____				Wetland Hydrology Present? Yes _____ No X _____		
Water Table Present? Yes _____ No X _____		Depth (inches): <u>>16</u> _____						
Saturation Present? Yes _____ No X _____ (includes capillary fringe)		Depth (inches): <u>>16</u> _____						
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 3
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____		Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
5. _____	_____	_____	_____		Total % Cover of: _____ Multiply by: _____
0% = Total Cover				OBL species <u>10</u> x 1 = <u>10</u>	
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>70</u> x 2 = <u>140</u>	
1. _____	_____	_____	_____	FAC species <u>17</u> x 3 = <u>51</u>	
2. _____	_____	_____	_____	FACU species <u>3</u> x 4 = <u>12</u>	
3. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>	
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>213</u> (B)	
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.13</u>	
0% = Total Cover				Hydrophytic Vegetation Indicators:	
Herb Stratum (Plot Size: 5' r or _____)					1 - Rapid Test for Hydrophytic Vegetation
1. <u>Phalaris arundinacea</u>	<u>60%</u>	<u>Yes</u>	<u>FACW</u>		2 - Dominance Test is >50%
2. <u>Carex densa</u>	<u>10%</u>	<u>No</u>	<u>OBL</u>		3 - Prevalence Index is ≤3.0 ¹
3. <u>Carex feta</u>	<u>10%</u>	<u>No</u>	<u>FACW</u>		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Lotus corniculatus</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>		5 - Wetland Non-Vascular Plants ¹
5. <u>Cirsium arvense</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		Problematic Hydrophytic Vegetation (Explain) ¹
6. <u>Anthoxanthum odoratum</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>		¹ Indicators of hydric soil and wetland hydrology must be present.
7. <u>Poa pratensis</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
100% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum <u>0%</u>					

Remarks:

SOIL							Sampling Point:	3
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-7	10YR 3/2	100					SiL	
7-11	10YR 3/2	95	7.5YR 3/4	5	C	M	SiL	
11-16	10YR 3/2	85	7.5YR 3/4	15	C	M	SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)								
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):						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input checked="" type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
Restrictive Layer (if present):						Hydric Soil Present?		
Type: _____						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): _____								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>						<u>Secondary Indicators (2 or more required)</u>		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input checked="" type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)			<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Frost-Heave Hummocks (D7)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)								
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
Field Observations:						Wetland Hydrology Present?		
Surface Water Present?		Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): _____		Yes <input checked="" type="checkbox"/> No _____		
Water Table Present?		Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): >16				
Saturation Present? (includes capillary fringe)		Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): >16				
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 4
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____		Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)	
0% = Total Cover					
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				Prevalence Index worksheet:	
1. _____	_____	_____	_____		Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4. _____	_____	_____	_____	FAC species <u>30</u> x 3 = <u>90</u>	
5. _____	_____	_____	_____	FACU species <u>69</u> x 4 = <u>276</u>	
0% = Total Cover				UPL species <u>1</u> x 5 = <u>5</u>	
Herb Stratum (Plot Size: 5' r or _____)				Column Totals: <u>100</u> (A) <u>371</u> (B)	
1. <u>Anthoxanthum odoratum</u>	<u>69%</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index = B/A = <u>3.71</u>	
2. <u>Lotus corniculatus</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
3. <u>Cirsium arvense</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>		1 - Rapid Test for Hydrophytic Vegetation
4. <u>Vicia hirsuta</u>	<u>1%</u>	<u>No</u>	<u>NOL</u>		2 - Dominance Test is >50%
5. _____	_____	_____	_____		3 - Prevalence Index is ≤3.0 ¹
6. _____	_____	_____	_____		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7. _____	_____	_____	_____		5 - Wetland Non-Vascular Plants ¹
8. _____	_____	_____	_____		Problematic Hydrophytic Vegetation (Explain) ¹
9. _____	_____	_____	_____		¹ Indicators of hydric soil and wetland hydrology must be present.
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
100% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum <u>0%</u>					

Remarks:

SOIL							Sampling Point: 4
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):							
Depth	Matrix		Redox Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰
0-10	10YR 3/2	100					SiL
10-16	10YR 3/2	90	7.5YR 4/6	10	C	M	SiL

⁰Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
--	---

³Indicators 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 X _____
--	--

Remarks:

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (2 or more required)</u> <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)
--	--

Field Observations: Surface Water Present? Yes _____ No X _____ Depth (inches): _____ Water Table Present? Yes _____ No X _____ Depth (inches): <u>>16</u> Saturation Present? Yes _____ No X _____ Depth (inches): <u>>16</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No X _____
--	--

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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 5
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Odne silt loam, 0 to 5 percent slopes (Unit OdB) - Hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>64</u> x 2 = <u>128</u>
1. _____	_____	_____	_____	FAC species <u>31</u> x 3 = <u>93</u>
2. _____	_____	_____	_____	FACU species <u>5</u> x 4 = <u>20</u>
3. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>241</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.41</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Phalaris arundinacea</u>	<u>64%</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Lotus corniculatus</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Anthoxanthum odoratum</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Poa pratensis</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>0%</u>				

Remarks:

Hydrophytic Vegetation Present? Yes X No _____

SOIL							Sampling Point:	5
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-6	10YR 3/2	100					SiL	
6-16	10YR 3/2	90	7.5YR	10	C	M	SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)								
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):					Indicators for Problematic Hydric Soils³:			
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input checked="" type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
						³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
Restrictive Layer (if present):						Hydric Soil Present?		
Type: _____						Yes <input checked="" type="checkbox"/> No _____		
Depth (inches): _____								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>					<u>Secondary Indicators (2 or more required)</u>			
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input checked="" type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)			<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Frost-Heave Hummocks (D7)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)								
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
Field Observations:						Wetland Hydrology Present?		
Surface Water Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): _____			Yes <input checked="" type="checkbox"/> No _____		
Water Table Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): <u>>16</u>					
Saturation Present? (includes capillary fringe)	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): <u>>16</u>					
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 6
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): <5
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>65</u> x 2 = <u>130</u>
1. _____	_____	_____	_____	FAC species <u>30</u> x 3 = <u>90</u>
2. _____	_____	_____	_____	FACU species <u>5</u> x 4 = <u>20</u>
3. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>240</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.40</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Phalaris arundinacea</u>	<u>65%</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Lotus corniculatus</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Poa pratensis</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Anthoxanthum odoratum</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
5. <u>Alopecurus pratensis</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100% = Total Cover				1 - Rapid Test for Hydrophytic Vegetation
Woody Vine Stratum (Plot Size: 10' r or _____)				<u>X</u> 2 - Dominance Test is >50%
1. _____	_____	_____	_____	3 - Prevalence Index is ≤3.0 ¹
2. _____	_____	_____	_____	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
0% = Total Cover				5 - Wetland Non-Vascular Plants ¹
% Bare Ground in Herb Stratum <u>0%</u>				Problematic Hydrophytic Vegetation (Explain) ¹
				¹ Indicators of hydric soil and wetland hydrology must be present.
				Hydrophytic Vegetation Present? Yes <u>X</u> No _____

Remarks:

SOIL **Sampling Point: 6**

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

Depth (inches)	Matrix		Redox Features				Texture ⁰	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 3/2	100					SiL	
9-16	10YR 3/2	97	7.5YR 4/4	3	C	M	SiL	

⁰Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

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

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators 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 X _____
--	--

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No X _____	Yes _____ No X _____
Water Table Present? Yes _____ No X _____	
Saturation Present? Yes _____ No X _____	
(includes capillary fringe)	

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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 7
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <5
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>10</u> x 1 = <u>10</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>45</u> x 2 = <u>90</u>
1. _____	_____	_____	_____	FAC species <u>40</u> x 3 = <u>120</u>
2. _____	_____	_____	_____	FACU species <u>5</u> x 4 = <u>20</u>
3. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>240</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.40</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Phalaris arundinacea</u>	<u>45%</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Lotus corniculatus</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Poa pratensis</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Carex densa</u>	<u>10%</u>	<u>No</u>	<u>OBL</u>	
5. <u>Anthoxanthum odoratum</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>0%</u>				

Remarks:

SOIL							Sampling Point:	7
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-6	10YR 3/2	100					SiL	
6-16	10YR 3/2	90	7.5YR 3/4	10			SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay) 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):						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> 2 cm Muck (A10)					
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Red Parent Material (TF2)					
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)							
						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 <input checked="" type="checkbox"/> No _____		
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>						<u>Secondary Indicators (2 or more required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)		<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input checked="" type="checkbox"/> Geomorphic Position (D2)					
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)		<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)					
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Frost-Heave Hummocks (D7)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)								
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
Field Observations:								
Surface Water Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): _____			Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____		
Water Table Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): <u>>16</u>					
Saturation Present? (includes capillary fringe)	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): <u>>16</u>					
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 8
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): <10
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>1</u> x 1 = <u>1</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>0</u> x 2 = <u>0</u>
1. _____	_____	_____	_____	FAC species <u>56</u> x 3 = <u>168</u>
2. _____	_____	_____	_____	FACU species <u>43</u> x 4 = <u>172</u>
3. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>341</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.41</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Anthoxanthum odoratum</u>	<u>43%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Lotus corniculatus</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Alopecurus pratensis</u>	<u>15%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Poa pratensis</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Cirsium arvense</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
6. <u>Carex densa</u>	<u>1%</u>	<u>No</u>	<u>OBL</u>	
7. <u>Rumex crispus</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>0%</u>				

Remarks:

SOIL								Sampling Point: 8															
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):																							
Depth	Matrix		Redox Features																				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks															
0-10	10YR 3/2	100																					
10-16	10YR 3/2	90	7.5YR 3/4	10	C	M	SiL																
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)																							
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):					Indicators for Problematic Hydric Soils³:																		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> 2 cm Muck (A10)																		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Red Parent Material (TF2)																		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)																		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Other (Explain in Remarks)																		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.																		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)																				
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)																				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)																				
<input type="checkbox"/> Depleted Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)																				
Restrictive Layer (if present):					<table style="width:100%; border:none;"> <tr> <td style="text-align:center">Hydric Soil</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align:center">Present?</td> <td style="text-align:center">Yes</td> <td style="text-align:center">_____</td> <td style="text-align:center">No</td> <td style="text-align:center">_____ X</td> </tr> </table>				Hydric Soil					Present?	Yes	_____	No	_____ X					
Hydric Soil																							
Present?	Yes	_____	No	_____ X																			
Type: _____																							
Depth (inches): _____																							
Remarks:																							
HYDROLOGY																							
Wetland Hydrology Indicators:																							
Primary Indicators (minimum of one required; check all that apply)					Secondary Indicators (2 or more required)																		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)		<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)																		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Drainage Patterns (B10)																		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Dry-Season Water Table (C2)																		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Geomorphic Position (D2)																		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Shallow Aquitard (D3)																		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> FAC-Neutral Test (D5)																		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)		<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)																		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Frost-Heave Hummocks (D7)																		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)																							
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																							
Field Observations:					<table style="width:100%; border:none;"> <tr> <td style="text-align:center">Wetland</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align:center">Hydrology</td> <td style="text-align:center">Yes</td> <td style="text-align:center">_____</td> <td style="text-align:center">No</td> <td style="text-align:center">_____ X</td> </tr> <tr> <td style="text-align:center">Present?</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				Wetland					Hydrology	Yes	_____	No	_____ X	Present?				
Wetland																							
Hydrology	Yes	_____	No	_____ X																			
Present?																							
Surface Water Present?		Yes _____	No _____ X	Depth (inches): _____																			
Water Table Present?		Yes _____	No _____ X	Depth (inches): _____ >16																			
Saturation Present? (includes capillary fringe)		Yes _____	No _____ X	Depth (inches): _____ >16																			
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 9
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Odne silt loam, 0 to 5 percent slopes (Unit OdB) - Hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>45</u> x 2 = <u>90</u>
1. _____	_____	_____	_____	FAC species <u>50</u> x 3 = <u>150</u>
2. _____	_____	_____	_____	FACU species <u>5</u> x 4 = <u>20</u>
3. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>260</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.60</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Phalaris arundinacea</u>	<u>45%</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Lotus corniculatus</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Alopecurus pratensis</u>	<u>15%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Poa pratensis</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Anthoxanthum odoratum</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>0%</u>				

Remarks:

SOIL							Sampling Point:	9
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-7	10YR 3/2	100					SiL	
7-13	10YR 3/2	90	7.5YR 3/4	10	C	M	SiL	
13-16	10YR 4/2	90	7.5YR 4/6	10	C	M	SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay) 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):					Indicators for Problematic Hydric Soils³:			
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input checked="" type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
Restrictive Layer (if present):						Hydric Soil Present?		
Type: _____						Yes <input checked="" type="checkbox"/> No _____		
Depth (inches): _____								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>					<u>Secondary Indicators (2 or more required)</u>			
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input checked="" type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)			<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Frost-Heave Hummocks (D7)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)								
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
Field Observations:						Wetland Hydrology Present?		
Surface Water Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): _____			Yes <input checked="" type="checkbox"/> No _____		
Water Table Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): <u>>16</u>					
Saturation Present? (includes capillary fringe)	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): <u>>16</u>					
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 10
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): <5
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____		Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
5. _____	_____	_____	_____		Total % Cover of: _____ Multiply by: _____
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>	
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>10</u> x 2 = <u>20</u>	
1. <u>Rubus armeniacus</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	FAC species <u>32</u> x 3 = <u>96</u>	
2. _____	_____	_____	_____	FACU species <u>58</u> x 4 = <u>232</u>	
3. _____	_____	_____	_____	UPL species <u>2</u> x 5 = <u>10</u>	
4. _____	_____	_____	_____	Column Totals: <u>102</u> (A) <u>358</u> (B)	
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.51</u>	
2% = Total Cover				Hydrophytic Vegetation Indicators:	
Herb Stratum (Plot Size: 5' r or _____)					1 - Rapid Test for Hydrophytic Vegetation
1. <u>Anthoxanthum odoratum</u>	<u>52%</u>	<u>Yes</u>	<u>FACU</u>		2 - Dominance Test is >50%
2. <u>Lotus corniculatus</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>		3 - Prevalence Index is ≤3.0 ¹
3. <u>Phalaris arundinacea</u>	<u>10%</u>	<u>No</u>	<u>FACW</u>		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Poa pratensis</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		5 - Wetland Non-Vascular Plants ¹
5. <u>Bromus hordeaceus</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		Problematic Hydrophytic Vegetation (Explain) ¹
6. <u>Vulpia myuros</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>		¹ Indicators of hydric soil and wetland hydrology must be present.
7. <u>Vicia sativa</u>	<u>1%</u>	<u>No</u>	<u>UPL</u>		
8. <u>Vicia hirsuta</u>	<u>1%</u>	<u>No</u>	<u>NOL</u>		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
100% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum <u>0%</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	

Remarks:

SOIL							Sampling Point:	10
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-9	10YR 3/2	100					SiL	
9-12	10YR 3/2	98	7.5YR 4/4	2	C	M	SiL	
12-15	10YR 3/2	90	7.5YR 4/4	10	C	M	SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay) 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):						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/>			<input type="checkbox"/>					
Restrictive Layer (if present):						Hydric Soil		
Type: _____						Present?		
Depth (inches): _____						Yes _____ No X _____		
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>						<u>Secondary Indicators (2 or more required)</u>		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)			<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Frost-Heave Hummocks (D7)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/>			<input type="checkbox"/>		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<input type="checkbox"/>			<input type="checkbox"/>		
Field Observations:						Wetland Hydrology		
Surface Water Present?		Yes _____	No X _____	Depth (inches): _____		Present?		
Water Table Present?		Yes _____	No X _____	Depth (inches): <u>>15</u>		Yes _____ No X _____		
Saturation Present? (includes capillary fringe)		Yes _____	No X _____	Depth (inches): <u>>15</u>				
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 11
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Odne silt loam, 0 to 5 percent slopes (Unit OdB) - Hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Fraxinus latifolia</u>	<u>25%</u>	<u>Yes</u>	<u>FACW</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
25% = Total Cover					
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				Prevalence Index worksheet:	
1. <u>Salix hookeriana</u>	<u>30%</u>	<u>Yes</u>	<u>FACW</u>		Total % Cover of: _____ Multiply by: _____
2. <u>Rosa nutkana</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	OBL species <u>0</u> x 1 = <u>0</u>	
3. <u>Crataegus monogyna</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	FACW species <u>140</u> x 2 = <u>280</u>	
4. _____	_____	_____	_____	FAC species <u>25</u> x 3 = <u>75</u>	
5. _____	_____	_____	_____	FACU species <u>0</u> x 4 = <u>0</u>	
40% = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>	
Herb Stratum (Plot Size: 5' r or _____)				Column Totals: <u>165</u> (A) <u>355</u> (B)	
1. <u>Phalaris arundinacea</u>	<u>85%</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index = B/A = <u>2.15</u>	
2. <u>Poa pratensis</u>	<u>15%</u>	<u>No</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
3. _____	_____	_____	_____		1 - Rapid Test for Hydrophytic Vegetation
4. _____	_____	_____	_____		<u>X</u> 2 - Dominance Test is >50%
5. _____	_____	_____	_____		3 - Prevalence Index is ≤3.0 ¹
6. _____	_____	_____	_____		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7. _____	_____	_____	_____		5 - Wetland Non-Vascular Plants ¹
8. _____	_____	_____	_____		Problematic Hydrophytic Vegetation (Explain) ¹
9. _____	_____	_____	_____		¹ Indicators of hydric soil and wetland hydrology must be present.
10. _____	_____	_____	_____		Hydrophytic Vegetation Present? Yes <u>X</u> No _____
11. _____	_____	_____	_____		
100% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum	<u>0%</u>				

Remarks:

SOIL							Sampling Point:	11
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-7	10YR 3/2	100					SiL	
7-10	10YR 3/2	95	7.5YR 3/4	5	C	M	SiL	
12-16	10YR 3/2	90	7.5YR 3/4	10	C	M	SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay) 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):					Indicators for Problematic Hydric Soils³:			
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input checked="" type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
Restrictive Layer (if present):						Hydric Soil Present?		
Type: _____						Yes <input checked="" type="checkbox"/> No _____		
Depth (inches): _____								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>					<u>Secondary Indicators (2 or more required)</u>			
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input checked="" type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)			<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Frost-Heave Hummocks (D7)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)								
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
Field Observations:						Wetland Hydrology Present?		
Surface Water Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): _____			Yes <input checked="" type="checkbox"/> No _____		
Water Table Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): <u>>16</u>					
Saturation Present? (includes capillary fringe)	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): <u>>16</u>					
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 12
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): <5
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Odne silt loam, 0 to 5 percent slopes (Unit OdB) - Hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____		Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)	
0% = Total Cover					
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				Prevalence Index worksheet:	
1. <u>Rubus armeniacus</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>		Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4. _____	_____	_____	_____	FAC species <u>15</u> x 3 = <u>45</u>	
5. _____	_____	_____	_____	FACU species <u>75</u> x 4 = <u>300</u>	
5% = Total Cover				UPL species <u>15</u> x 5 = <u>75</u>	
Herb Stratum (Plot Size: 5' r or _____)				Column Totals: <u>105</u> (A) <u>420</u> (B)	
1. <u>Bromus hordeaceus</u>	<u>49%</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index = B/A = <u>4.00</u>	
2. <u>Anthoxanthum odoratum</u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators:	
3. <u>Vicia sativa</u>	<u>15%</u>	<u>No</u>	<u>UPL</u>		1 - Rapid Test for Hydrophytic Vegetation
4. <u>Lotus corniculatus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		2 - Dominance Test is >50%
5. <u>Cirsium arvense</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		3 - Prevalence Index is ≤3.0 ¹
6. <u>Galium aparine</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7. _____	_____	_____	_____		5 - Wetland Non-Vascular Plants ¹
8. _____	_____	_____	_____		Problematic Hydrophytic Vegetation (Explain) ¹
9. _____	_____	_____	_____		¹ Indicators of hydric soil and wetland hydrology must be present.
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
100% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum	<u>0%</u>			Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	

Remarks:

SOIL							Sampling Point:	12
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-11	10YR 3/2	100	_____	_____	_____	_____	SiL	_____
11-16	10YR 4/3	100	_____	_____	_____	_____	SiL	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)								
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):						Indicators for Problematic Hydric Soils³:		
____ Histosol (A1)			____ Sandy Redox (S5)			____ 2 cm Muck (A10)		
____ Histic Epipedon (A2)			____ Stripped Matrix (S6)			____ Red Parent Material (TF2)		
____ Black Histic (A3)			____ Loamy Mucky Mineral (F1) (except MLRA 1)			____ Very Shallow Dark Surface (TF12)		
____ Hydrogen Sulfide (A4)			____ Loamy Gleyed Matrix (F2)			____ Other (Explain in Remarks)		
____ Depleted Below Dark Surface (A11)			____ Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
____ Thick Dark Surface (A12)			____ Redox Dark Surface (F6)					
____ Sandy Mucky Mineral (S1)			____ Depleted Dark Surface (F7)					
____ Sandy Gleyed Matrix (S4)			____ Redox Depressions (F8)					
____			____					
Restrictive Layer (if present):						Hydric Soil Present?		
Type: _____						Yes _____ No <u> X </u>		
Depth (inches): _____								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:						Secondary Indicators (2 or more required)		
<u>Primary Indicators (minimum of one required; check all that apply)</u>								
____ Surface Water (A1)			____ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)			____ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)		
____ High Water Table (A2)			____ Salt Crust (B11)			____ Drainage Patterns (B10)		
____ Saturation (A3)			____ Aquatic Invertebrates (B13)			____ Dry-Season Water Table (C2)		
____ Water Marks (B1)			____ Hydrogen Sulfide Odor (C1)			____ Saturation Visible on Aerial Imagery (C9)		
____ Sediment Deposits (B2)			____ Oxidized Rhizospheres along Living Roots (C3)			____ Geomorphic Position (D2)		
____ Drift Deposits (B3)			____ Presence of Reduced Iron (C4)			____ Shallow Aquitard (D3)		
____ Algal Mat or Crust (B4)			____ Recent Iron Reduction in Tilled Soils (C6)			____ FAC-Neutral Test (D5)		
____ Iron Deposits (B5)			____ Stunted or Stressed Plants (D1) (LRR A)			____ Raised Ant Mounds (D6) (LRR A)		
____ Surface Soil Cracks (B6)			____ Other (Explain in Remarks)			____ Frost-Heave Hummocks (D7)		
____ Inundation Visible on Aerial Imagery (B7)								
____ Sparsely Vegetated Concave Surface (B8)								
Field Observations:						Wetland Hydrology Present?		
Surface Water Present?		Yes _____	No <u> X </u>	Depth (inches): _____		Yes _____ No <u> X </u>		
Water Table Present?		Yes _____	No <u> X </u>	Depth (inches): <u> >16 </u>				
Saturation Present? (includes capillary fringe)		Yes _____	No <u> X </u>	Depth (inches): <u> >16 </u>				
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 13
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Odne silt loam, 0 to 5 percent slopes (Unit OdB) - Hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____		Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
5. _____	_____	_____	_____		Total % Cover of: _____ Multiply by: _____
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>	
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>20</u> x 2 = <u>40</u>	
1. <u>Rubus armeniacus</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	FAC species <u>5</u> x 3 = <u>15</u>	
2. _____	_____	_____	_____	FACU species <u>76</u> x 4 = <u>304</u>	
3. _____	_____	_____	_____	UPL species <u>1</u> x 5 = <u>5</u>	
4. _____	_____	_____	_____	Column Totals: <u>102</u> (A) <u>364</u> (B)	
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.57</u>	
2% = Total Cover				Hydrophytic Vegetation Indicators:	
Herb Stratum (Plot Size: 5' r or _____)					1 - Rapid Test for Hydrophytic Vegetation
1. <u>Bromus hordeaceus</u>	<u>70%</u>	<u>Yes</u>	<u>FACU</u>		2 - Dominance Test is >50%
2. <u>Phalaris arundinacea</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>		3 - Prevalence Index is ≤3.0 ¹
3. <u>Galium aparine</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Poa pratensis</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>		5 - Wetland Non-Vascular Plants ¹
5. <u>Vicia sativa</u>	<u>1%</u>	<u>No</u>	<u>UPL</u>		Problematic Hydrophytic Vegetation (Explain) ¹
6. <u>Cirsium vulgare</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>		¹ Indicators of hydric soil and wetland hydrology must be present.
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
100% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum <u>0%</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	

Remarks:

SOIL							Sampling Point:	13
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-16	10YR 3/2	100					SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)								
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):				Indicators for Problematic Hydric Soils³:				
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)						
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)						
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)						
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)						
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.						
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)							
Restrictive Layer (if present):						Hydric Soil		
Type: _____						Present?		
Depth (inches): _____						Yes _____ No <u> X </u>		
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>				<u>Secondary Indicators (2 or more required)</u>				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2,						
<input type="checkbox"/> High Water Table (A2)	1, 2, 4A, and 4B)	4A, and 4B)						
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)						
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)						
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)						
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)						
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)						
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)						
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)						
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)						
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
Field Observations:						Wetland		
Surface Water Present? Yes _____ No <u> X </u>						Hydrology		
Water Table Present? Yes _____ No <u> X </u>						Yes _____ No <u> X </u>		
Saturation Present? (includes capillary fringe) Yes _____ No <u> X </u>						Present?		
Depth (inches): _____								
Depth (inches): >16								
Depth (inches): >16								
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 14
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <5
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____		Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
5. _____	_____	_____	_____		Total % Cover of: _____ Multiply by: _____
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>	
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>62</u> x 2 = <u>124</u>	
1. _____	_____	_____	_____	FAC species <u>30</u> x 3 = <u>90</u>	
2. _____	_____	_____	_____	FACU species <u>8</u> x 4 = <u>32</u>	
3. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>	
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>246</u> (B)	
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.46</u>	
0% = Total Cover				Hydrophytic Vegetation Indicators:	
Herb Stratum (Plot Size: 5' r or _____)					1 - Rapid Test for Hydrophytic Vegetation
1. <u>Phalaris arundinacea</u>	<u>60%</u>	<u>Yes</u>	<u>FACW</u>		<u>X</u> 2 - Dominance Test is >50%
2. <u>Lotus corniculatus</u>	<u>15%</u>	<u>No</u>	<u>FAC</u>		3 - Prevalence Index is ≤3.0 ¹
3. <u>Poa pratensis</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Bromus hordeaceus</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		5 - Wetland Non-Vascular Plants ¹
5. <u>Alopecurus pratensis</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		Problematic Hydrophytic Vegetation (Explain) ¹
6. <u>Anthoxanthum odoratum</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>		¹ Indicators of hydric soil and wetland hydrology must be present.
7. <u>Carex feta</u>	<u>2%</u>	<u>No</u>	<u>FACW</u>		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
100% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum <u>0%</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	

Remarks:

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

Project/Site: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 15
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): <5
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____		Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)	
0% = Total Cover					
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				Prevalence Index worksheet:	
1. _____	_____	_____	_____		Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3. _____	_____	_____	_____	FACW species <u>45</u> x 2 = <u>90</u>	
4. _____	_____	_____	_____	FAC species <u>30</u> x 3 = <u>90</u>	
5. _____	_____	_____	_____	FACU species <u>25</u> x 4 = <u>100</u>	
0% = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>	
Herb Stratum (Plot Size: 5' r or _____)				Column Totals: <u>100</u> (A) <u>280</u> (B)	
1. <u>Phalaris arundinacea</u>	<u>45%</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index = B/A = <u>2.80</u>	
2. <u>Anthoxanthum odoratum</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators:	
3. <u>Alopecurus pratensis</u>	<u>15%</u>	<u>No</u>	<u>FAC</u>		1 - Rapid Test for Hydrophytic Vegetation
4. <u>Poa pratensis</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>		2 - Dominance Test is >50%
5. <u>Bromus hordeaceus</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		3 - Prevalence Index is ≤3.0 ¹
6. <u>Lotus corniculatus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7. _____	_____	_____	_____		5 - Wetland Non-Vascular Plants ¹
8. _____	_____	_____	_____		Problematic Hydrophytic Vegetation (Explain) ¹
9. _____	_____	_____	_____		¹ Indicators of hydric soil and wetland hydrology must be present.
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
100% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum	<u>0%</u>				

Remarks:

SOIL							Sampling Point: 15	
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	
0-10	10YR 3/2	100					SiL	
10-16	10YR 3/2	95	7.5YR 3/4	5	C	M	SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)								
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):				Indicators for Problematic Hydric Soils³:				
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> 2 cm Muck (A10)				
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Matrix (F3)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Thick Dark Surface (A12)		<input type="checkbox"/> Redox Dark Surface (F6)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Redox Depressions (F8)						
<input type="checkbox"/>		<input type="checkbox"/>						
Restrictive Layer (if present):				Hydric Soil Present?				
Type: _____				Yes _____ No X _____				
Depth (inches): _____								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)				
Primary Indicators (minimum of one required; check all that apply)								
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)		<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)				
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Water Marks (B1)		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Sediment Deposits (B2)		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Geomorphic Position (D2)				
<input type="checkbox"/> Drift Deposits (B3)		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)		<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Frost-Heave Hummocks (D7)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)								
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
Field Observations:				Wetland Hydrology Present?				
Surface Water Present? Yes _____ No X _____		Depth (inches): _____		Yes _____ No X _____				
Water Table Present? Yes _____ No X _____		Depth (inches): >16 _____						
Saturation Present? (includes capillary fringe) Yes _____ No X _____		Depth (inches): >16 _____						
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 16
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____		Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
5. _____	_____	_____	_____		Total % Cover of: _____ Multiply by: _____
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>	
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>5</u> x 2 = <u>10</u>	
1. _____	_____	_____	_____	FAC species <u>25</u> x 3 = <u>75</u>	
2. _____	_____	_____	_____	FACU species <u>70</u> x 4 = <u>280</u>	
3. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>	
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>365</u> (B)	
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.65</u>	
0% = Total Cover				Hydrophytic Vegetation Indicators:	
Herb Stratum (Plot Size: 5' r or _____)					1 - Rapid Test for Hydrophytic Vegetation
1. <u>Anthoxanthum odoratum</u>	<u>60%</u>	<u>Yes</u>	<u>FACU</u>		2 - Dominance Test is >50%
2. <u>Bromus hordeaceus</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>		3 - Prevalence Index is ≤3.0 ¹
3. <u>Holcus lanatus</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Lotus corniculatus</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>		5 - Wetland Non-Vascular Plants ¹
5. <u>Poa pratensis</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		Problematic Hydrophytic Vegetation (Explain) ¹
6. <u>Carex feta</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>		¹ Indicators of hydric soil and wetland hydrology must be present.
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
100% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum <u>0%</u>					

Remarks:

SOIL							Sampling Point: 16	
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-9	10YR 3/2	100					SiL	
9-16	10YR 3/2	95	7.5YR 3/4	5	C	M	SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)								
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):				Indicators for Problematic Hydric Soils³:				
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
Restrictive Layer (if present):				Hydric Soil				
Type: _____				Present? Yes _____ No X _____				
Depth (inches): _____								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)				
<u>Primary Indicators (minimum of one required; check all that apply)</u>								
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2,		
<input type="checkbox"/> High Water Table (A2)			1, 2, 4A, and 4B)			4A, and 4B)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)			<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Frost-Heave Hummocks (D7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
Field Observations:				Wetland Hydrology Present?				
Surface Water Present?	Yes _____	No X _____	Depth (inches): _____		Yes _____ No X _____			
Water Table Present?	Yes _____	No X _____	Depth (inches): >16 _____					
Saturation Present? (includes capillary fringe)	Yes _____	No X _____	Depth (inches): >16 _____					
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 17
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5-10
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>0</u> x 2 = <u>0</u>
1. _____	_____	_____	_____	FAC species <u>30</u> x 3 = <u>90</u>
2. _____	_____	_____	_____	FACU species <u>60</u> x 4 = <u>240</u>
3. _____	_____	_____	_____	UPL species <u>10</u> x 5 = <u>50</u>
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>380</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.80</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Anthoxanthum odoratum</u>	<u>60%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Lotus corniculatus</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Vicia sativa</u>	<u>10%</u>	<u>No</u>	<u>UPL</u>	
4. <u>Cirsium arvense</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100% = Total Cover				1 - Rapid Test for Hydrophytic Vegetation
Woody Vine Stratum (Plot Size: 10' r or _____)				2 - Dominance Test is >50%
1. _____	_____	_____	_____	3 - Prevalence Index is ≤3.0 ¹
2. _____	_____	_____	_____	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
0% = Total Cover				5 - Wetland Non-Vascular Plants ¹
% Bare Ground in Herb Stratum <u>0%</u>				Problematic Hydrophytic Vegetation (Explain) ¹
				¹ Indicators of hydric soil and wetland hydrology must be present.
				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>

Remarks:

SOIL							Sampling Point:	17
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-8	10YR 3/2	100					SiL	
8-11	10YR 3/2	98	7.5YR 4/4	2	C	M	SiL	
11-16	10YR 3/2	95	7.5YR 3/4	5	C	M	SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)								
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):						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/>			<input type="checkbox"/>					
Restrictive Layer (if present):								
Type: _____								
Depth (inches): _____								
						Hydric Soil Present? Yes _____ No X _____		
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>						<u>Secondary Indicators (2 or more required)</u>		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)			<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Frost-Heave Hummocks (D7)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/>			<input type="checkbox"/>		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<input type="checkbox"/>			<input type="checkbox"/>		
Field Observations:								
Surface Water Present?		Yes _____	No X _____	Depth (inches): _____		Wetland Hydrology Present? Yes _____ No X _____		
Water Table Present?		Yes _____	No X _____	Depth (inches): <u>>16</u>				
Saturation Present? (includes capillary fringe)		Yes _____	No X _____	Depth (inches): <u>>16</u>				
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 18
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Fraxinus latifolia</u>	10%	Yes	FACW		Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)	
10% = Total Cover					
Sapling/Shrub Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. <u>Salix species</u>	40%	Yes	FAC*		Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3. _____	_____	_____	_____	FACW species <u>20</u> x 2 = <u>40</u>	
4. _____	_____	_____	_____	FAC species <u>110</u> x 3 = <u>330</u>	
5. _____	_____	_____	_____	FACU species <u>20</u> x 4 = <u>80</u>	
40% = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>	
				Column Totals: <u>150</u> (A) <u>450</u> (B)	
				Prevalence Index = B/A = <u>3.00</u>	
Herb Stratum (Plot Size: 5' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <u>Lotus corniculatus</u>	40%	Yes	FAC		1 - Rapid Test for Hydrophytic Vegetation
2. <u>Ranunculus repens</u>	20%	Yes	FAC		<u>X</u> 2 - Dominance Test is >50%
3. <u>Anthoxanthum odoratum</u>	20%	Yes	FACU		3 - Prevalence Index is ≤3.0 ¹
4. <u>Phalaris arundinacea</u>	10%	No	FACW		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <u>Holcus lanatus</u>	5%	No	FAC		5 - Wetland Non-Vascular Plants ¹
6. <u>Poa pratensis</u>	5%	No	FAC		Problematic Hydrophytic Vegetation (Explain) ¹
7. _____	_____	_____	_____		¹ Indicators of hydric soil and wetland hydrology must be present.
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
100% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum <u>0%</u>					

Remarks:

SOIL	Sampling Point: 18
-------------	---------------------------

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

Depth (inches)	Matrix		Redox Features				Texture ⁰	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/2	95	7.5YR 3/4	5	C	M/PL	SiL	
5-16	10YR 3/2	90	7.5YR 3/4	10	C	M	SiL	

⁰Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

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

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

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1)
<input type="checkbox"/> Histic Epipedon (A2)
<input type="checkbox"/> Black Histic (A3)
<input type="checkbox"/> Hydrogen Sulfide (A4)
<input type="checkbox"/> Depleted Below Dark Surface (A11)
<input type="checkbox"/> Thick Dark Surface (A12)
<input type="checkbox"/> Sandy Mucky Mineral (S1)
<input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)
<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Matrix (F3)
<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Redox Depressions (F8) |
|--|--|

Indicators for Problematic Hydric Soils³:

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

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

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)

- | | |
|---|--|
| <input type="checkbox"/> Surface Water (A1)
<input type="checkbox"/> High Water Table (A2)
<input type="checkbox"/> Saturation (A3)
<input type="checkbox"/> Water Marks (B1)
<input type="checkbox"/> Sediment Deposits (B2)
<input type="checkbox"/> Drift Deposits (B3)
<input type="checkbox"/> Algal Mat or Crust (B4)
<input type="checkbox"/> Iron Deposits (B5)
<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)
<input type="checkbox"/> 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 <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): >16
Saturation Present? (includes capillary fringe)	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): >16

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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 19
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5-10
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Fraxinus latifolia</u>	10%	Yes	FACW		Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)	
10% = Total Cover					
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				Prevalence Index worksheet:	
1. <u>Rubus armeniacus</u>	30%	Yes	FAC		Total % Cover of: _____ Multiply by: _____
2. <u>Rosa nutkana</u>	5%	No	FAC	OBL species <u>0</u> x 1 = <u>0</u>	
3. <u>Corylus cornuta</u>	5%	No	FACU	FACW species <u>15</u> x 2 = <u>30</u>	
4. _____	_____	_____	_____	FAC species <u>55</u> x 3 = <u>165</u>	
5. _____	_____	_____	_____	FACU species <u>80</u> x 4 = <u>320</u>	
40% = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>	
Herb Stratum (Plot Size: 5' r or _____)				Column Totals: <u>150</u> (A) <u>515</u> (B)	
1. <u>Anthoxanthum odoratum</u>	74%	Yes	FACU	Prevalence Index = B/A = <u>3.43</u>	
2. <u>Lotus corniculatus</u>	15%	No	FAC	Hydrophytic Vegetation Indicators:	
3. <u>Ranunculus repens</u>	5%	No	FAC		1 - Rapid Test for Hydrophytic Vegetation
4. <u>Phalaris arundinacea</u>	5%	No	FACW		<u>X</u> 2 - Dominance Test is >50%
5. <u>Tellima grandiflora</u>	1%	No	FACU		3 - Prevalence Index is ≤3.0 ¹
6. _____	_____	_____	_____		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7. _____	_____	_____	_____		5 - Wetland Non-Vascular Plants ¹
8. _____	_____	_____	_____		Problematic Hydrophytic Vegetation (Explain) ¹
9. _____	_____	_____	_____		¹ Indicators of hydric soil and wetland hydrology must be present.
10. _____	_____	_____	_____		Hydrophytic Vegetation Present? Yes <u>X</u> No _____
11. _____	_____	_____	_____		
100% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum	<u>0%</u>				

Remarks:

SOIL	Sampling Point: 19
-------------	---------------------------

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

Depth (inches)	Matrix		Redox Features				Texture ⁰	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/2	100					SiL	
10-16	10YR 3/2	95	7.5YR 3/4	5	C	M	SiL	

⁰Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

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

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

Indicators for Problematic Hydric Soils³:

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

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

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

Restrictive Layer (if present):

Hydric Soil

Present? Yes No

Type: _____
Depth (inches): _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

- | | | |
|--|---|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Frost-Heave Hummocks (D7) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | |

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): >16
 Saturation Present? Yes No Depth (inches): >16
 (includes capillary fringe)

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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 20
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>5</u> x 2 = <u>10</u>
1. _____	_____	_____	_____	FAC species <u>40</u> x 3 = <u>120</u>
2. _____	_____	_____	_____	FACU species <u>50</u> x 4 = <u>200</u>
3. _____	_____	_____	_____	UPL species <u>5</u> x 5 = <u>25</u>
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>355</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.55</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Anthoxanthum odoratum</u>	<u>50%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Ranunculus repens</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Lotus corniculatus</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
4. <u>Phalaris arundinacea</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>	
5. <u>Vicia sativa</u>	<u>5%</u>	<u>No</u>	<u>UPL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>0%</u>				

Remarks:

SOIL	Sampling Point: 20
-------------	--

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

Depth (inches)	Matrix		Redox Features				Texture ⁰	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	100					SiL	
12-16	10YR 3/2	95	7.5YR 3/4	5	C	M	SiL	

⁰Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> 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 <u> X </u>
--	---

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations: Surface Water Present? Yes _____ No <u> X </u> Depth (inches): _____ Water Table Present? Yes _____ No <u> X </u> Depth (inches): <u> >16 </u> Saturation Present? Yes _____ No <u> X </u> Depth (inches): <u> >16 </u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u> X </u>
---	---

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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 21
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): <5
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Acer macrophyllum</u>	<u>40%</u>	<u>Yes</u>	<u>FACU</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
40% = Total Cover					
Sapling/Shrub Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. <u>Corylus cornuta</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>		Total % Cover of: _____ Multiply by: _____
2. <u>Symphoricarpos albus</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	OBL species <u>0</u> x 1 = <u>0</u>	
3. <u>Acer circinatum</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	FACW species <u>0</u> x 2 = <u>0</u>	
4. _____	_____	_____	_____	FAC species <u>8</u> x 3 = <u>24</u>	
5. _____	_____	_____	_____	FACU species <u>57</u> x 4 = <u>228</u>	
45% = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>	
				Column Totals: <u>65</u> (A) <u>252</u> (B)	
				Prevalence Index = B/A = <u>3.88</u>	
Herb Stratum (Plot Size: 5' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <u>Polystichum munitum</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		1 - Rapid Test for Hydrophytic Vegetation
2. <u>Tellima grandiflora</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		2 - Dominance Test is >50%
3. <u>Geranium robertianum</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>		3 - Prevalence Index is ≤3.0 ¹
4. <u>Geum macrophyllum</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <u>Ranunculus repens</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>		5 - Wetland Non-Vascular Plants ¹
6. <u>Galium aparine</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>		Problematic Hydrophytic Vegetation (Explain) ¹
7. <u>Claytonia sibirica</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>		¹ Indicators of hydric soil and wetland hydrology must be present.
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
15% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Rubus ursinus</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>		
2. _____	_____	_____	_____		
5% = Total Cover					
% Bare Ground in Herb Stratum <u>85%</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	

Remarks:

SOIL							Sampling Point:	21
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-13	10YR 3/2	100					SiL	
13-16	10YR 4/3	100					SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)								
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):						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/>			<input type="checkbox"/>					
Restrictive Layer (if present):						Hydric Soil		
Type: _____						Present?		
Depth (inches): _____						Yes _____ No X _____		
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>						<u>Secondary Indicators (2 or more required)</u>		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)			<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Frost-Heave Hummocks (D7)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)								
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
Field Observations:						Wetland Hydrology		
Surface Water Present?		Yes _____	No X _____	Depth (inches): _____		Present?		
Water Table Present?		Yes _____	No X _____	Depth (inches): <u>>16</u>		Yes _____ No X _____		
Saturation Present? (includes capillary fringe)		Yes _____	No X _____	Depth (inches): <u>>16</u>				
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 22
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Fraxinus latifolia</u>	<u>80%</u>	<u>Yes</u>	<u>FACW</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>6</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
80% = Total Cover					Total % Cover of: _____ Multiply by: _____
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				OBL species <u>20</u> x 1 = <u>20</u>	
1. <u>Rosa nutkana</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	FACW species <u>90</u> x 2 = <u>180</u>	
2. <u>Lonicera involucrata</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	FAC species <u>72</u> x 3 = <u>216</u>	
3. _____	_____	_____	_____	FACU species <u>1</u> x 4 = <u>4</u>	
4. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>	
5. _____	_____	_____	_____	Column Totals: <u>183</u> (A) <u>420</u> (B)	
20% = Total Cover				Prevalence Index = B/A = <u>2.30</u>	
Herb Stratum (Plot Size: 5' r or _____)				Hydrophytic Vegetation Indicators:	
1. <u>Carex pachystachya</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>		<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Carex leptopoda</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>		<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Veronica americana</u>	<u>20%</u>	<u>Yes</u>	<u>OBL</u>		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. <u>Stachys chamissonis</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>		<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <u>Juncus effusus</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>		<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹
6. <u>Claytonia sibirica</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>		<input type="checkbox"/> Problematic Hydrophytic Vegetation (Explain) ¹
7. <u>Geum macrophyllum</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>		¹ Indicators of hydric soil and wetland hydrology must be present.
8. <u>Ranunculus parviflorus</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
83% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum	<u>17%</u>			Hydrophytic Vegetation Present? Yes <u>X</u> No _____	

Remarks:

SOIL	Sampling Point: 22
-------------	---------------------------

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

Depth (inches)	Matrix		Redox Features					Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	
0-3	10YR 3/2	90	7.5YR 3/4	10	C	M	SiL	
3-16	10YR 3/2	80	7.5YR 3/4	20	C	M	SiL	

⁰Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

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

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	--

Remarks:

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (2 or more required)</u> <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)
---	--

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): >16 Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): >16 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	--

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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 23
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5-10
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Fraxinus latifolia</u>	<u>70%</u>	<u>Yes</u>	<u>FACW</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)	
<u>70%</u> = Total Cover					
Sapling/Shrub Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. <u>Symphoricarpos albus</u>	<u>75%</u>	<u>Yes</u>	<u>FACU</u>		Total % Cover of: _____ Multiply by: _____
2. <u>Acer circinatum</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	OBL species <u>0</u> x 1 = <u>0</u>	
3. <u>Amelanchier alnifolia</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	FACW species <u>70</u> x 2 = <u>140</u>	
4. _____	_____	_____	_____	FAC species <u>15</u> x 3 = <u>45</u>	
5. _____	_____	_____	_____	FACU species <u>88</u> x 4 = <u>352</u>	
<u>90%</u> = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>	
				Column Totals: <u>173</u> (A) <u>537</u> (B)	
				Prevalence Index = B/A = <u>3.10</u>	
Herb Stratum (Plot Size: 5' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <u>Polystichum munitum</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		1 - Rapid Test for Hydrophytic Vegetation
2. <u>Circaea alpina</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		2 - Dominance Test is >50%
3. <u>Ranunculus parviflorus</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>		3 - Prevalence Index is ≤3.0 ¹
4. <u>Tellima grandiflora</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <u>Fragaria vesca</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>		5 - Wetland Non-Vascular Plants ¹
6. _____	_____	_____	_____		Problematic Hydrophytic Vegetation (Explain) ¹
7. _____	_____	_____	_____		¹ Indicators of hydric soil and wetland hydrology must be present.
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
<u>13%</u> = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
<u>0%</u> = Total Cover					
% Bare Ground in Herb Stratum <u>87%</u>					

Remarks:

SOIL	Sampling Point: 23
-------------	---------------------------

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth (inches)	Matrix		Redox Features				Texture ⁰	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 3/2	100					SiL	

⁰Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

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

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> 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 <u> X </u>
--	--

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (2 or more required) <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations: Surface Water Present? Yes _____ No <u> X </u> Depth (inches): _____ Water Table Present? Yes _____ No <u> X </u> Depth (inches): <u> >16 </u> Saturation Present? Yes _____ No <u> X </u> Depth (inches): <u> >16 </u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u> X </u>
---	--

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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 24
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Fraxinus latifolia</u>	<u>80%</u>	<u>Yes</u>	<u>FACW</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>12</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
80% = Total Cover					Total % Cover of: _____ Multiply by: _____
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				OBL species <u>0</u> x 1 = <u>0</u>	
1. <u>Rosa nutkana</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	FACW species <u>95</u> x 2 = <u>190</u>	
2. <u>Physocarpus capitatus</u>	<u>10%</u>	<u>Yes</u>	<u>FACW</u>	FAC species <u>35</u> x 3 = <u>105</u>	
3. _____	_____	_____	_____	FACU species <u>15</u> x 4 = <u>60</u>	
4. _____	_____	_____	_____	UPL species <u>5</u> x 5 = <u>25</u>	
5. _____	_____	_____	_____	Column Totals: <u>150</u> (A) <u>380</u> (B)	
25% = Total Cover				Prevalence Index = B/A = <u>2.53</u>	
Herb Stratum (Plot Size: 5' r or _____)				Hydrophytic Vegetation Indicators:	
1. <u>Carex leptopoda</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>		<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Carex pachystachya</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>		<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Tellima grandiflora</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹
4. <u>Claytonia sibirica</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>		<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <u>Nemophila parviflora</u>	<u>5%</u>	<u>Yes</u>	<u>NOL</u>		<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹
6. <u>Ranunculus parviflorus</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>		<input type="checkbox"/> Problematic Hydrophytic Vegetation (Explain) ¹
7. <u>Geum macrophyllum</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>		¹ Indicators of hydric soil and wetland hydrology must be present.
8. <u>Epilobium ciliatum</u>	<u>5%</u>	<u>Yes</u>	<u>FACW</u>		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
40% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. <u>Rubus ursinus</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>		
2. _____	_____	_____	_____		
5% = Total Cover					
% Bare Ground in Herb Stratum	<u>60%</u>			Hydrophytic Vegetation Present? Yes <u>X</u> No _____	

Remarks:

SOIL							Sampling Point: 24	
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	
0-7	10YR 3/2	100					SiL	
7-16	10YR 3/2	95	7.5YR 3/4	5	C	M	SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay) 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):				Indicators for Problematic Hydric Soils³:				
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> 2 cm Muck (A10)		<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)		<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)		<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input checked="" type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Sandy Mucky Mineral (S1)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
Restrictive Layer (if present):						Hydric Soil Present?		
Type: _____						Yes <input checked="" type="checkbox"/> No _____		
Depth (inches): _____								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)				
<u>Primary Indicators (minimum of one required; check all that apply)</u>				<u>Secondary Indicators (2 or more required)</u>				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)		<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input checked="" type="checkbox"/> Geomorphic Position (D2)					
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)					
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)		<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)					
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Frost-Heave Hummocks (D7)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)								
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
Field Observations:						Wetland Hydrology Present?		
Surface Water Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): _____					
Water Table Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): _____					
Saturation Present? (includes capillary fringe)	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): _____					
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 25
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5-10
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____		Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
5. _____	_____	_____	_____		Total % Cover of: _____ Multiply by: _____
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>	
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>5</u> x 2 = <u>10</u>	
1. _____	_____	_____	_____	FAC species <u>20</u> x 3 = <u>60</u>	
2. _____	_____	_____	_____	FACU species <u>55</u> x 4 = <u>220</u>	
3. _____	_____	_____	_____	UPL species <u>20</u> x 5 = <u>100</u>	
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>390</u> (B)	
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.90</u>	
0% = Total Cover				Hydrophytic Vegetation Indicators:	
Herb Stratum (Plot Size: 5' r or _____)					1 - Rapid Test for Hydrophytic Vegetation
1. <u>Anthoxanthum odoratum</u>	<u>55%</u>	<u>Yes</u>	<u>FACU</u>		2 - Dominance Test is >50%
2. <u>Vicia sativa</u>	<u>10%</u>	<u>No</u>	<u>UPL</u>		3 - Prevalence Index is ≤3.0 ¹
3. <u>Vicia hirsuta</u>	<u>10%</u>	<u>No</u>	<u>NOL</u>		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Schedonorus arundinaceus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		5 - Wetland Non-Vascular Plants ¹
5. <u>Lotus corniculatus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		Problematic Hydrophytic Vegetation (Explain) ¹
6. <u>Alopecurus pratensis</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		¹ Indicators of hydric soil and wetland hydrology must be present.
7. <u>Phalaris arundinacea</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>		
8. <u>Cirsium arvense</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>		
9. <u>Myosotis discolor</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
100% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum <u>0%</u>					

Remarks:

SOIL	Sampling Point: 25
-------------	---------------------------

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

Depth (inches)	Matrix		Redox Features					Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	
0-9	10YR 3/2	100					SiL	
9-16	10YR 3/2	95	7.5YR 4/6	5	C	M	SiL	

⁰Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

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

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> 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 <u> X </u>
--	--

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Frost-Heave Hummocks (D7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations:	Wetland Hydrology Present? Yes _____ No <u> X </u>
Surface Water Present? Yes _____ No <u> X </u> Depth (inches): _____	
Water Table Present? Yes _____ No <u> X </u> Depth (inches): <u> >16 </u>	
Saturation Present? Yes _____ No <u> X </u> Depth (inches): <u> >16 </u> (includes capillary fringe)	

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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 26
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>40</u> x 2 = <u>80</u>
1. _____	_____	_____	_____	FAC species <u>40</u> x 3 = <u>120</u>
2. _____	_____	_____	_____	FACU species <u>20</u> x 4 = <u>80</u>
3. _____	_____	_____	_____	UPL species <u>1</u> x 5 = <u>5</u>
4. _____	_____	_____	_____	Column Totals: <u>101</u> (A) <u>285</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.82</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Phalaris arundinacea</u>	<u>40%</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Lotus corniculatus</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Anthoxanthum odoratum</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Poa pratensis</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Alopecurus pratensis</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
6. <u>Vicia sativa</u>	<u>1%</u>	<u>No</u>	<u>UPL</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
101% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>0%</u>				

Remarks:

Hydrophytic Vegetation Present? Yes X No _____

SOIL	Sampling Point: 26
-------------	---------------------------

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

Depth (inches)	Matrix		Redox Features					Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	
0-4	10YR 3/2	100					SiL	
4-16	10YR 3/2	95	7.5YR 4/6	5	C	M	SiL	

⁰Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

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

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

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

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>>16</u>	
Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>>16</u>	

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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 27
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>20</u> x 2 = <u>40</u>
1. _____	_____	_____	_____	FAC species <u>56</u> x 3 = <u>168</u>
2. _____	_____	_____	_____	FACU species <u>10</u> x 4 = <u>40</u>
3. _____	_____	_____	_____	UPL species <u>4</u> x 5 = <u>20</u>
4. _____	_____	_____	_____	Column Totals: <u>90</u> (A) <u>268</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.98</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Alopecurus pratensis</u>	<u>45%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Phalaris arundinacea</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Anthoxanthum odoratum</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Poa pratensis</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Vicia hirsuta</u>	<u>4%</u>	<u>No</u>	<u>NOL</u>	
6. <u>Myosotis discolor</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
90% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>10%</u>				

Remarks:

SOIL							Sampling Point: 27	
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features				Texture ⁰	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/2	100					SiL	
4-16	10YR 3/2	95	10YR 4/6	5	C	M	SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)								
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):				Indicators for Problematic Hydric Soils³:				
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> 2 cm Muck (A10)				
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Matrix (F3)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Thick Dark Surface (A12)		<input checked="" type="checkbox"/> Redox Dark Surface (F6)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Redox Depressions (F8)						
Restrictive Layer (if present):						Hydric Soil		
Type: _____						Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Depth (inches): _____								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one required; check all that apply)				Secondary Indicators (2 or more required)				
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA		<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2,				
<input type="checkbox"/> High Water Table (A2)		1, 2, 4A, and 4B)		4A, and 4B)				
<input type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Water Marks (B1)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Sediment Deposits (B2)		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Drift Deposits (B3)		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input checked="" type="checkbox"/> Geomorphic Position (D2)				
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)		<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Frost-Heave Hummocks (D7)				
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
Field Observations:						Wetland		
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>		Depth (inches): _____		Hydrology Present? Yes <input checked="" type="checkbox"/> No _____				
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>		Depth (inches): <u> >16 </u>						
Saturation Present? Yes _____ No <input checked="" type="checkbox"/>		Depth (inches): <u> >16 </u>						
(includes capillary fringe)								
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 28
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5-10
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>0</u> x 2 = <u>0</u>
1. _____	_____	_____	_____	FAC species <u>35</u> x 3 = <u>105</u>
2. _____	_____	_____	_____	FACU species <u>37</u> x 4 = <u>148</u>
3. _____	_____	_____	_____	UPL species <u>18</u> x 5 = <u>90</u>
4. _____	_____	_____	_____	Column Totals: <u>90</u> (A) <u>343</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.81</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Poa pratensis</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Anthoxanthum odoratum</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Vicia sativa</u>	<u>10%</u>	<u>No</u>	<u>UPL</u>	
4. <u>Schedonorus arundinaceus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Plantago lanceolata</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
6. <u>Vicia hirsuta</u>	<u>5%</u>	<u>No</u>	<u>NOL</u>	
7. <u>Lupinus bicolor</u>	<u>3%</u>	<u>No</u>	<u>NOL</u>	
8. <u>Dactylis glomerata</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
90% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>10%</u>				

Remarks:

SOIL	Sampling Point: 28
-------------	---------------------------

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

Depth (inches)	Matrix		Redox Features				Texture ⁰	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 3/2	100					SiL	

⁰Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

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

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> 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 X _____
-----------------------------	-----------	-------------------

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Frost-Heave Hummocks (D7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes _____ No X _____	Depth (inches): _____
Water Table Present?	Yes _____ No X _____	Depth (inches): <u>>16</u>
Saturation Present? (includes capillary fringe)	Yes _____ No X _____	Depth (inches): <u>>16</u>

Wetland Hydrology Present?	Yes _____	No X _____
-----------------------------------	-----------	-------------------

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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 29
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>20</u> x 2 = <u>40</u>
1. _____	_____	_____	_____	FAC species <u>45</u> x 3 = <u>135</u>
2. _____	_____	_____	_____	FACU species <u>15</u> x 4 = <u>60</u>
3. _____	_____	_____	_____	UPL species <u>20</u> x 5 = <u>100</u>
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>335</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.35</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Alopecurus pratensis</u>	<u>40%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Phalaris arundinacea</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Galium aparine</u>	<u>15%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Vicia sativa</u>	<u>15%</u>	<u>No</u>	<u>UPL</u>	
5. <u>Vicia hirsuta</u>	<u>5%</u>	<u>No</u>	<u>NOL</u>	
6. <u>Schedonorus arundinaceus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>0%</u>				

Remarks:

SOIL							Sampling Point:	29
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-5	10YR 3/2	100					SiL	
10-16	10YR 3/2	95	7.5YR 3/4	5	C	M	SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay) 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):						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)			<input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> 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 X _____		
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>						<u>Secondary Indicators (2 or more required)</u>		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)		
Field Observations:								
Surface Water Present?		Yes _____ No X _____	Depth (inches): _____					
Water Table Present?		Yes _____ No X _____	Depth (inches): <u>>16</u>		Wetland Hydrology Present? Yes _____ No X _____			
Saturation Present? (includes capillary fringe)		Yes _____ No X _____	Depth (inches): <u>>16</u>					
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 30
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____		Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
5. _____	_____	_____	_____		Total % Cover of: _____ Multiply by: _____
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>	
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>60</u> x 2 = <u>120</u>	
1. _____	_____	_____	_____	FAC species <u>26</u> x 3 = <u>78</u>	
2. _____	_____	_____	_____	FACU species <u>0</u> x 4 = <u>0</u>	
3. _____	_____	_____	_____	UPL species <u>4</u> x 5 = <u>20</u>	
4. _____	_____	_____	_____	Column Totals: <u>90</u> (A) <u>218</u> (B)	
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.42</u>	
0% = Total Cover				Hydrophytic Vegetation Indicators:	
Herb Stratum (Plot Size: 5' r or _____)					1 - Rapid Test for Hydrophytic Vegetation
1. <i>Phalaris arundinacea</i>	60%	Yes	FACW		<u>X</u> 2 - Dominance Test is >50%
2. <i>Alopecurus pratensis</i>	15%	No	FAC		3 - Prevalence Index is ≤3.0 ¹
3. <i>Poa pratensis</i>	5%	No	FAC		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <i>Lotus corniculatus</i>	5%	No	FAC		5 - Wetland Non-Vascular Plants ¹
5. <i>Geranium molle</i>	4%	No	NOL		Problematic Hydrophytic Vegetation (Explain) ¹
6. <i>Myosotis discolor</i>	1%	No	FAC		¹ Indicators of hydric soil and wetland hydrology must be present.
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
90% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum <u>10%</u>					

Remarks:

SOIL	Sampling Point: 30
-------------	---------------------------

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

Depth (inches)	Matrix		Redox Features				Texture ⁰	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/2	100					SiL	
4-7	10YR 3/2	99	7.5YR 4/6	1	C	M	SiL	
7-16	10YR 3/2	90	7.5YR 3/4	10	C	M	SiL	

⁰Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

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

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted): <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> 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 <input checked="" type="checkbox"/> No _____
--	--

Remarks:

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (2 or more required)</u> <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)
---	--

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): >16 Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): >16 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> 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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 31
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): <3
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Fraxinus latifolia</u>	20%	Yes	FACW		Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)	
20% = Total Cover					
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				Prevalence Index worksheet:	
1. <u>Rubus armeniacus</u>	90%	Yes	FAC		Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>	
3. _____	_____	_____	_____	FACW species <u>20</u> x 2 = <u>40</u>	
4. _____	_____	_____	_____	FAC species <u>95</u> x 3 = <u>285</u>	
5. _____	_____	_____	_____	FACU species <u>6</u> x 4 = <u>24</u>	
90% = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>	
Herb Stratum (Plot Size: 5' r or _____)				Column Totals: <u>121</u> (A) <u>349</u> (B)	
1. <u>Geum macrophyllum</u>	5%	Yes	FAC	Prevalence Index = B/A = <u>2.88</u>	
2. <u>Tellima grandiflora</u>	5%	Yes	FACU	Hydrophytic Vegetation Indicators:	
3. <u>Fragaria vesca</u>	1%	No	FACU		1 - Rapid Test for Hydrophytic Vegetation
4. _____	_____	_____	_____		X 2 - Dominance Test is >50%
5. _____	_____	_____	_____		3 - Prevalence Index is ≤3.0 ¹
6. _____	_____	_____	_____		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7. _____	_____	_____	_____		5 - Wetland Non-Vascular Plants ¹
8. _____	_____	_____	_____		Problematic Hydrophytic Vegetation (Explain) ¹
9. _____	_____	_____	_____		¹ Indicators of hydric soil and wetland hydrology must be present.
10. _____	_____	_____	_____		Hydrophytic Vegetation Present? Yes <u>X</u> No _____
11. _____	_____	_____	_____		
11% = Total Cover					
Woody Vine Stratum (Plot Size: 10' r or _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0% = Total Cover					
% Bare Ground in Herb Stratum	<u>89%</u>				

Remarks:

SOIL							Sampling Point:	31
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	Remarks
0-9	10YR 3/2	100					SiL	
9-16	10YR 3/2	95	7.5YR 3/3	5	C	M	SiL	Faint
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay) 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):						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/>			<input type="checkbox"/>					
Restrictive Layer (if present):						Hydric Soil		
Type: _____						Present?		
Depth (inches): _____						Yes _____ No X _____		
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>						<u>Secondary Indicators (2 or more required)</u>		
<input type="checkbox"/> Surface Water (A1)			<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)		
<input type="checkbox"/> High Water Table (A2)			<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)			<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)			<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Sediment Deposits (B2)			<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Drift Deposits (B3)			<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Algal Mat or Crust (B4)			<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Iron Deposits (B5)			<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)			<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)		
<input type="checkbox"/> Surface Soil Cracks (B6)			<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Frost-Heave Hummocks (D7)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			<input type="checkbox"/>			<input type="checkbox"/>		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<input type="checkbox"/>			<input type="checkbox"/>		
Field Observations:						Wetland Hydrology		
Surface Water Present?		Yes _____	No X _____	Depth (inches): _____		Present?		
Water Table Present?		Yes _____	No X _____	Depth (inches): <u>>16</u>		Yes _____ No X _____		
Saturation Present? (includes capillary fringe)		Yes _____	No X _____	Depth (inches): <u>>16</u>				
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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 32
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): <5
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>20</u> x 2 = <u>40</u>
1. _____	_____	_____	_____	FAC species <u>33</u> x 3 = <u>99</u>
2. _____	_____	_____	_____	FACU species <u>40</u> x 4 = <u>160</u>
3. _____	_____	_____	_____	UPL species <u>7</u> x 5 = <u>35</u>
4. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>334</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.34</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Anthoxanthum odoratum</u>	<u>40%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Phalaris arundinacea</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Poa pratensis</u>	<u>15%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Cirsium arvense</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Vicia sativa</u>	<u>5%</u>	<u>No</u>	<u>UPL</u>	
6. <u>Lotus corniculatus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
7. <u>Alopecurus pratensis</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
8. <u>Vicia hirsuta</u>	<u>1%</u>	<u>No</u>	<u>NOL</u>	
9. <u>Bromus sterilis</u>	<u>1%</u>	<u>No</u>	<u>UPL*</u>	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
99% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>1%</u>				

Remarks:
 *Assumed indicator status

SOIL	Sampling Point: 32
-------------	---------------------------

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

Depth (inches)	Matrix		Redox Features				Texture ⁰	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/2	100					SiL	
10-16	10YR 3/2	95	7.5YR 3/4	5	C	M	SiL	

⁰Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

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

Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
<p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____	Yes _____ No X _____
Depth (inches): _____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes _____ No X _____	Depth (inches): _____	Yes _____ No X _____	
Water Table Present?	Yes _____ No X _____	Depth (inches): <u>>16</u>		
Saturation Present? (includes capillary fringe)	Yes _____ No X _____	Depth (inches): <u>>16</u>		

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: Stella Ridge City/County: Camas/Clark Sampling Date: 5/15/2025
 Applicant/Owner: Allied Development LLC State: Washington Sampling Point: 33
 Investigator(s): Emma Eichhorn and Margret Harburg Section, Township, Range: Section 38, T.1N, R.3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): <5
 Subregion (LRR): A. Northwest Forests and Coast Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: Powell silt loam, 0 to 8 percent slopes (Unit PoB) - Non-hydric NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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 <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Precipitation:
 According to the ACIS Vancouver Pearson Airprot weather station, 0.08 inches of rainfall were received on the day of the site visit and 0.38 inches was received within the two weeks prior. Since October 1, 2024, 28.85 inches of rainfall were received, which is 90 percent of normal.

Remarks:

VEGETATION

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
5. _____	_____	_____	_____	
0% = Total Cover				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				FACW species <u>25</u> x 2 = <u>50</u>
1. _____	_____	_____	_____	FAC species <u>61</u> x 3 = <u>183</u>
2. _____	_____	_____	_____	FACU species <u>15</u> x 4 = <u>60</u>
3. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
4. _____	_____	_____	_____	Column Totals: <u>101</u> (A) <u>293</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.90</u>
0% = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: 5' r or _____)				
1. <i>Phalaris arundinacea</i>	25%	Yes	FACW	
2. <i>Alopecurus pratensis</i>	20%	Yes	FAC	
3. <i>Poa pratensis</i>	20%	Yes	FAC	
4. <i>Lotus corniculatus</i>	20%	Yes	FAC	
5. <i>Anthoxanthum odoratum</i>	15%	No	FACU	
6. <i>Myosotis discolor</i>	1%	No	FAC	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
101% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>0%</u>				

Remarks:
 *Assumed indicator status

SOIL							Sampling Point: 33	
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):								
Depth	Matrix		Redox Features					Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture ⁰	
0-6	10YR 3/2	100					SiL	
6-16	10YR 3/2	95	7.5YR 3/4	5	C	M	SiL	
⁰ Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)								
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):				Indicators for Problematic Hydric Soils³:				
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)				
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)				
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)							
Restrictive Layer (if present):					Hydric Soil Present?			
Type: _____					Yes <input checked="" type="checkbox"/> No _____			
Depth (inches): _____								
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
<u>Primary Indicators (minimum of one required; check all that apply)</u>				<u>Secondary Indicators (2 or more required)</u>				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)				
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input checked="" type="checkbox"/> Geomorphic Position (D2)				
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)			<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)				
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Frost-Heave Hummocks (D7)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)								
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
Field Observations:					Wetland Hydrology Present?			
Surface Water Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): _____	Yes <input checked="" type="checkbox"/> No _____				
Water Table Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): >16 _____					
Saturation Present? (includes capillary fringe)	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): >16 _____					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks:								



Appendix B: Representative Site Photographs



Photo A. View of Wetland A looking northeast. The wetland boundary was based on topography and a distinct change in vegetation, with reed canary grass dominant in the wetland and large sweet vernal grass dominant in the upland.



Photo B. View of Wetland A looking southeast. NW Brady Road runs along the east boundary of the project area.



Photo C. View of Plots 14 and 15 (pink flags) and wetland boundary in the eastern portion of Wetland C (orange flags) looking west.



Photo D. View of the PEM portion of Wetland C and adjacent upland looking southeast. The wetland boundary was based on topography and a distinct change in vegetation, with reed canary grass dominant in the wetland and large sweet vernal grass dominant in the upland.



Photo E. View of Plot 22 looking north, depicting conditions in the PFO portion of Wetland C.



Photo F. View of upland conditions adjacent to the PFO portion of Wetland C. The understory was dominant in FAC California dewberry, fragrant fringe cup, Siberian spring beauty, and pineland sword fern.



Photo G. View of Plots 24 and 25 and Wetland B boundary looking east. The wetland was dominated by reed canary grass and lacked garden vetch, which was dominant in the upland.



Photo H. General conditions in the western part of the project area looking south. Wetland B is pictured in lower elevation concave hillslope dominant in reed canary grass.



Photo I. View of general conditions in the eastern portion of the study area looking southeast, with Wetland A pictured in the background.



Photo J. View of general conditions in the eastern portion of the study area looking northeast.



Photo K. View of upland conditions in the eastern portion of the study area looking west.



Photo L. View of upland conditions in the western portion of the study area looking east.



Appendix C: **Wetland Rating Form and Figures**

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 5/28/2024

Rated by Emma Eichhorn Trained by Ecology? Yes No Date of training: _____

HGM Class used for rating Depressional Wetland has multiple HGM classes? Yes No

NOTE: Form is not complete with out the figures requested (figures can be combined).

Source of base aerial photo/map National Agriculture Imagery Program (NAIP)

OVERALL WETLAND CATEGORY III (based on functions or special characteristics)

1. Category of wetland based on FUNCTIONS

- Category I - Total score = 23 - 27
- Category II - Total score = 20 - 22
- X Category III - Total score = 16 - 19
- Category IV - Total score = 9 - 15

Score for each function based on three ratings
(order of ratings is not important)

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>List appropriate rating (H, M, L)</i>				
Site Potential	M	M	L	
Landscape Potential	L	M	L	
Value	H	H	L	Total
Score Based on Ratings	6	7	3	16

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	2
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	3
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to another figure</i>)	S 4.1	3
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	5
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	5

HGM Classification of Wetland in Western Washington

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

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

- NO - go to 2 **YES** - the wetland class is **Tidal Fringe** - go to 1.1

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

- NO - Saltwater Tidal Fringe (Estuarine)** **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands.
If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

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

- NO - go to 3 **YES** - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

- The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
 At least 30% of the open water area is deeper than 6.6 ft (2 m).

- NO - go to 4 **YES** - The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

- The wetland is on a slope (*slope can be very gradual*),
 The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
 The water leaves the wetland **without being impounded**.

- NO - go to 5 **YES** - The wetland class is **Slope**

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

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

- The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
 The overbank flooding occurs at least once every 2 years.

- NO - go to 6 **YES** - The wetland class is **Riverine**

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

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

NO - go to 7

YES - The wetland class is **Depressional**

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

NO - go to 8

YES - The wetland class is **Depressional**

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

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

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

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

NOTES and FIELD OBSERVATIONS:

DEPRESSIONAL AND FLATS WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

D 1.0. Does the site have the potential to improve water quality?		
D 1.1. <u>Characteristics of surface water outflows from the wetland:</u> Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 <input type="checkbox"/> Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 <input type="checkbox"/> Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	3	
D 1.2. <u>The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions).</u> Yes = 4 No = 0	0	
D 1.3. <u>Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):</u> Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > 1/2 of area points = 3 Wetland has persistent, ungrazed plants > 1/10 of area points = 1 Wetland has persistent, ungrazed plants < 1/10 of area points = 0	5	
D 1.4. <u>Characteristics of seasonal ponding or inundation:</u> <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > 1/2 total area of wetland points = 4 Area seasonally ponded is > 1/4 total area of wetland points = 2 Area seasonally ponded is < 1/4 total area of wetland points = 0	0	
Total for D 1 Add the points in the boxes above	8	

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

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

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

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

Rating of Value If score is: 2 - 4 = H 1 = M 0 = L Record the rating on the first page

DEPRESSIONAL AND FLATS WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. <u>Characteristics of surface water outflows from the wetland:</u>		
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	4
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0	
D 4.2. <u>Depth of storage during wet periods:</u> <i>Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.</i>		
Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	0
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
<input type="checkbox"/> Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
<input type="checkbox"/> The wetland is a "headwater" wetland	points = 3	
Wetland is flat but has small depressions on the surface that trap water	points = 1	
Marks of ponding less than 0.5 ft (6 in)	points = 0	
D 4.3. <u>Contribution of the wetland to storage in the watershed:</u> <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i>		
<input type="checkbox"/> The area of the basin is less than 10 times the area of the unit	points = 5	3
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	
<input type="checkbox"/> Entire wetland is in the Flats class	points = 5	
Total for D 4	Add the points in the boxes above	7

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

D 5.0. Does the landscape have the potential to support hydrologic function of the site?		
D 5.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	0
D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0	1
Total for D 5	Add the points in the boxes above	1

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

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. <u>The unit is in a landscape that has flooding problems.</u> <i>Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.</i>		
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon		2
<ul style="list-style-type: none"> • Flooding occurs in a sub-basin that is immediately down-gradient of unit. 	points = 2	
<input checked="" type="checkbox"/> <ul style="list-style-type: none"> • Surface flooding problems are in a sub-basin farther down-gradient. 	points = 1	
<input type="checkbox"/> Flooding from groundwater is an issue in the sub-basin.	points = 1	
<input type="checkbox"/> The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why	points = 0	
<input type="checkbox"/> There are no problems with flooding downstream of the wetland.	points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0	0
Total for D 6	Add the points in the boxes above	2

Rating of Value If score is: 2 - 4 = H 1 = M 0 = L Record the rating on the first page

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

- Aquatic bed 4 structures or more: points = 4
 - Emergent 3 structures: points = 2
 - Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1
 - Forested (areas where trees have > 30% cover) 1 structure: points = 0
- If the unit has a Forested class, check if:*
- The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

0

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

- Permanently flooded or inundated 4 or more types present: points = 3
- Seasonally flooded or inundated 3 types present: points = 2
- Occasionally flooded or inundated 2 types present: points = 1
- Saturated only 1 types present: points = 0
- Permanently flowing stream or river in, or adjacent to, the wetland
- Seasonally flowing stream in, or adjacent to, the wetland
- Lake Fringe wetland** **2 points**
- Freshwater tidal wetland** **2 points**

0

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft². *Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*

- If you counted:
- > 19 species points = 2
 - 5 - 19 species points = 1
 - < 5 species points = 0

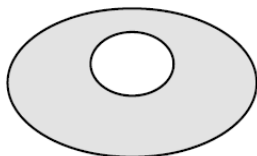
1

H 1.4. Interspersion of habitats

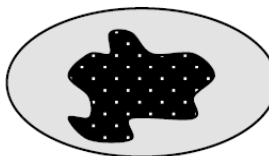
Decide from the diagrams below whether interspersions among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*



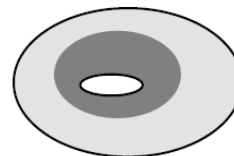
None = 0 points



Low = 1 point

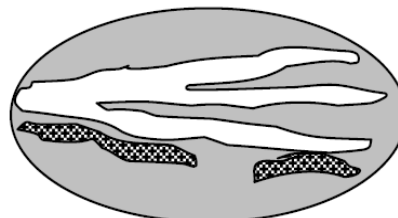
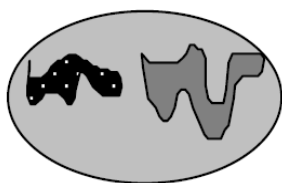


Moderate = 2 points



0

All three diagrams in this row are **HIGH** = 3 points



<p>H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) <input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by</i>) <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata) 	1
Total for H 1	2

Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 - 6 = L Record the rating on the first page

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
<p>H 2.1 Accessible habitat (include only habitat that directly abuts wetland unit). Calculate: 10.5 % undisturbed habitat + (3.6 % moderate & low intensity land uses / 2) = 12.3%</p> <p>If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0</p>	1
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: 26 % undisturbed habitat + (12.4 % moderate & low intensity land uses / 2) = 32.2%</p> <p>Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	1
<p>H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0</p>	-2
Total for H 2	0

Rating of Landscape Potential If Score is: 4 - 6 = H 1 - 3 = M < 1 = L Record the rating on the first page

H 3.0. Is the habitat provided by the site valuable to society?	
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated.</p> <p>Site meets ANY of the following criteria: points = 2</p> <ul style="list-style-type: none"> <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan <p>Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0</p>	0

Rating of Value If Score is: 2 = H 1 = M 0 = L Record the rating on the first page

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

<http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here:

<http://wdfw.wa.gov/conservation/phs/list/>

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.</i>	
<p>SC 1.0. Estuarine Wetlands</p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal, <input type="checkbox"/> Vegetated, and <input type="checkbox"/> With a salinity greater than 0.5 ppt</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 1.1 <input checked="" type="checkbox"/> No = Not an estuarine wetland</p>	
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No - Go to SC 1.2</p>	
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25)</p> <p><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.</p> <p><input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	
<p>SC 2.0. Wetlands of High Conservation Value (WHCV)</p> <p>SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 2.2 <input checked="" type="checkbox"/> No - Go to SC 2.3</p> <p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Not WHCV</p> <p>SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Contact WNHP/WDNR and to SC 2.4 <input checked="" type="checkbox"/> No = Not WHCV</p> <p>SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Not WHCV</p>	
<p>SC 3.0. Bogs</p> <p>Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i></p> <p>SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 3.3 <input checked="" type="checkbox"/> No - Go to SC 3.2</p> <p>SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 3.3 <input checked="" type="checkbox"/> No = Is not a bog</p> <p>SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Is a Category I bog <input type="checkbox"/> No - Go to SC 3.4</p> <p>NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.</p> <p>SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Is a Category I bog <input type="checkbox"/> No = Is not a bog</p>	

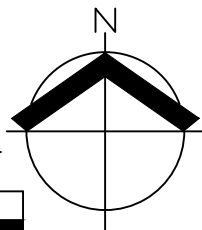
<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife’s forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. <input type="checkbox"/> Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a forested wetland for this section</p>	
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> <input type="checkbox"/> The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks <input type="checkbox"/> The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 5.1 <input checked="" type="checkbox"/> No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> <input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). <input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. <input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft²) <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Long Beach Peninsula: Lands west of SR 103 <input type="checkbox"/> Grayland-Westport: Lands west of SR 105 <input type="checkbox"/> Ocean Shores-Copalis: Lands west of SR 115 and SR 109 <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 6.1 <input checked="" type="checkbox"/> No = Not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No - Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category II <input type="checkbox"/> No - Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category III <input type="checkbox"/> No = Category IV</p>	
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter “Not Applicable” on Summary Form</p>	



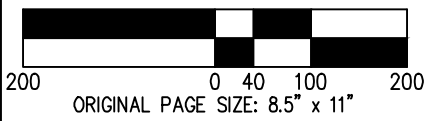
LEGEND (COLOR COPY):

	PEM/SLOPE WETLAND A
	PFO/PSS/SLOPE WETLAND A

NAIP AERIAL (JUNE, 2023)
WESTERN WA WETLAND RATING FORM



SCALE: 1" = 200 FEET



DATE: 08/11/2025

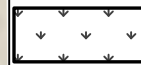
COWARDIN CLASSIFICATION AND 150' BUFFER NW 18TH AVENUE CRITICAL AREAS ASSESSMENT		FIGURE 1
AKS ENGINEERING & FORESTRY, LLC 9600 NE 126TH AVE, STE 2520 VANCOUVER, WA 98682 P: 360.882.0419 F: 360.882.0426 aks-eng.com		DRWN: RAS CHKD: EE AKS JOB: 12107



STUDY AREA BOUNDARY

WETLAND A

LEGEND (COLOR COPY):



PEM/SLOPE WETLAND A

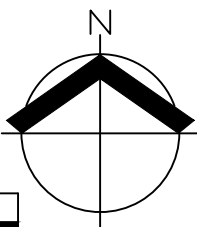


SATURATED ONLY

NAIP AERIAL (JUNE, 2023)
WESTERN WA WETLAND RATING FORM

DATE: 08/11/2025

SCALE: 1" = 200 FEET



ORIGINAL PAGE SIZE: 8.5" x 11"

**HYDROPERIODS
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT**

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682
P: 360.882.0419 F: 360.882.0426 aks-eng.com



FIGURE
2

DRWN: RAS
CHKD: EE
AKS JOB:
12107

STUDY AREA BOUNDARY

WETLAND A

LEGEND (COLOR COPY):



DENSE WOODY PLANTS/ DENSE, UNCUT, RIGID PLANTS

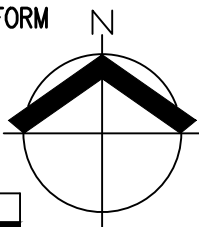


DENSE, UNCUT HERBACEOUS PLANTS

NAIP AERIAL (JUNE, 2023)
WESTERN WA WETLAND RATING FORM

DATE: 08/11/2025

SCALE: 1" = 200 FEET



ORIGINAL PAGE SIZE: 8.5" x 11"

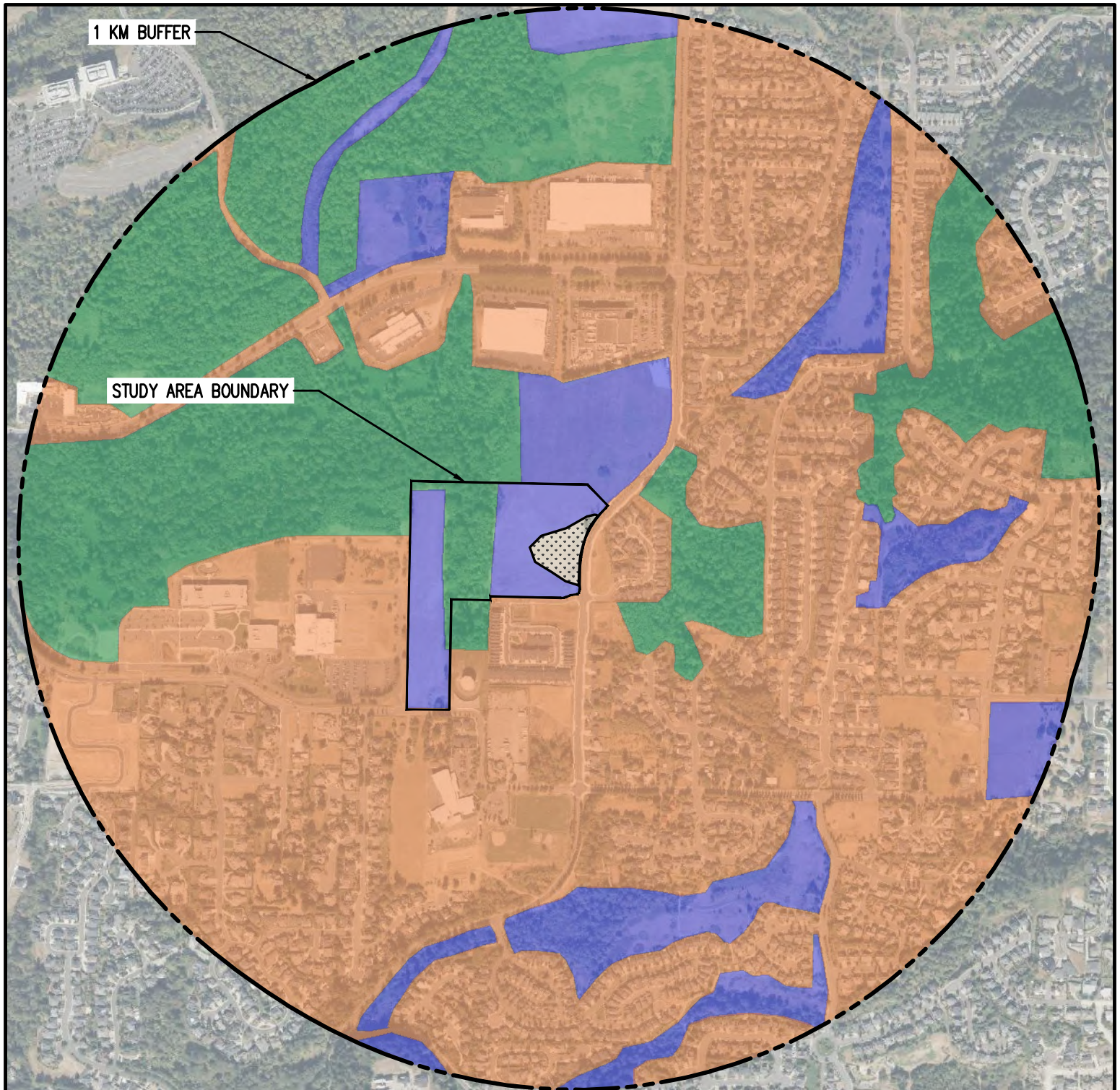
PLANT COVER
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682
P: 360.882.0419 F: 360.882.0426 aks-eng.com



FIGURE
3




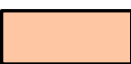
DRWN: RAS
CHKD: EE
AKS JOB:
12107



1 KM BUFFER

STUDY AREA BOUNDARY


LEGEND (COLOR COPY):

-  PEM/SLOPE WETLAND A
-  RELATIVELY UNDISTURBED HABITAT
-  MODERATE/LOW INTENSITY LAND USE
-  HIGH INTENSITY LAND USE

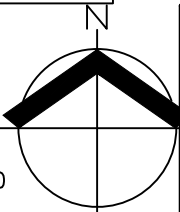
1KM AERIAL DERIVED FROM BING IMAGERY
WESTERN WA WETLAND RATING FORM

DATE: 08/11/2025

SCALE: 1" = 900 FEET



ORIGINAL PAGE SIZE: 8.5" X 11"



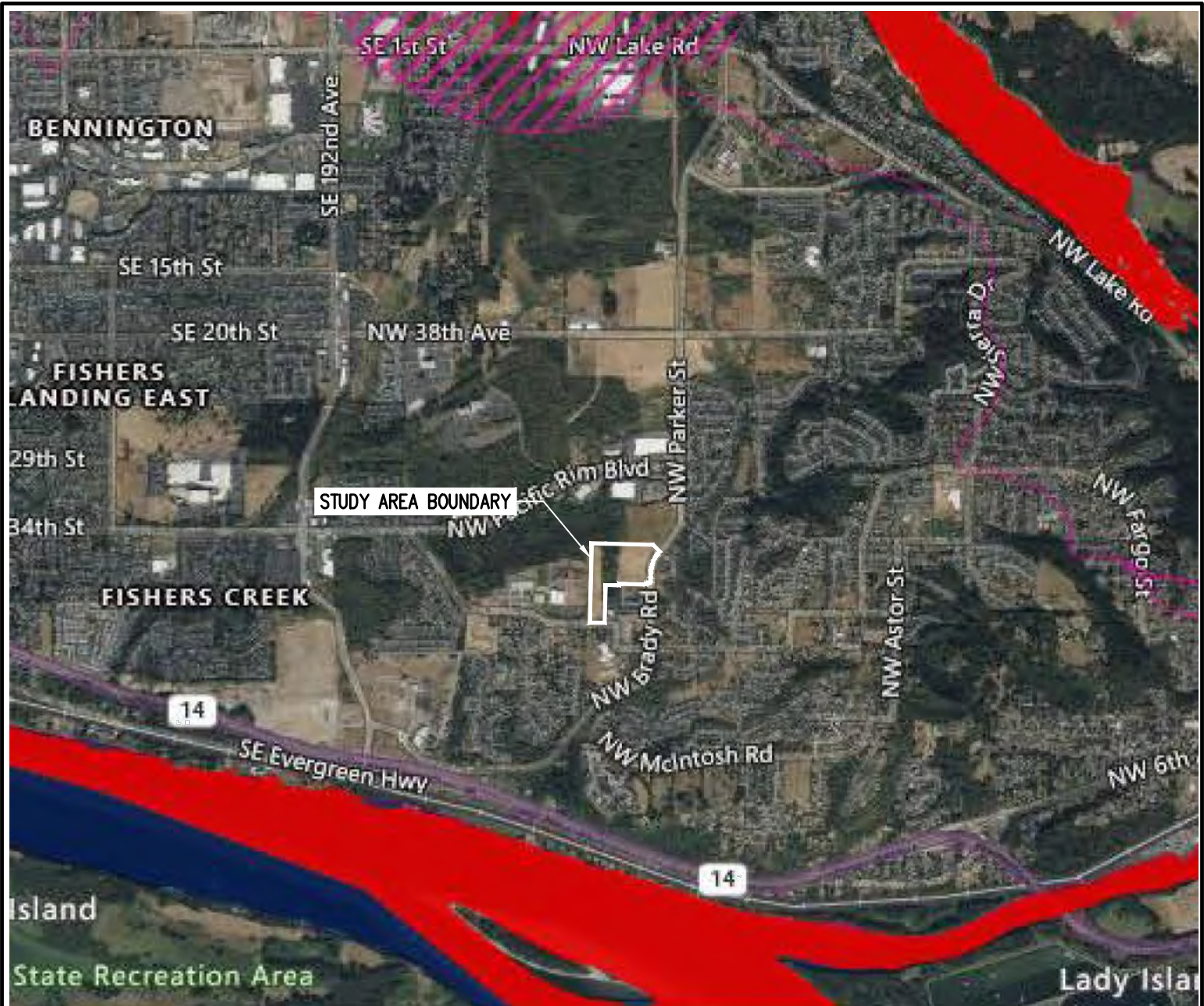
**1KM BUFFER AND LAND USE INTENSITY
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT**

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682
P: 360.882.0419 F: 360.882.0426 aks-eng.com

**FIGURE
4**

DRWN: RAS
CHKD: EE
AKS JOB:
12107





Assessed Water/Sediment

Water

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Sediment

- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

WQ Improvement Projects

- TMDL - Approved
- 4B - Approved
- STI - Approved
- ARP - Approved
- TMDL - In Development
- STI - In Development
- ARP - In Development

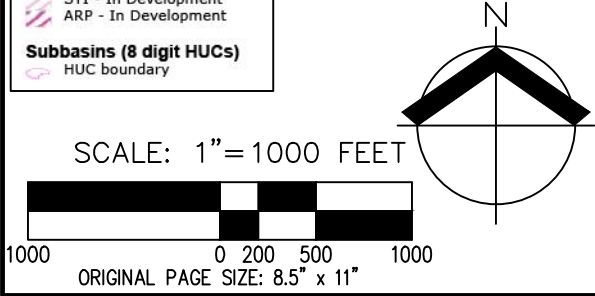
Subbasins (8 digit HUCs)

- HUC boundary

TITLE	Salmon Creek Watershed Bacteria and Turbidity Total Maximum Daily Load (Water Cleanup Plan): Detailed Implementation Plan	
	Publication number	Date Published
	05-10-037	March 2005
TITLE	Salmon Creek Temperature Total Maximum Daily Load: Water Quality Improvement Report and Implementation Plan	
	Publication number	Date Published
	11-10-044	October 2011

WASHINGTON DEPARTMENT OF ECOLOGY
WESTERN WA WETLAND RATING FORM

DATE: 08/11/2025



303d AND TMDLs
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682
P: 360.882.0419 F: 360.882.0426 aks-eng.com



FIGURE	5
DRWN: RAS	CHKD: EE
AKS JOB:	12107

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B Date of site visit: 5/15/2025

Rated by Emma Eichhorn Trained by Ecology? Yes No Date of training _____

HGM Class used for rating Slope Wetland has multiple HGM classes? Yes No

NOTE: Form is not complete with out the figures requested (figures can be combined).

Source of base aerial photo/map National Agriculture Imagery Program (NAIP)

OVERALL WETLAND CATEGORY IV (based on functions or special characteristics)

1. Category of wetland based on FUNCTIONS

- Category I** - Total score = 23 - 27
- Category II** - Total score = 20 - 22
- Category III** - Total score = 16 - 19
- X **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>List appropriate rating (H, M, L)</i>				
Site Potential	M	L	L	
Landscape Potential	L	L	L	
Value	H	H	L	Total
Score Based on Ratings	6	5	3	14

Score for each function based on three ratings
(order of ratings is not important)

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	2
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	3
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to another figure</i>)	S 4.1	3
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	5
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	5

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

NO - go to 7

YES - The wetland class is **Depressional**

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

NO - go to 8

YES - The wetland class is **Depressional**

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

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

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

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

SLOPE WETLANDS		
Water Quality Functions - Indicators that the site functions to improve water quality		
S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)		
Slope is 1% or less	points = 3	1
Slope is > 1% - 2%	points = 2	
Slope is > 2% - 5%	points = 1	
Slope is greater than 5%	points = 0	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions):		0
Yes = 3 No = 0		
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.		
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6	6
Dense, uncut, herbaceous plants > ½ of area	points = 3	
Dense, woody, plants > ½ of area	points = 2	
Dense, uncut, herbaceous plants > ¼ of area	points = 1	
Does not meet any of the criteria above for plants	points = 0	
Total for S 1		7
Add the points in the boxes above		

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

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

Rating of Landscape Potential If score is: 1 - 2 = M 0 = L Record rating on the first page

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

Rating of Value If score is: 2 - 4 = H 1 = M 0 = L Record rating on the first page

SLOPE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion

S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.</i> Dense, uncut, rigid plants cover > 90% of the area of the wetland points = 1 All other conditions points = 0	0

Rating of Site Potential If score is: 1 = M 0 = L *Record rating on the first page*


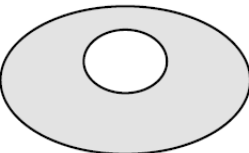
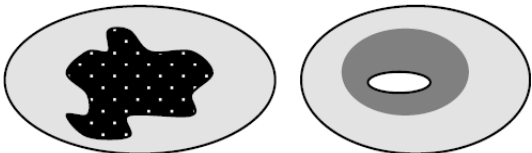
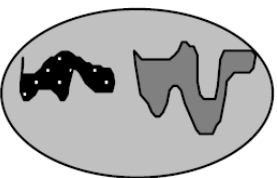

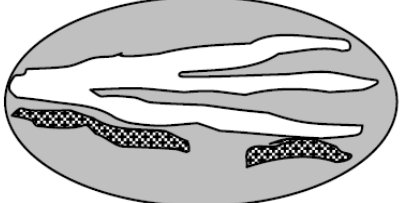
S 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	0

Rating of Landscape Potential If score is: 1 = M 0 = L *Record rating on the first page*

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

Rating of Value If score is: 2 - 4 = H 1 = M 0 = L *Record rating on the first page*

NOTES and FIELD OBSERVATIONS:

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat							
H 1.0. Does the site have the potential to provide habitat?							
<p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Aquatic bed 4 structures or more: points = 4 <input checked="" type="checkbox"/> Emergent 3 structures: points = 2 <input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 <input type="checkbox"/> Forested (areas where trees have > 30% cover) 1 structure: points = 0 <p><i>If the unit has a Forested class, check if:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> 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 	0						
<p>H 1.2. Hydroperiods</p> <p>Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).</p> <ul style="list-style-type: none"> <input type="checkbox"/> Permanently flooded or inundated 4 or more types present: points = 3 <input type="checkbox"/> Seasonally flooded or inundated 3 types present: points = 2 <input type="checkbox"/> Occasionally flooded or inundated 2 types present: points = 1 <input checked="" type="checkbox"/> Saturated only 1 types present: points = 0 <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake Fringe wetland 2 points <input type="checkbox"/> Freshwater tidal wetland 2 points 	0						
<p>H 1.3. Richness of plant species</p> <p>Count the number of plant species in the wetland that cover at least 10 ft². <i>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i></p> <p>If you counted:</p> <table style="width: 100%; border: none;"> <tr> <td style="padding-right: 20px;">> 19 species</td> <td style="text-align: right;">points = 2</td> </tr> <tr> <td>5 - 19 species</td> <td style="text-align: right;">points = 1</td> </tr> <tr> <td>< 5 species</td> <td style="text-align: right;">points = 0</td> </tr> </table>	> 19 species	points = 2	5 - 19 species	points = 1	< 5 species	points = 0	0
> 19 species	points = 2						
5 - 19 species	points = 1						
< 5 species	points = 0						
<p>H 1.4. Interspersion of habitats</p> <p>Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-bottom: 20px;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> </div> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 20%;"> <p>All three diagrams in this row are HIGH = 3 points</p> </div> <div style="width: 60%;">    </div> </div>	0						

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i>		
<input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) <input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>) <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)		0
Total for H 1	Add the points in the boxes above	0

Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 - 6 = L Record rating on the first page

H 2.0. Does the landscape have the potential to support the habitat function of the site?		
H 2.1 Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). Calculate: 11.5 % undisturbed habitat + (4.2 % moderate & low intensity land uses / 2) = 13.6%		
If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0		1
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: 26.8 % undisturbed habitat + (10.9 % moderate & low intensity land uses / 2) = 32.25%		
Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0		1
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0		
Total for H 2	Add the points in the boxes above	0

Rating of Landscape Potential If Score is: 4 - 6 = H 1 - 3 = M < 1 = L Record rating on the first page

H 3.0. Is the habitat provided by the site valuable to society?		
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated.		
Site meets ANY of the following criteria: points = 2 <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan		0
Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0		

Rating of Value If Score is: 2 = H 1 = M 0 = L Record rating on the first page

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

<http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here:

<http://wdfw.wa.gov/conservation/phs/list/>

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

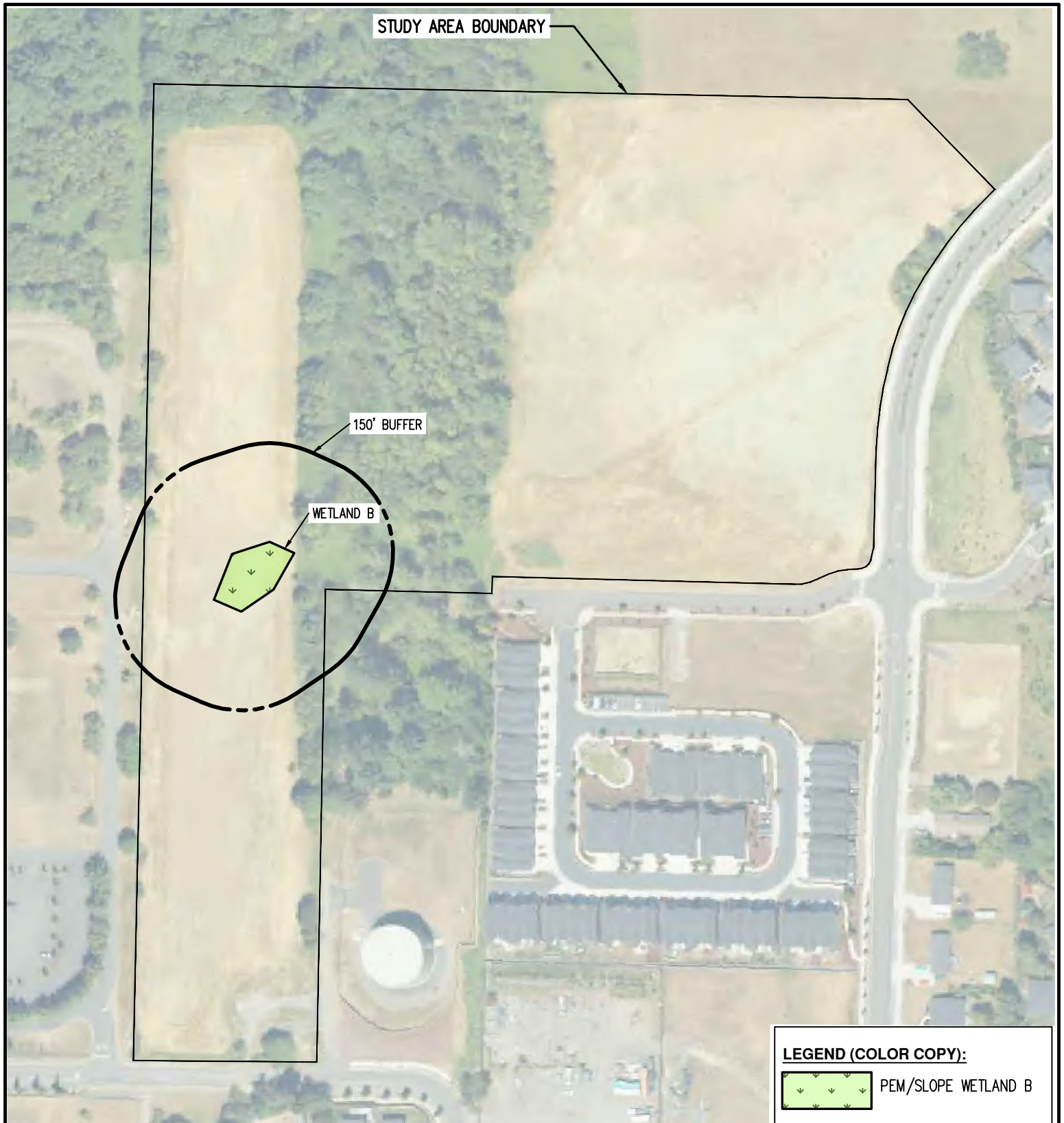
- Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- Herbaceous Balds:** Variable size patches of grass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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.</i>	
<p>SC 1.0. Estuarine Wetlands</p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal,</p> <p><input type="checkbox"/> Vegetated, and</p> <p><input type="checkbox"/> With a salinity greater than 0.5 ppt</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 1.1 <input checked="" type="checkbox"/> No = Not an estuarine wetland</p>	
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No - Go to SC 1.2</p>	
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25)</p> <p><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.</p> <p><input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	
<p>SC 2.0. Wetlands of High Conservation Value (WHCV)</p>	
<p>SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 2.2 <input checked="" type="checkbox"/> No - Go to SC 2.3</p>	
<p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Not WHCV</p>	
<p>SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Contact WNHP/WDNR and to SC 2.4 <input checked="" type="checkbox"/> No = Not WHCV</p>	
<p>SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Not WHCV</p>	
<p>SC 3.0. Bogs</p> <p>Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i></p>	
<p>SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 3.3 <input checked="" type="checkbox"/> No - Go to SC 3.2</p>	
<p>SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 3.3 <input checked="" type="checkbox"/> No = Is not a bog</p>	
<p>SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Is a Category I bog <input type="checkbox"/> No - Go to SC 3.4</p>	
<p>NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.</p>	
<p>SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Is a Category I bog <input type="checkbox"/> No = Is not a bog</p>	

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <p><input type="checkbox"/> Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.</p> <p><input type="checkbox"/> Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a forested wetland for this section</p>	
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <p><input type="checkbox"/> The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks</p> <p><input type="checkbox"/> The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>)</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 5.1 <input checked="" type="checkbox"/> No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).</p> <p><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.</p> <p><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft²)</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <p><input type="checkbox"/> Long Beach Peninsula: Lands west of SR 103</p> <p><input type="checkbox"/> Grayland-Westport: Lands west of SR 105</p> <p><input type="checkbox"/> Ocean Shores-Copalis: Lands west of SR 115 and SR 109</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 6.1 <input checked="" type="checkbox"/> No = Not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No - Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category II <input type="checkbox"/> No - Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category III <input type="checkbox"/> No = Category IV</p>	
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	




STUDY AREA BOUNDARY

150' BUFFER

WETLAND B

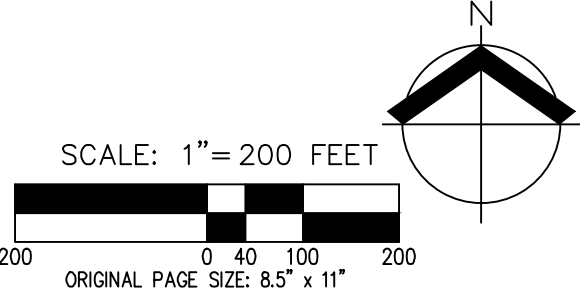
LEGEND (COLOR COPY):

 PEM/SLOPE WETLAND B

NAIP AERIAL (JUNE, 2023)
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025

SCALE: 1" = 200 FEET



ORIGINAL PAGE SIZE: 8.5" x 11"

**COWARDIN CLASSIFICATION AND 150' BUFFER
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT**

FIGURE
1

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682
P: 360.882.0419 F: 360.882.0426 aks-eng.com



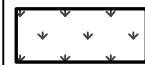
DRWN: RAS
CHKD: EE
AKS JOB:
12107

STUDY AREA BOUNDARY

WETLAND B



LEGEND (COLOR COPY):



PEM/SLOPE WETLAND B

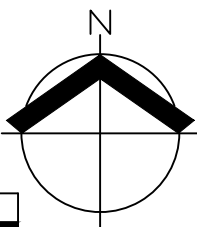


SATURATED ONLY

NAIP AERIAL (JUNE, 2023)
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025

SCALE: 1" = 200 FEET



ORIGINAL PAGE SIZE: 8.5" x 11"

HYDROPERIODS
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682

P: 360.882.0419 F: 360.882.0426 aks-eng.com



FIGURE
2

DRWN: RAS

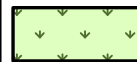
CHKD: EE

AKS JOB:
12107

STUDY AREA BOUNDARY

WETLAND B

LEGEND (COLOR COPY):

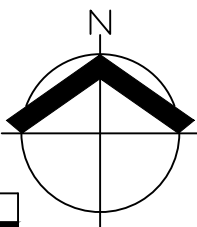


DENSE, UNCUT HERBACEOUS PLANT

NAIP AERIAL (JUNE, 2023)
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025

SCALE: 1" = 200 FEET



ORIGINAL PAGE SIZE: 8.5" x 11"

PLANT COVER
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682

P: 360.882.0419 F: 360.882.0426 aks-eng.com

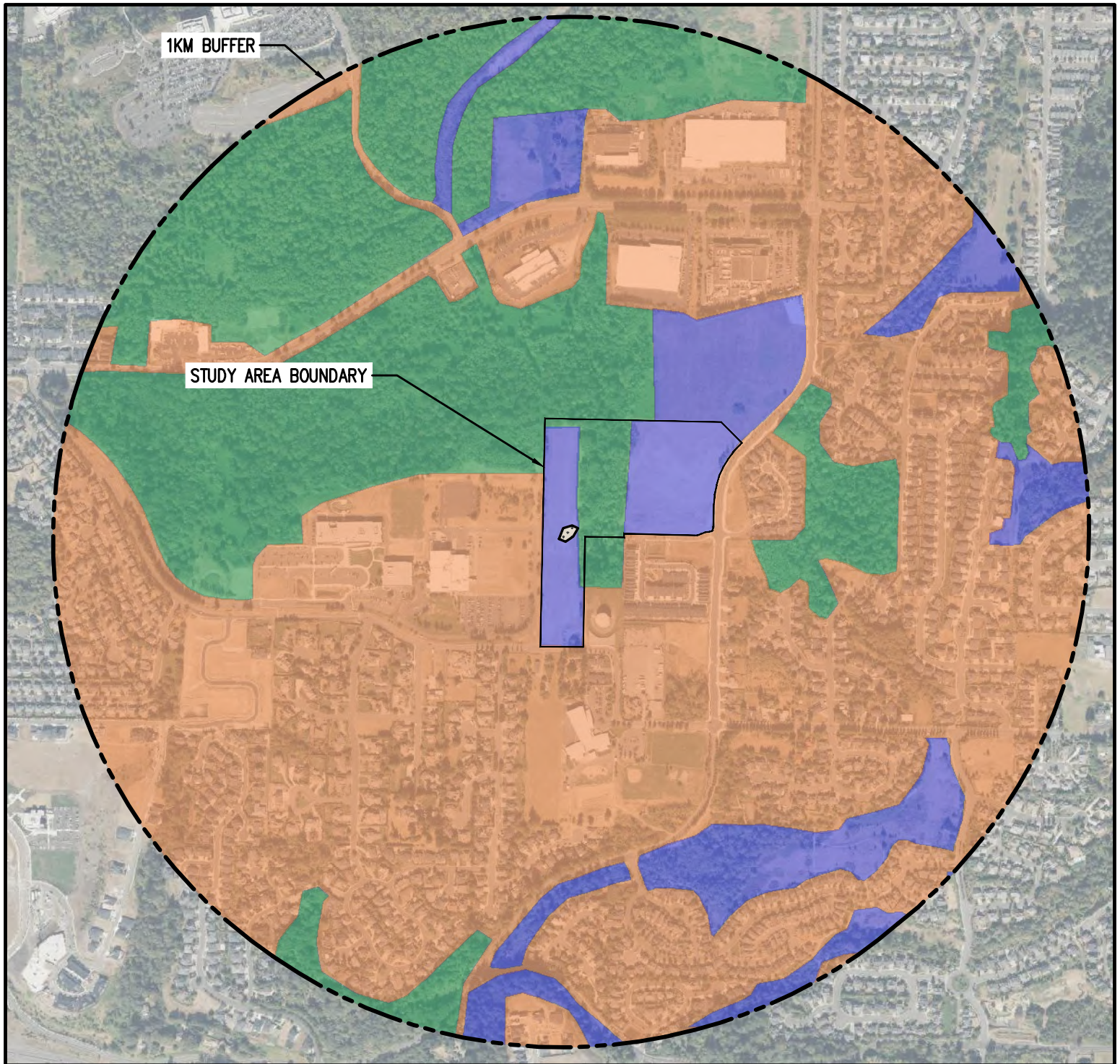


FIGURE
3

DRWN: RAS

CHKD: EE

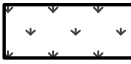



AKS JOB:
12107



1KM BUFFER

STUDY AREA BOUNDARY

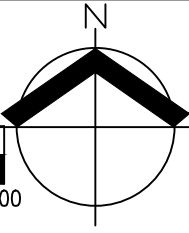
LEGEND (COLOR COPY):

-  PEM/SLOPE WETLAND B
-  RELATIVELY UNDISTURBED HABITAT
-  MODERATE/LOW INTENSITY LAND USE
-  HIGH INTENSITY LAND USE

1KM AERIAL DERIVED FROM BING IMAGERY
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025

SCALE: 1" = 900 FEET



**1KM BUFFER AND LAND USE INTENSITY
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT**

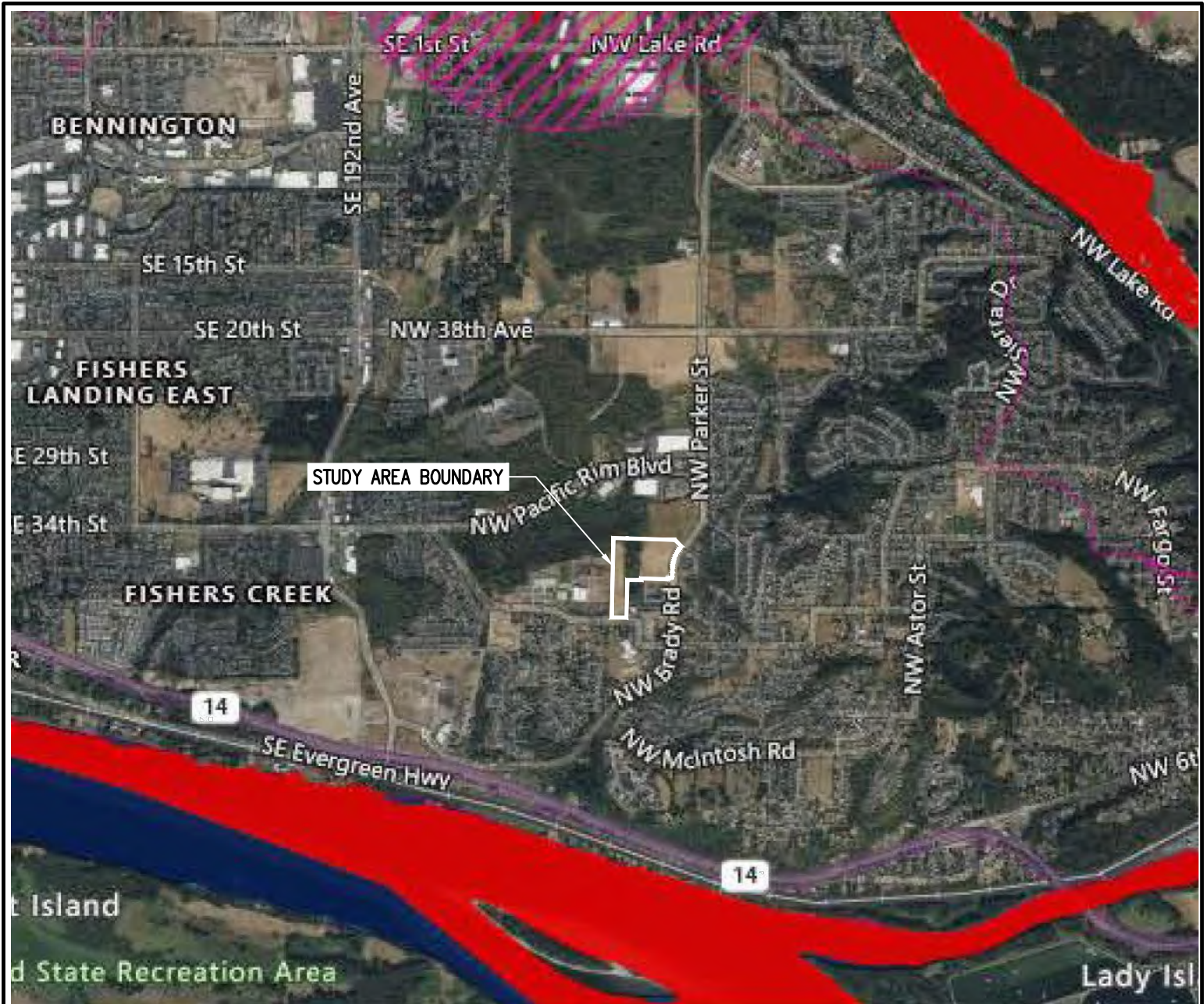
AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682
P: 360.882.0419 F: 360.882.0426 aks-eng.com



FIGURE
4

DRWN: RAS
CHKD: EE

AKS JOB:
12107

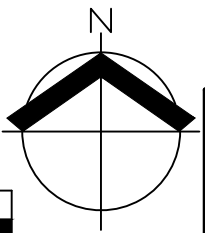
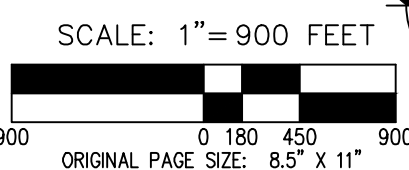


- Assessed Water/Sediment**
- Water**
- Category 5 - 303d
 - Category 4C
 - Category 4B
 - Category 4A
 - Category 2
 - Category 1
- Sediment**
- Category 5 - 303d
 - Category 4C
 - Category 4B
 - Category 4A
 - Category 2
 - Category 1
- WQ Improvement Projects**
- TMDL - Approved
 - 4B - Approved
 - STI - Approved
 - ARP - Approved
 - TMDL - In Development
 - STI - In Development
 - ARP - In Development
- Subbasins (8 digit HUCs)**
- HUC boundary

TITLE	Salmon Creek Watershed Bacteria and Turbidity Total Maximum Daily Load (Water Cleanup Plan): Detailed Implementation Plan	
	Publication number	Date Published
	05-10-037	March 2005
TITLE	Salmon Creek Temperature Total Maximum Daily Load: Water Quality Improvement Report and Implementation Plan	
	Publication number	Date Published
	11-10-044	October 2011

WASHINGTON DEPARTMENT OF ECOLOGY
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025



303d AND TMDLs
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682
P: 360.882.0419 F: 360.882.0426 aks-eng.com



FIGURE	5
DRWN: RAS	CHKD: EE
AKS JOB:	12107

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland C Date of site visit: 5/15/2025

Rated by Emma Eichhorn Trained by Ecology? Yes No Date of training _____

HGM Class used for rating Slope Wetland has multiple HGM classes? Yes No

NOTE: Form is not complete with out the figures requested (figures can be combined).

Source of base aerial photo/map National Agriculture Imagery Program (NAIP)

OVERALL WETLAND CATEGORY IV (based on functions or special characteristics)

1. Category of wetland based on FUNCTIONS

- Category I** - Total score = 23 - 27
- Category II** - Total score = 20 - 22
- X** **Category III** - Total score = 16 - 19
- Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>List appropriate rating (H, M, L)</i>				
Site Potential	M	M	M	
Landscape Potential	L	L	L	
Value	H	H	L	Total
Score Based on Ratings	6	6	4	16

<p>Score for each function based on three ratings (order of ratings is not important)</p> <p>9 = H, H, H 8 = H, H, M 7 = H, H, L 7 = H, M, M 6 = H, M, L 6 = M, M, M 5 = H, L, L 5 = M, M, L 4 = M, L, L 3 = L, L, L</p>
--

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	2
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	3
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to another figure</i>)	S 4.1	3
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	5
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	5

HGM Classification of Wetland in Western Washington

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

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

- NO - go to 2 YES - the wetland class is **Tidal Fringe** - go to 1.1

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

- NO - Saltwater Tidal Fringe (Estuarine)** **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands.
 If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

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

- NO - go to 3 YES - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

- The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
 At least 30% of the open water area is deeper than 6.6 ft (2 m).

- NO - go to 4 YES - The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

- The wetland is on a slope (*slope can be very gradual*),
 The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
 The water leaves the wetland **without being impounded**.

- NO - go to 5 YES - The wetland class is **Slope**

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

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

- The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
 The overbank flooding occurs at least once every 2 years.

- NO - go to 6 YES - The wetland class is **Riverine**

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

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

NO - go to 7

YES - The wetland class is **Depressional**

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

NO - go to 8

YES - The wetland class is **Depressional**

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

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

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

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

<u>SLOPE WETLANDS</u>		
Water Quality Functions - Indicators that the site functions to improve water quality		
S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of the average slope of the wetland: (<i>a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance</i>)		
Slope is 1% or less	points = 3	1
Slope is > 1% - 2%	points = 2	
Slope is > 2% - 5%	points = 1	
Slope is greater than 5%	points = 0	
S 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic (use NRCS definitions):		0
		Yes = 3 No = 0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. <i>Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i>		
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6	6
Dense, uncut, herbaceous plants > ½ of area	points = 3	
Dense, woody, plants > ½ of area	points = 2	
Dense, uncut, herbaceous plants > ¼ of area	points = 1	
Does not meet any of the criteria above for plants	points = 0	
Total for S 1	Add the points in the boxes above	7

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

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


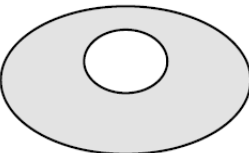
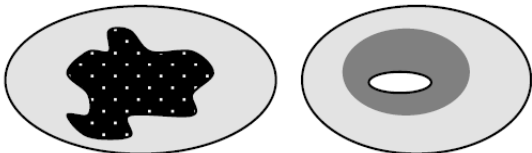
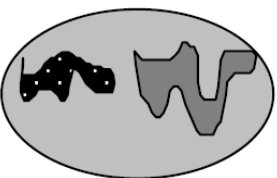

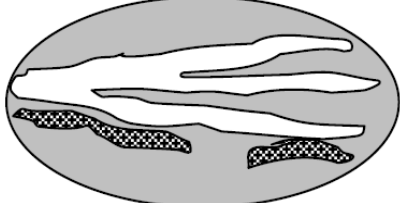
Rating of Landscape Potential If score is: 1 - 2 = M 0 = L *Record rating on the first page*

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

Rating of Value If score is: 2 - 4 = H 1 = M 0 = L *Record rating on the first page*

<u>SLOPE WETLANDS</u>		
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion		
S 4.0. Does the site have the potential to reduce flooding and stream erosion?		
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.</i>	1	
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	
Rating of Site Potential If score is: <input checked="" type="checkbox"/> 1 = M <input type="checkbox"/> 0 = L <i>Record rating on the first page</i>		
S 5.0. Does the landscape have the potential to support hydrologic functions of the site?		
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?	Yes = 1 No = 0	0
Rating of Landscape Potential If score is: <input type="checkbox"/> 1 = M <input checked="" type="checkbox"/> 0 = L <i>Record rating on the first page</i>		
S 6.0. Are the hydrologic functions provided by the site valuable to society?		
S 6.1. Distance to the nearest areas downstream that have flooding problems:		2
The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds)	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
No flooding problems anywhere downstream	points = 0	
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0	0
Total for S 6	Add the points in the boxes above	2
Rating of Value If score is: <input checked="" type="checkbox"/> 2 - 4 = H <input type="checkbox"/> 1 = M <input type="checkbox"/> 0 = L <i>Record rating on the first page</i>		

NOTES and FIELD OBSERVATIONS:

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
<p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Aquatic bed 4 structures or more: points = 4 <input checked="" type="checkbox"/> Emergent 3 structures: points = 2 <input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 <input checked="" type="checkbox"/> Forested (areas where trees have > 30% cover) 1 structure: points = 0 <p><i>If the unit has a Forested class, check if:</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> 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 	<p>2</p>
<p>H 1.2. Hydroperiods</p> <p>Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).</p> <ul style="list-style-type: none"> <input type="checkbox"/> Permanently flooded or inundated 4 or more types present: points = 3 <input type="checkbox"/> Seasonally flooded or inundated 3 types present: points = 2 <input checked="" type="checkbox"/> Occasionally flooded or inundated 2 types present: points = 1 <input checked="" type="checkbox"/> Saturated only 1 types present: points = 0 <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake Fringe wetland 2 points <input type="checkbox"/> Freshwater tidal wetland 2 points 	<p>2</p>
<p>H 1.3. Richness of plant species</p> <p>Count the number of plant species in the wetland that cover at least 10 ft². <i>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i></p> <p>If you counted: points = 2</p> <p style="padding-left: 40px;">> 19 species points = 1</p> <p style="padding-left: 40px;">5 - 19 species points = 0</p> <p style="padding-left: 40px;">< 5 species</p>	<p>2</p>
<p>H 1.4. Interspersion of habitats</p> <p>Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-bottom: 20px;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> </div> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 20%;"> <p>All three diagrams in this row are HIGH = 3 points</p> </div> <div style="width: 60%; text-align: center;">    </div> </div>	<p>1</p>

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i>	
<input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) <input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>) <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)	1
Total for H 1	8

Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 - 6 = L *Record rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). Calculate: 11.8 % undisturbed habitat + (4 % moderate & low intensity land uses / 2) = 13.8% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0	
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: 60.2 % undisturbed habitat + (28.7 % moderate & low intensity land uses / 2) = 74.55% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0	
Total for H 2	0

Rating of Landscape Potential If Score is: 4 - 6 = H 1 - 3 = M < 1 = L *Record rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated. Site meets ANY of the following criteria: points = 2 <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0	

Rating of Value If Score is: 2 = H 1 = M 0 = L *Record rating on the first page*

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

<http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here:

<http://wdfw.wa.gov/conservation/phs/list/>

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

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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.</i>	
<p>SC 1.0. Estuarine Wetlands</p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal,</p> <p><input type="checkbox"/> Vegetated, and</p> <p><input type="checkbox"/> With a salinity greater than 0.5 ppt</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 1.1 <input checked="" type="checkbox"/> No = Not an estuarine wetland</p>	
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No - Go to SC 1.2</p>	
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25)</p> <p><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.</p> <p><input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	
<p>SC 2.0. Wetlands of High Conservation Value (WHCV)</p>	
<p>SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 2.2 <input checked="" type="checkbox"/> No - Go to SC 2.3</p>	
<p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Not WHCV</p>	
<p>SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Contact WNHP/WDNR and to SC 2.4 <input checked="" type="checkbox"/> No = Not WHCV</p>	
<p>SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Not WHCV</p>	
<p>SC 3.0. Bogs</p> <p>Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i></p>	
<p>SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 3.3 <input checked="" type="checkbox"/> No - Go to SC 3.2</p>	
<p>SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 3.3 <input checked="" type="checkbox"/> No = Is not a bog</p>	
<p>SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Is a Category I bog <input type="checkbox"/> No - Go to SC 3.4</p>	
<p>NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.</p>	
<p>SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Is a Category I bog <input type="checkbox"/> No = Is not a bog</p>	

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <p><input type="checkbox"/> Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.</p> <p><input type="checkbox"/> Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a forested wetland for this section</p>	
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <p><input type="checkbox"/> The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks</p> <p><input type="checkbox"/> The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>)</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 5.1 <input checked="" type="checkbox"/> No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).</p> <p><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.</p> <p><input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft²)</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <p><input type="checkbox"/> Long Beach Peninsula: Lands west of SR 103</p> <p><input type="checkbox"/> Grayland-Westport: Lands west of SR 105</p> <p><input type="checkbox"/> Ocean Shores-Copalis: Lands west of SR 115 and SR 109</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 6.1 <input checked="" type="checkbox"/> No = Not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No - Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category II <input type="checkbox"/> No - Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category III <input type="checkbox"/> No = Category IV</p>	
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	

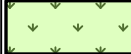
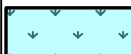


STUDY AREA BOUNDARY

150' BUFFER

WETLAND C

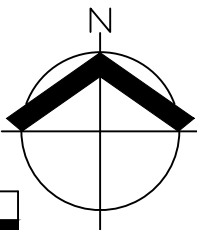
LEGEND (COLOR COPY):

-  PEM/SLOPE WETLAND C
-  PFO/SLOPE WETLAND C

NAIP AERIAL (JUNE, 2023)
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025

SCALE: 1" = 200 FEET



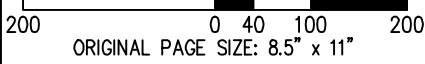
**COWARDIN CLASSIFICATION AND 150' BUFFER
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT**

FIGURE
1

AKS ENGINEERING & FORESTRY, LLC
 9600 NE 126TH AVE, STE 2520
 VANCOUVER, WA 98682
 P: 360.882.0419 F: 360.882.0426 aks-eng.com

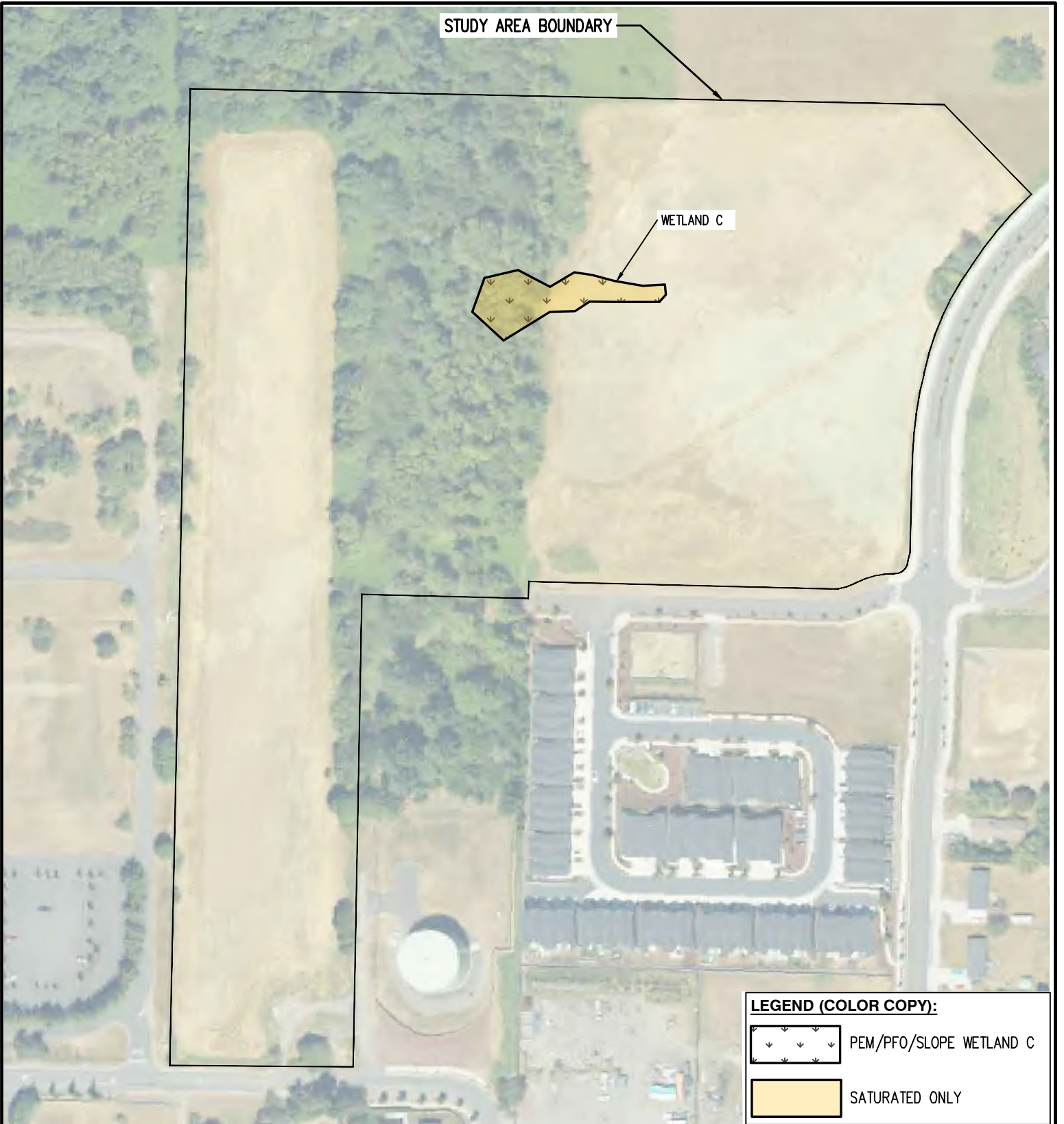


DRWN: RAS
 CHKD: EE
 AKS JOB:
 12107

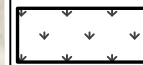


STUDY AREA BOUNDARY

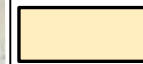
WETLAND C



LEGEND (COLOR COPY):



PEM/PFO/SLOPE WETLAND C

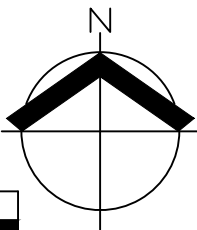


SATURATED ONLY

NAIP AERIAL (JUNE, 2023)
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025

SCALE: 1" = 200 FEET



ORIGINAL PAGE SIZE: 8.5" x 11"

**HYDROPERIODS
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT**

FIGURE
2

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682

P: 360.882.0419 F: 360.882.0426 aks-eng.com

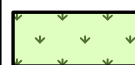


DRWN: RAS
CHKD: EE
AKS JOB:
12107

STUDY AREA BOUNDARY

WETLAND C

LEGEND:

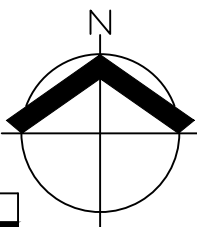


DENSE, UN CUT HERBACEOUS PLANTS

NAIP AERIAL (JUNE, 2023)
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025

SCALE: 1" = 200 FEET



200 0 40 100 200
ORIGINAL PAGE SIZE: 8.5" x 11"

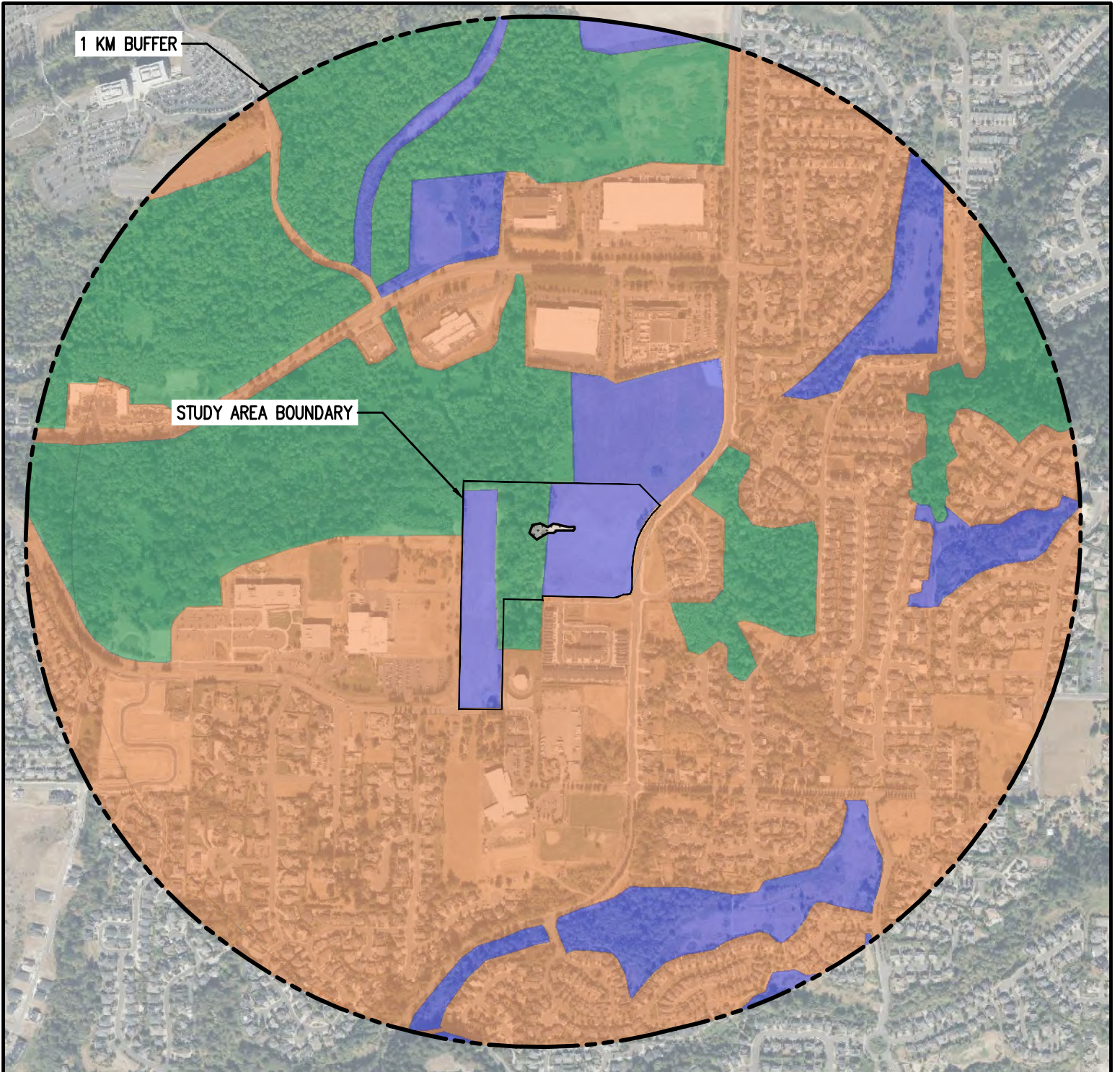
PLANT COVER
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682
P: 360.882.0419 F: 360.882.0426 aks-eng.com



FIGURE
3

DRWN: RAS
CHKD: EE
AKS JOB:
12107

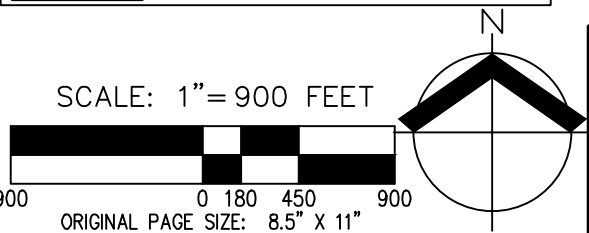


LEGEND (COLOR COPY):

	PEM/PFO/SLOPE WETLAND C
	RELATIVELY UNDISTURBED HABITAT
	MODERATE/LOW INTENSITY LAND USE
	HIGH INTENSITY LAND USE

1KM AERIAL DERIVED FROM BING IMAGERY
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025



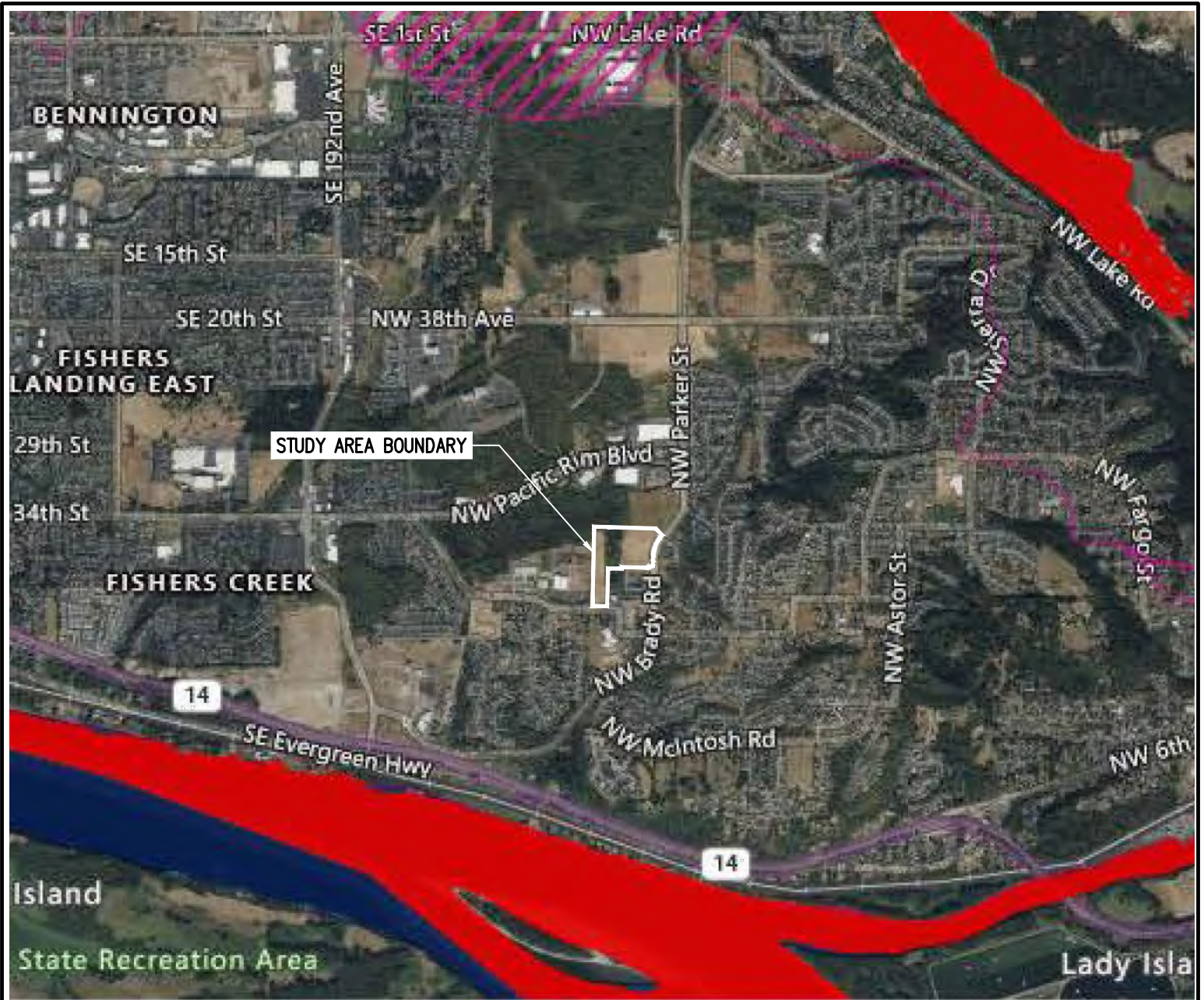
**1KM BUFFER AND LAND USE INTENSITY
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT**

FIGURE
4

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682
P: 360.882.0419 F: 360.882.0426 aks-eng.com



DRWN: RAS
CHKD: EE
AKS JOB:
12107



Assessed Water/Sediment

- Water**
- Category 5 - 303d
 - Category 4C
 - Category 4B
 - Category 4A
 - Category 2
 - Category 1

- Sediment**
- Category 5 - 303d
 - Category 4C
 - Category 4B
 - Category 4A
 - Category 2
 - Category 1

WQ Improvement Projects

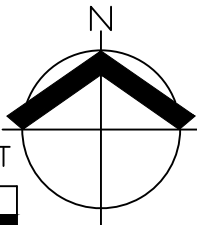
- TMDL - Approved
- 4B - Approved
- STI - Approved
- ARP - Approved
- TMDL - In Development
- STI - In Development
- ARP - In Development

- Subbasins (8 digit HUCs)**
- HUC boundary

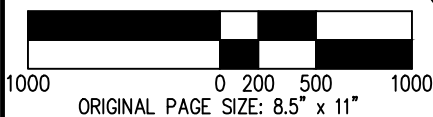
TITLE	Salmon Creek Watershed Bacteria and Turbidity Total Maximum Daily Load (Water Cleanup Plan): Detailed Implementation Plan	
	Publication number	Date Published
	05-10-037	March 2005
TITLE	Salmon Creek Temperature Total Maximum Daily Load: Water Quality Improvement Report and Implementation Plan	
	Publication number	Date Published
	11-10-044	October 2011

WASHINGTON DEPARTMENT OF ECOLOGY
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025



SCALE: 1" = 1000 FEET



303d AND TMDLs		FIGURE 5
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT		
AKS ENGINEERING & FORESTRY, LLC 9600 NE 126TH AVE, STE 2520 VANCOUVER, WA 98682 P: 360.882.0419 F: 360.882.0426 aks-eng.com		DRWN: RAS CHKD: EE AKS JOB: 12107



RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland D Date of site visit: 5/15/2025

Rated by Emma Eichhorn Trained by Ecology? Yes No Date of training _____

HGM Class used for rating Slope Wetland has multiple HGM classes? Yes No

NOTE: Form is not complete with out the figures requested (figures can be combined).

Source of base aerial photo/map National Agriculture Imagery Program (NAIP)

OVERALL WETLAND CATEGORY IV (based on functions or special characteristics)

1. Category of wetland based on FUNCTIONS

- Category I** - Total score = 23 - 27
- Category II** - Total score = 20 - 22
- Category III** - Total score = 16 - 19
- X **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>List appropriate rating (H, M, L)</i>				
Site Potential	L	M	L	
Landscape Potential	L	L	L	
Value	H	H	L	Total
Score Based on Ratings	5	6	3	14

Score for each function based on three ratings
(order of ratings is not important)

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	

Maps and Figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

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

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	2
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	3
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to another figure</i>)	S 4.1	3
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	S 2.1, S 5.1	1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	5
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	5

HGM Classification of Wetland in Western Washington

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

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

- NO - go to 2 YES - the wetland class is **Tidal Fringe** - go to 1.1

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

- NO - Saltwater Tidal Fringe (Estuarine)** **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands.
 If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

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

- NO - go to 3 YES - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

- The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
 At least 30% of the open water area is deeper than 6.6 ft (2 m).

- NO - go to 4 YES - The wetland class is **Lake Fringe** (Lacustrine Fringe)

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

- The wetland is on a slope (*slope can be very gradual*),
 The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
 The water leaves the wetland **without being impounded**.

- NO - go to 5 YES - The wetland class is **Slope**

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

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

- The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
 The overbank flooding occurs at least once every 2 years.

- NO - go to 6 YES - The wetland class is **Riverine**

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

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

NO - go to 7

YES - The wetland class is **Depressional**

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

NO - go to 8

YES - The wetland class is **Depressional**

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

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

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

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

Water Quality Functions - Indicators that the site functions to improve water quality		
S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)		
Slope is 1% or less	points = 3	1
Slope is > 1% - 2%	points = 2	
Slope is > 2% - 5%	points = 1	
Slope is greater than 5%	points = 0	
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions):		0
Yes = 3 No = 0		
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.		
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6	3
Dense, uncut, herbaceous plants > ½ of area	points = 3	
Dense, woody, plants > ½ of area	points = 2	
Dense, uncut, herbaceous plants > ¼ of area	points = 1	
Does not meet any of the criteria above for plants	points = 0	
Total for S 1	Add the points in the boxes above	4

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

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

Rating of Landscape Potential If score is: 1 - 2 = M 0 = L Record rating on the first page

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

Rating of Value If score is: 2 - 4 = H 1 = M 0 = L Record rating on the first page

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion	
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	

<p>S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.</i></p>		1
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1	
All other conditions	points = 0	

Rating of Site Potential If score is: 1 = M 0 = L *Record rating on the first page*


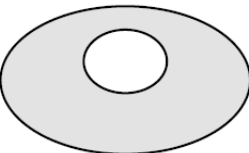
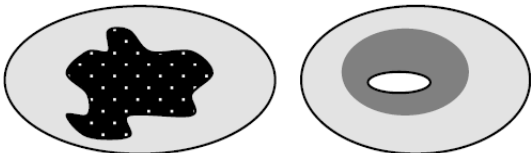
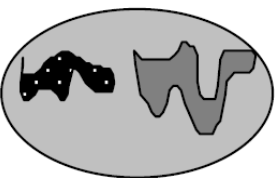

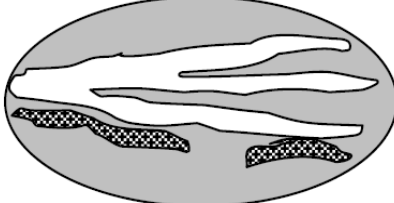
S 5.0. Does the landscape have the potential to support hydrologic functions of the site?		
<p>S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?</p>		0
Yes = 1 No = 0		

Rating of Landscape Potential If score is: 1 = M 0 = L *Record rating on the first page*

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

Rating of Value If score is: 2 - 4 = H 1 = M 0 = L *Record rating on the first page*

NOTES and FIELD OBSERVATIONS:

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat							
H 1.0. Does the site have the potential to provide habitat?							
<p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Aquatic bed 4 structures or more: points = 4 <input type="checkbox"/> Emergent 3 structures: points = 2 <input checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 <input type="checkbox"/> Forested (areas where trees have > 30% cover) 1 structure: points = 0 <p><i>If the unit has a Forested class, check if:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> 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 	0						
<p>H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).</p> <ul style="list-style-type: none"> <input type="checkbox"/> Permanently flooded or inundated 4 or more types present: points = 3 <input type="checkbox"/> Seasonally flooded or inundated 3 types present: points = 2 <input type="checkbox"/> Occasionally flooded or inundated 2 types present: points = 1 <input checked="" type="checkbox"/> Saturated only 1 types present: points = 0 <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake Fringe wetland 2 points <input type="checkbox"/> Freshwater tidal wetland 2 points 	0						
<p>H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². <i>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i></p> <p>If you counted:</p> <table style="width: 100%; border: none;"> <tr> <td style="padding-right: 20px;">> 19 species</td> <td style="text-align: right;">points = 2</td> </tr> <tr> <td>5 - 19 species</td> <td style="text-align: right;">points = 1</td> </tr> <tr> <td>< 5 species</td> <td style="text-align: right;">points = 0</td> </tr> </table>	> 19 species	points = 2	5 - 19 species	points = 1	< 5 species	points = 0	1
> 19 species	points = 2						
5 - 19 species	points = 1						
< 5 species	points = 0						
<p>H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-bottom: 20px;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> </div> <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="width: 20%;"> <p>All three diagrams in this row are HIGH = 3 points</p> </div> <div style="display: flex; justify-content: space-around;">    </div> </div>	0						

<p>H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) <input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>) <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata) 		0
<p>Total for H 1 Add the points in the boxes above</p>		1

Rating of Site Potential If Score is: 15 - 18 = H 7 - 14 = M 0 - 6 = L Record rating on the first page

<p>H 2.0. Does the landscape have the potential to support the habitat function of the site?</p>		
<p>H 2.1 Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). Calculate: 11.5 % undisturbed habitat + (4.2 % moderate & low intensity land uses / 2) = 13.6%</p> <p>If total accessible habitat is:</p> <ul style="list-style-type: none"> > 1/3 (33.3%) of 1 km Polygon points = 3 20 - 33% of 1 km Polygon points = 2 10 - 19% of 1 km Polygon points = 1 < 10 % of 1 km Polygon points = 0 		1
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: 32.5 % undisturbed habitat + (8.3 % moderate & low intensity land uses / 2) = 36.65%</p> <ul style="list-style-type: none"> Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10 - 50% and in 1-3 patches points = 2 Undisturbed habitat 10 - 50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0 		1
<p>H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0</p>		-2
<p>Total for H 2 Add the points in the boxes above</p>		0

Rating of Landscape Potential If Score is: 4 - 6 = H 1 - 3 = M < 1 = L Record rating on the first page

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>		
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated.</p> <p>Site meets ANY of the following criteria: points = 2</p> <ul style="list-style-type: none"> <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan <p>Site has 1 or 2 priority habitats (listed on next page) with in 100m points = 1 Site does not meet any of the criteria above points = 0</p>		0

Rating of Value If Score is: 2 = H 1 = M 0 = L Record rating on the first page

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp.

<http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here:

<http://wdfw.wa.gov/conservation/phs/list/>

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

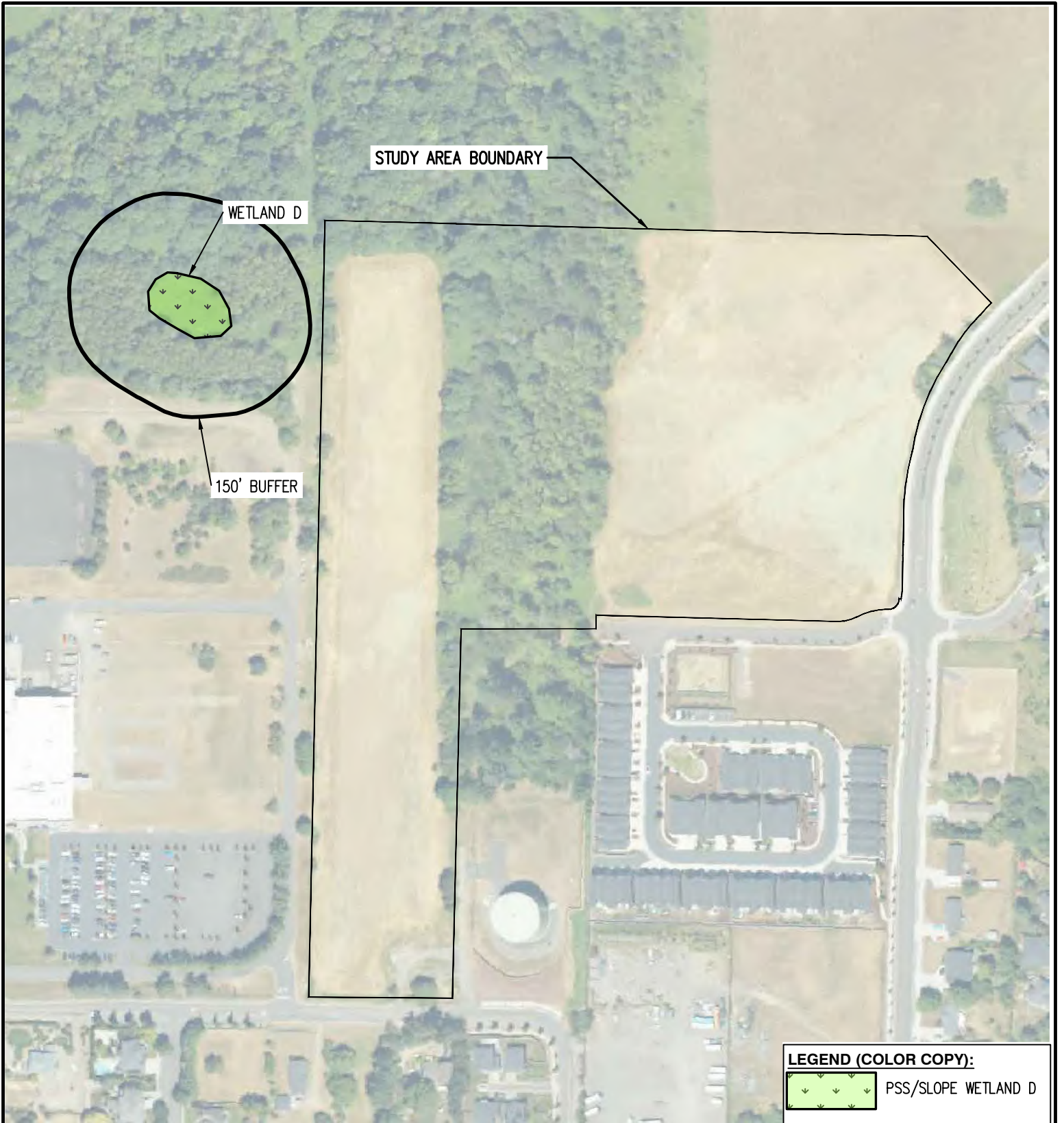
- Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- Herbaceous Balds:** Variable size patches of grass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

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

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.</i>	
<p>SC 1.0. Estuarine Wetlands</p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal,</p> <p><input type="checkbox"/> Vegetated, and</p> <p><input type="checkbox"/> With a salinity greater than 0.5 ppt</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 1.1 <input checked="" type="checkbox"/> No = Not an estuarine wetland</p>	
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No - Go to SC 1.2</p>	
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25)</p> <p><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.</p> <p><input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	
<p>SC 2.0. Wetlands of High Conservation Value (WHCV)</p>	
<p>SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 2.2 <input checked="" type="checkbox"/> No - Go to SC 2.3</p>	
<p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Not WHCV</p>	
<p>SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Contact WNHP/WDNR and to SC 2.4 <input checked="" type="checkbox"/> No = Not WHCV</p>	
<p>SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Not WHCV</p>	
<p>SC 3.0. Bogs</p> <p>Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i></p>	
<p>SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 3.3 <input checked="" type="checkbox"/> No - Go to SC 3.2</p>	
<p>SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?</p> <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 3.3 <input checked="" type="checkbox"/> No = Is not a bog</p>	
<p>SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Is a Category I bog <input type="checkbox"/> No - Go to SC 3.4</p>	
<p>NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.</p>	
<p>SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Is a Category I bog <input type="checkbox"/> No = Is not a bog</p>	

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. <input type="checkbox"/> Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a forested wetland for this section</p>	
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> <input type="checkbox"/> The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks <input type="checkbox"/> The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 5.1 <input checked="" type="checkbox"/> No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> <input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). <input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. <input type="checkbox"/> The wetland is larger than 1/10 ac (4350 ft²) <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Long Beach Peninsula: Lands west of SR 103 <input type="checkbox"/> Grayland-Westport: Lands west of SR 105 <input type="checkbox"/> Ocean Shores-Copalis: Lands west of SR 115 and SR 109 <p style="text-align: right;"><input type="checkbox"/> Yes - Go to SC 6.1 <input checked="" type="checkbox"/> No = Not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No - Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category II <input type="checkbox"/> No - Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category III <input type="checkbox"/> No = Category IV</p>	
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	

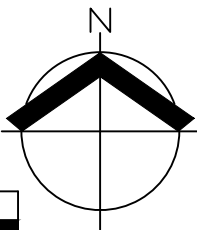


LEGEND (COLOR COPY):

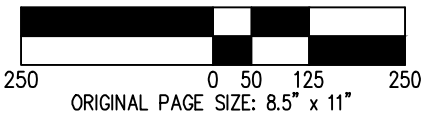
 PSS/SLOPE WETLAND D

NAIP AERIAL (JUNE, 2023)
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025



SCALE: 1" = 250 FEET

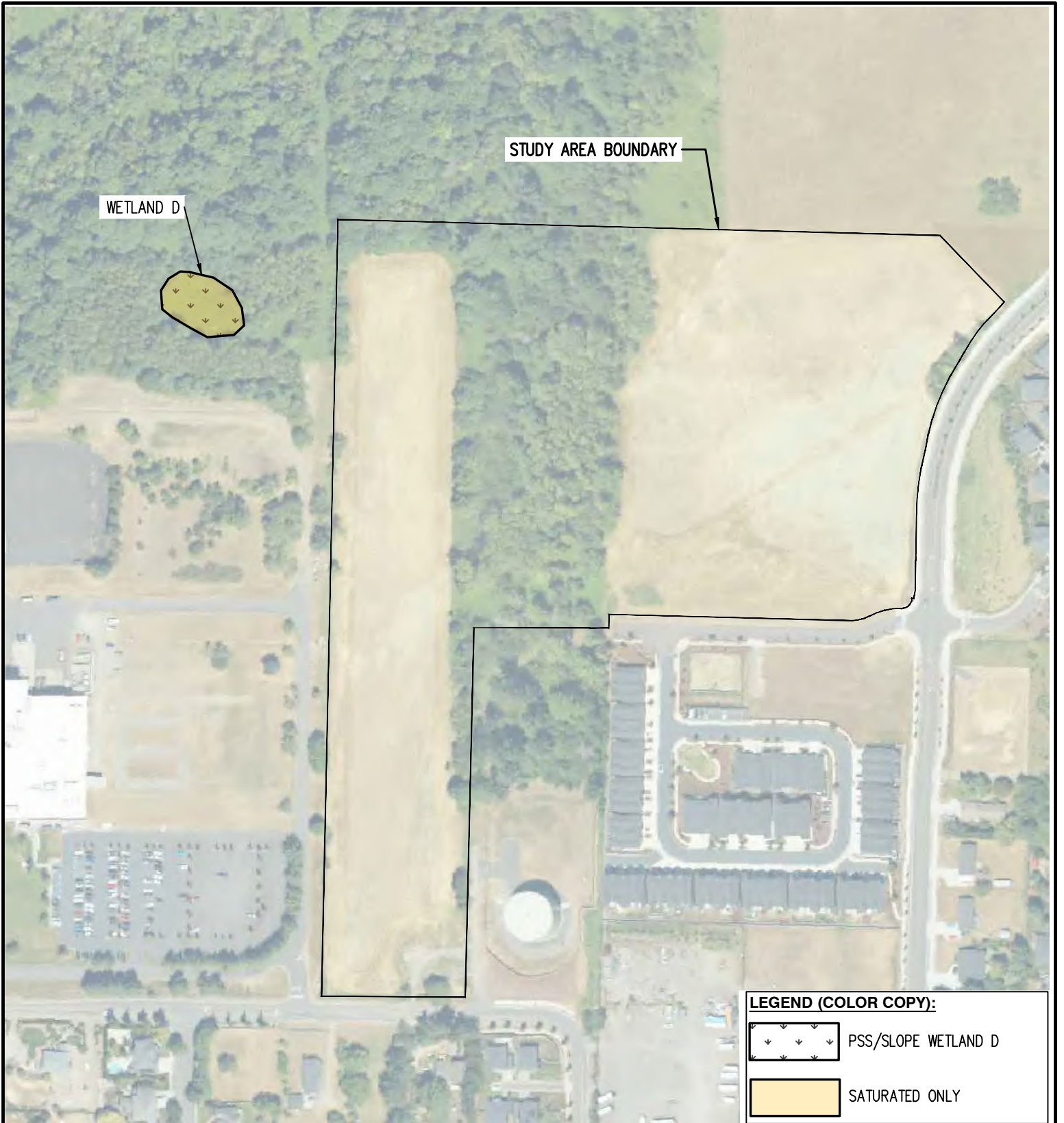


**COWARDIN CLASSIFICATION AND 150' BUFFER
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT**

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682
P: 360.882.0419 F: 360.882.0426 aks-eng.com



FIGURE 1
DRWN: RAS
CHKD: EE
AKS JOB: 12107

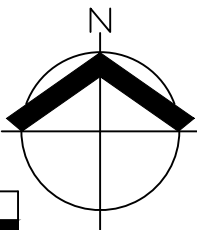


NAIP AERIAL (JUNE, 2023)
 WESTERN WA WETLAND RATING FORM

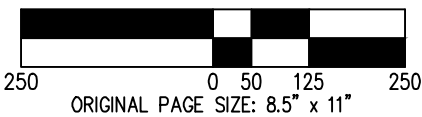
LEGEND (COLOR COPY):

	PSS/SLOPE WETLAND D
	SATURATED ONLY

DATE: 05/27/2025

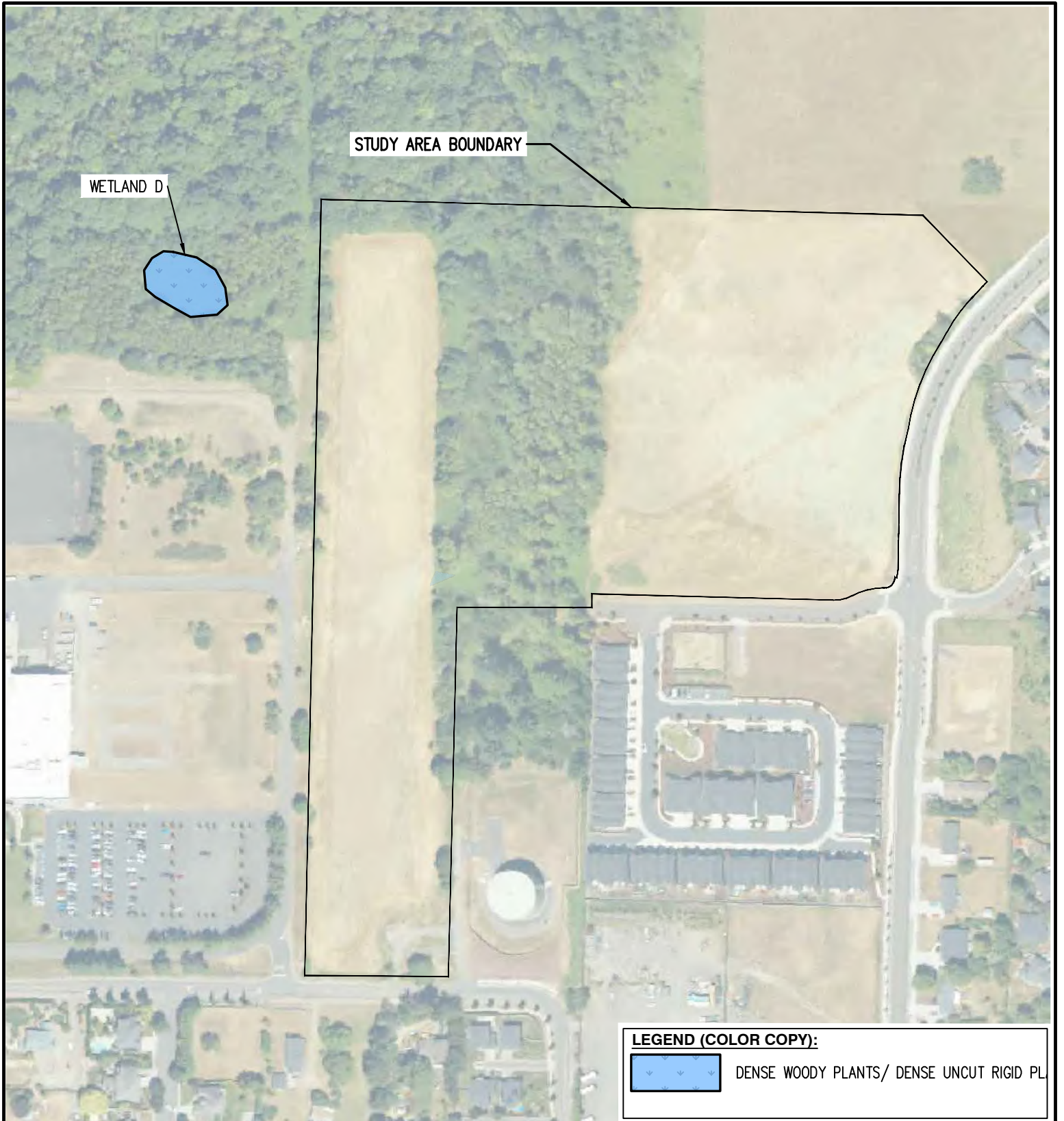


SCALE: 1" = 250 FEET



HYDROPERIODS		FIGURE 2
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT		
AKS ENGINEERING & FORESTRY, LLC 9600 NE 126TH AVE, STE 2520 VANCOUVER, WA 98682 P: 360.882.0419 F: 360.882.0426 aks-eng.com		DRWN: RAS CHKD: EE AKS JOB: 12107





STUDY AREA BOUNDARY

WETLAND D

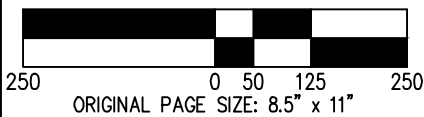
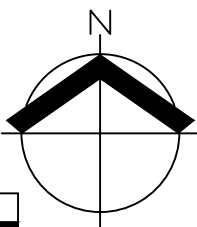
LEGEND (COLOR COPY):


	DENSE WOODY PLANTS/ DENSE UN-CUT RIGID PL
--	---

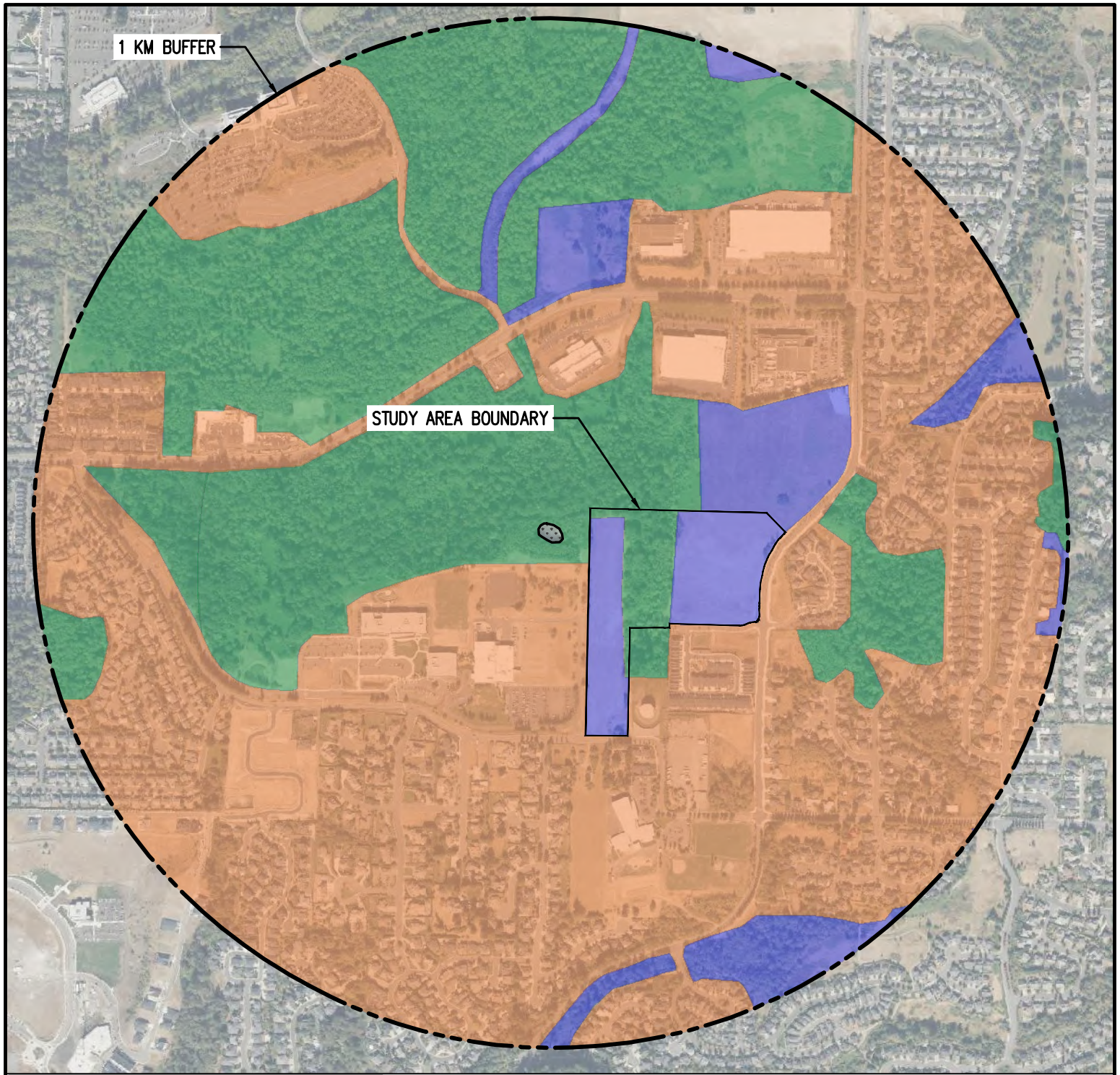
NAIP AERIAL (JUNE, 2023)
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025

SCALE: 1" = 250 FEET







PLANT COVER		FIGURE 3
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT		
AKS ENGINEERING & FORESTRY, LLC 9600 NE 126TH AVE, STE 2520 VANCOUVER, WA 98682 P: 360.882.0419 F: 360.882.0426 aks-eng.com		DRWN: RAS CHKD: EE AKS JOB: 12107
		



1 KM BUFFER

STUDY AREA BOUNDARY

LEGEND (COLOR COPY):

-  PSS/SLOPE WETLAND D
-  RELATIVELY UNDISTURBED HABITAT
-  MODERATE/LOW INTENSITY LAND USE
-  HIGH INTENSITY LAND USE

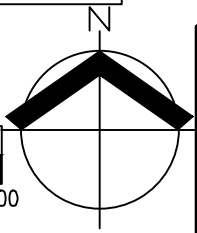
1KM AERIAL DERIVED FROM BING IMAGERY
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025

SCALE: 1" = 900 FEET



ORIGINAL PAGE SIZE: 8.5" X 11"



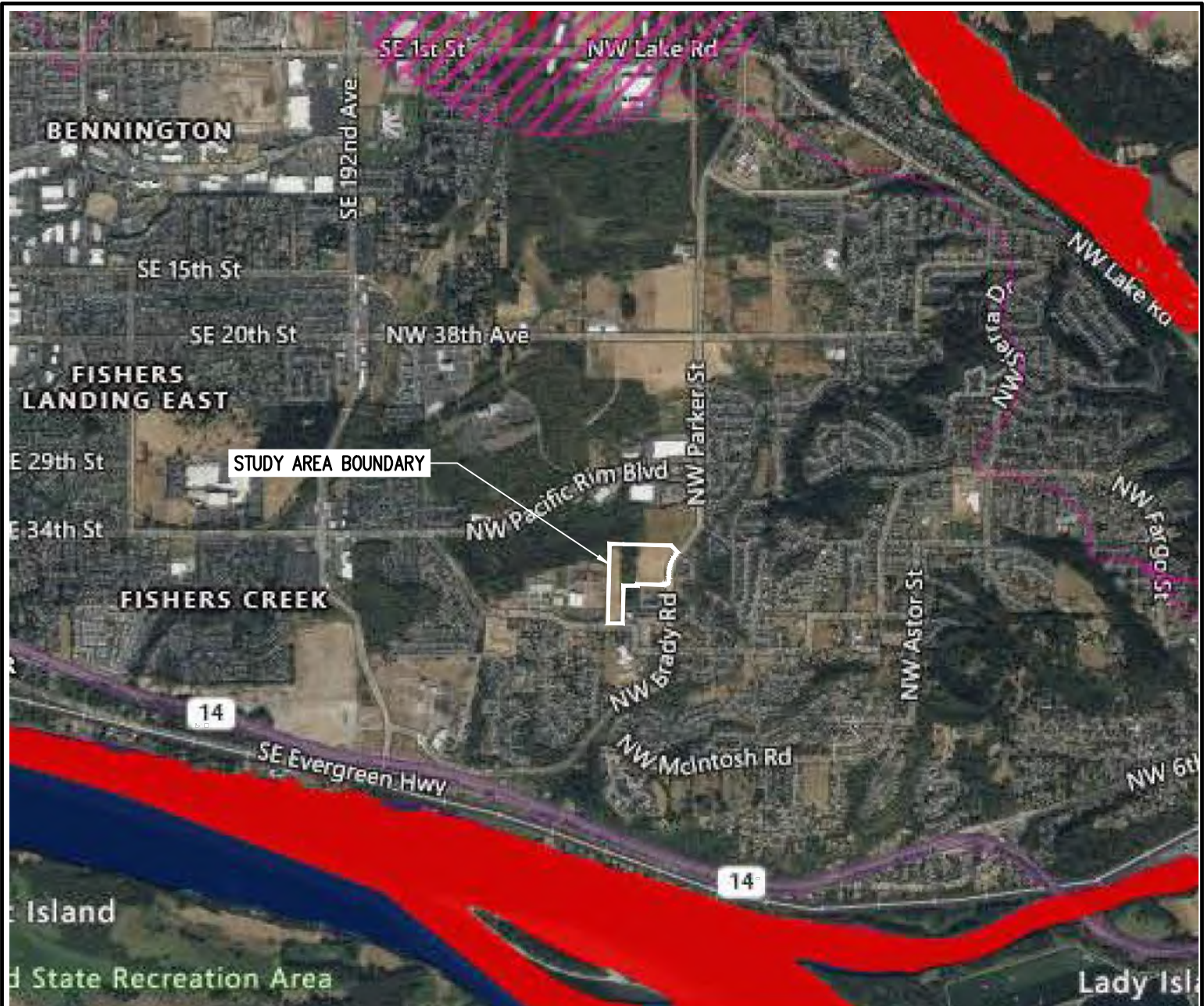
**1KM BUFFER AND LAND USE INTENSITY
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT**

AKS ENGINEERING & FORESTRY, LLC
 9600 NE 126TH AVE, STE 2520
 VANCOUVER, WA 98682
 P: 360.882.0419 F: 360.882.0426 aks-eng.com



FIGURE
4

DRWN: RAS
 CHKD: EE
 AKS JOB:
 12107

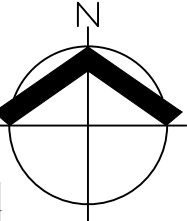
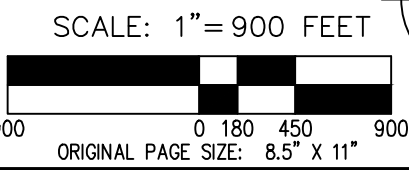


- Assessed Water/Sediment**
- Water**
- Category 5 - 303d
 - Category 4C
 - Category 4B
 - Category 4A
 - Category 2
 - Category 1
- Sediment**
- Category 5 - 303d
 - Category 4C
 - Category 4B
 - Category 4A
 - Category 2
 - Category 1
- WQ Improvement Projects**
- TMDL - Approved
 - 4B - Approved
 - STI - Approved
 - ARP - Approved
 - TMDL - In Development
 - STI - In Development
 - ARP - In Development
- Subbasins (8 digit HUCs)**
- HUC boundary

TITLE	Salmon Creek Watershed Bacteria and Turbidity Total Maximum Daily Load (Water Cleanup Plan): Detailed Implementation Plan	
	Publication number	Date Published
	05-10-037	March 2005
TITLE	Salmon Creek Temperature Total Maximum Daily Load: Water Quality Improvement Report and Implementation Plan	
	Publication number	Date Published
	11-10-044	October 2011

WASHINGTON DEPARTMENT OF ECOLOGY
WESTERN WA WETLAND RATING FORM

DATE: 05/27/2025



303d AND TMDLs
NW 18TH AVENUE CRITICAL AREAS ASSESSMENT

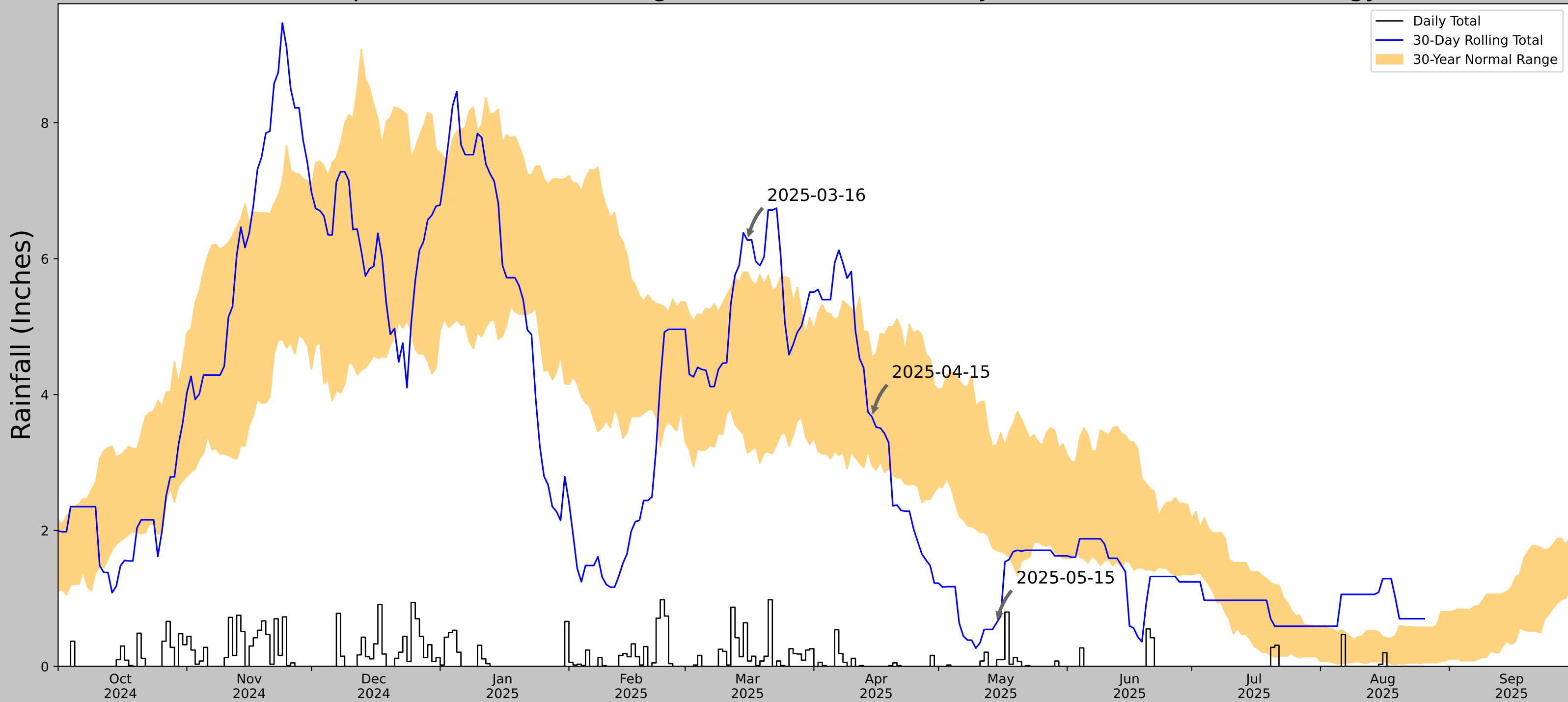
AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682
P: 360.882.0419 F: 360.882.0426 aks-eng.com

FIGURE	5
DRWN: RAS	CHKD: EE
AKS JOB:	12107



Appendix D: APT Information

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	45.59301, -122.45557
Observation Date	2025-05-15
Elevation (ft)	495.779
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-05-15	1.704331	3.253937	0.641732	Dry	1	3	3
2025-04-15	2.95315	4.551181	3.669291	Normal	2	2	4
2025-03-16	3.136221	5.800394	6.271654	Wet	3	1	3
Result							Normal Conditions - 10

Figures and tables made by the Antecedent Precipitation Tool Version 2.9



Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PORTLAND WFO	45.5608, -122.5383	20.997	4.578	474.782	4.234	10366	90
PORTLAND 4.6 ENE	45.5548, -122.5645	139.108	1.334	118.111	0.758	4	0
PORTLAND INTL AP	45.5958, -122.6092	21.982	4.196	0.985	1.892	983	0

AgACIS for Clark County

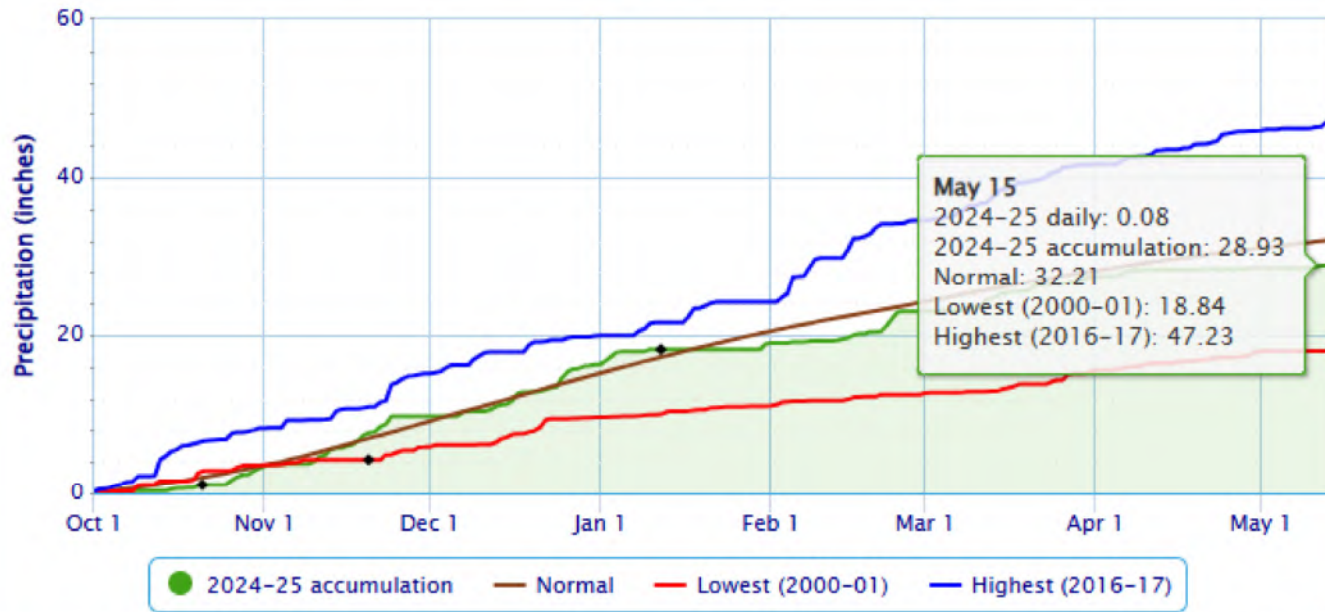
AgACIS



Accumulated Precipitation – VANCOUVER PEARSON AP, WA



Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



Powered by ACIS

Note regarding subsequent/missing values

Climatological Data for VANCOUVER PEARSON AP, WA - May 2025

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2025-05-01	81	42	61.5	22	12	0.00	M	M
2025-05-02	73	46	59.5	20	10	0.00	M	M
2025-05-03	62	46	54.0	14	4	T	M	M
2025-05-04	65	36	50.5	11	1	0.00	M	M
2025-05-05	76	39	57.5	18	8	0.00	M	M
2025-05-06	83	43	63.0	23	13	0.00	M	M
2025-05-07	71	44	57.5	18	8	0.00	M	M
2025-05-08	70	39	54.5	15	5	0.00	M	M
2025-05-09	77	40	58.5	19	9	0.00	M	M
2025-05-10	70	47	58.5	19	9	0.00	M	M
2025-05-11	61	51	56.0	16	6	0.16	M	M
2025-05-12	61	50	55.5	16	6	0.15	M	M
2025-05-13	61	46	53.5	14	4	0.01	M	M
2025-05-14	64	51	57.5	18	8	T	M	M
2025-05-15	59	50	54.5	15	5	0.08	M	M
2025-05-16	63	50	56.5	17	7	0.01	M	M
2025-05-17	63	52	57.5	18	8	0.79	M	M
2025-05-18	60	50	55.0	15	5	T	M	M
2025-05-19	65	50	57.5	18	8	0.09	M	M
2025-05-20	63	51	57.0	17	7	0.02	M	M
2025-05-21	68	49	58.5	19	9	0.00	M	M
2025-05-22	64	52	58.0	18	8	0.01	M	M
2025-05-23	69	50	59.5	20	10	0.00	M	M
2025-05-24	80	46	63.0	23	13	0.00	M	M
2025-05-25	66	48	57.0	17	7	0.00	M	M
2025-05-26	71	54	62.5	23	13	T	M	M
2025-05-27	83	45	64.0	24	14	0.00	M	M
2025-05-28	83	54	68.5	29	19	0.00	M	M
2025-05-29	70	54	62.0	22	12	0.05	M	M
2025-05-30	86	50	68.0	28	18	0.00	M	M
2025-05-31	69	52	60.5	21	11	0.00	M	M
Average Sum	69.6	47.6	58.6	587	277	1.37	M	M



Appendix E: Buffer Enhancement species and quantities

Stella Ridge Subdivision Wetland A Buffer Planting Specifications

Planting specifications for +28,425 square feet of Buffer Enhancement as shown on Figures 9A-9B .

Scientific Name	Common Name	Size*	Spacing/Seeding Rate	Quantity
Trees (total 124) = SF x 0.05				
<i>Salix hookeriana</i>	Hooker's Willow	2 gallon	15 feet on center	31
<i>Alnus rubra</i>	Red Alder	2 gallon	10 feet on center	31
<i>Populus balsamifera</i>	Black cottonwood	2 gallon	10 feet on center	31
<i>Cornus sericea</i>	Red osier dogwood	2 gallon	10 feet on center	31
Shrubs (total 268) = SF x 0.01				
<i>Rhamnus purshiana</i>	Cascara	1 gallon	4-5 feet on center	165
<i>Lonicera involucrata</i>	Black twinberry	1 gallon	4-5 feet on center	165
<i>Corylus cornuta</i>	Beaked hazelnut	1 gallon	4-5 feet on center	165
<i>Rosa nutkana</i>	dull Oregon grap	1 gallon	4-5 feet on center	165

*Bare root plants may be substituted for container plants based on availability. If bare root plants are used, they must be planted during the late winter/early spring dormancy period.

Planting Notes

- 1) Container stock shall be installed only from February 1 through May 1 and October 1 through November 15. Bare root stock shall be installed only from December 15 through April 15. Plantings outside these times may require additional measures to ensure survival which shall be specified on the plans.
- 2) All non-native invasive vegetation shall be removed from planting areas prior to installing native enhancement plantings. Invasive species control shall be consistent with the County's vegetation management and approved noxious/invasive weed list.
- 3) Appropriate plant selection, along with adequate site preparation and maintenance, reduces the need for irrigation. However, unless site hydrology is currently adequate, a County approved irrigation system or equivalent (i.e., polymer, plus watering) shall be used during the two-year plant establishment period. Watering shall be at a minimum rate of at least one inch per week from June 15 through October 15.
- 4) Trees, shrubs, and groundcovers planted shall be mulched at a minimum of three inches in depth and 18 inches in diameter, to retain moisture and discourage weed growth around newly installed plant material. Appropriate mulches are made from composted bark or leaves that have not been chemically treated.
- 5) Depending on site conditions, appropriate measure shall be taken to limit wildlife-related plant damage.

Stella Ridge Subdivision Wetland B Buffer Planting Specifications

Planting specifications for +19,203 square feet of Buffer Enhancement as shown on Figures 9A-9B .

Scientific Name	Common Name	Size*	Spacing/Seeding Rate	Quantity
Trees (total 124) = SF x 0.05				
<i>Salix hookeriana</i>	Hooker's Willow	2 gallon	15 feet on center	20
<i>Alnus rubra</i>	Red Alder	2 gallon	10 feet on center	20
<i>Populus balsamifera</i>	Black cottonwood	2 gallon	10 feet on center	20
<i>Cornus sericea</i>	Red osier dogwood	2 gallon	10 feet on center	20
Shrubs (total 268) = SF x 0.01				
<i>Rhamnus purshiana</i>	Cascara	1 gallon	4-5 feet on center	115
<i>Lonicera involucrata</i>	Black twinberry	1 gallon	4-5 feet on center	115
<i>Corylus cornuta</i>	Beaked hazelnut	1 gallon	4-5 feet on center	115
<i>Rosa nutkana</i>	dull Oregon grap	1 gallon	4-5 feet on center	115

*Bare root plants may be substituted for container plants based on availability. If bare root plants are used, they must be planted during the late winter/early spring dormancy period.

Planting Notes

- 1) Container stock shall be installed only from February 1 through May 1 and October 1 through November 15. Bare root stock shall be installed only from December 15 through April 15. Plantings outside these times may require additional measures to ensure survival which shall be specified on the plans.
- 2) All non-native invasive vegetation shall be removed from planting areas prior to installing native enhancement plantings. Invasive species control shall be consistent with the County's vegetation management and approved noxious/invasive weed list.
- 3) Appropriate plant selection, along with adequate site preparation and maintenance, reduces the need for irrigation. However, unless site hydrology is currently adequate, a County approved irrigation system or equivalent (i.e., polymer, plus watering) shall be used during the two-year plant establishment period. Watering shall be at a minimum rate of at least one inch per week from June 15 through October 15.
- 4) Trees, shrubs, and groundcovers planted shall be mulched at a minimum of three inches in depth and 18 inches in diameter, to retain moisture and discourage weed growth around newly installed plant material. Appropriate mulches are made from composted bark or leaves that have not been chemically treated.
- 5) Depending on site conditions, appropriate measure shall be taken to limit wildlife-related plant damage.