

April 7, 2025

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14065 162nd Avenue NE, Wetland Delineation Report

The Watershed Company Reference Number: 220234

Summary

This report has been prepared to present the findings of a wetland delineation study located at 14065 162nd Avenue NE in unincorporated King County near Woodinville (parcel #3401700251). In addition to the information and findings presented in this report, the following documents are enclosed:

- Site Photos
- Delineation Sketch
- Wetland Determination Data Forms
- Wetland Rating Forms and Figures

One wetland (Wetland A) was delineated in the center of the subject property. It is a Category III wetland with five habitat points (Table 1). King County requires a standard buffer of 60 feet for Wetland A and a building setback of 15 feet.

Table 1. Summary of wetlands, streams, and required buffers.

Feature Name	Category/Type	Habitat Score	Buffer (ft)
Wetland A	Category III	5	60

Study Area

The study area is defined as parcel #3401700251 and is approximately 1.5 acres in size (Figure 1). Adjacent public or private property within 225 feet was screened from the edge of parcel or nearest publicly accessible land; no private property was accessed without permission. It is situated within Section 23 of Township 26 North, Range 05 East of the Public Land Survey System.

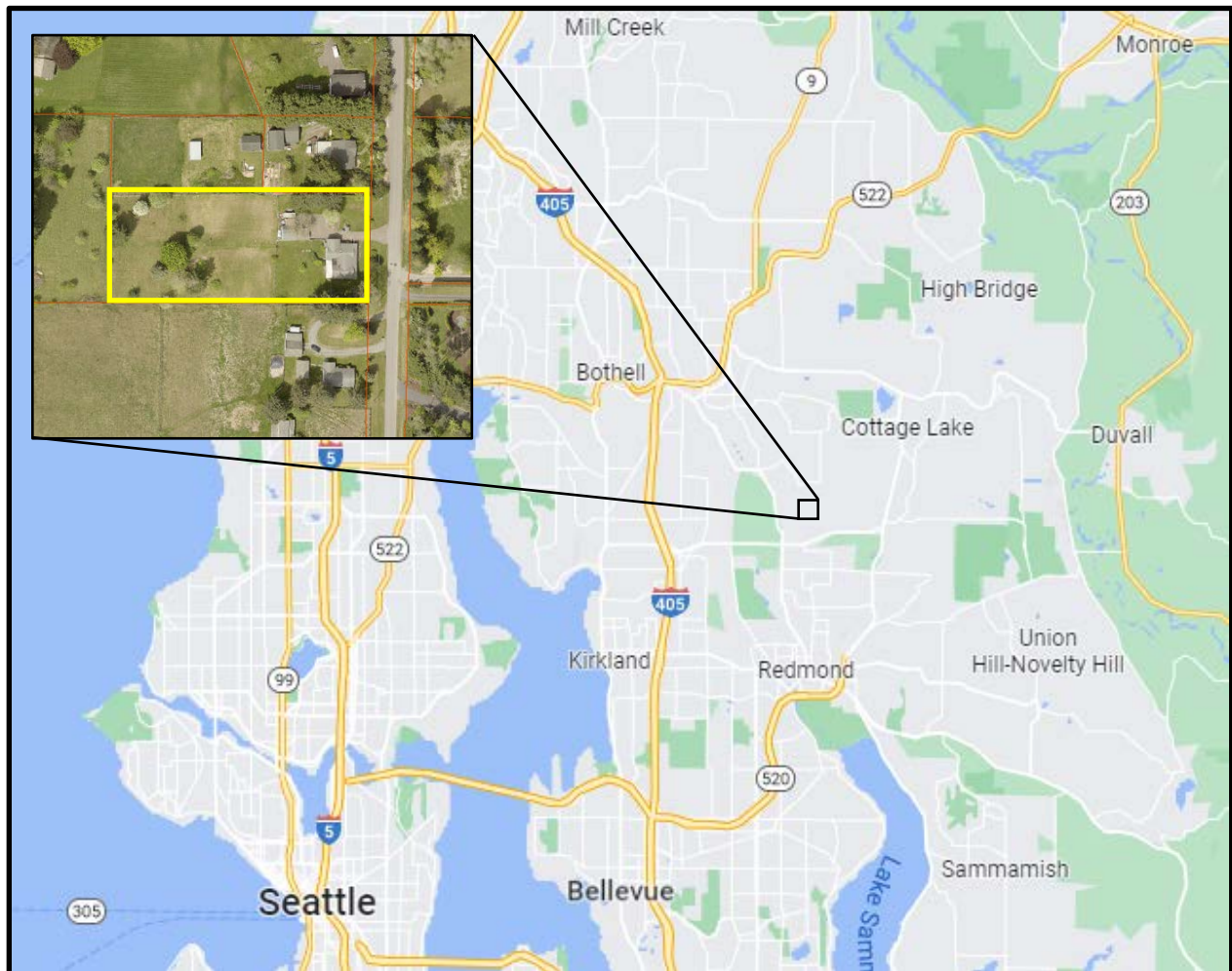


Figure 1. Vicinity and study area map.

Methods

Field investigations for the delineation study were conducted on March 7, 2022 by The Watershed Company ecologist Sam Payne, PWS.

The study area was evaluated for wetlands using methodology from the *Corps of Engineers Wetland 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* (U.S. Army Corps of Engineers 2010). Presence or absence of wetlands was determined on the basis of an examination of vegetation, soils and hydrology. These parameters were sampled at several locations along the wetland boundary to determine the wetland edge. Wetlands were classified using the Department of Ecology's 2014 rating system (Hruby 2014).

The on-site wetland boundary was marked with pink- and black-striped flagging. Wetland delineation flag locations were collected in the field using a Trimble GEOXH handheld unit. That data was used to generate a wetland delineation map.

Characterization of climatic conditions for precipitation in the Wetland Determination Data Forms were determined using the WETS table methodology (USDA, NRCS 2015). The "Seattle Tacoma Intl AP" station from 1991-2020 was used as a source for precipitation data (<http://agacis.rcc-acis.org/>). The WETS table methodology uses climate data from the three months prior to the site visit month to determine if normal conditions are present in the study area region.

The study area was evaluated for streams based on the presence or absence of an ordinary high water mark (OHWM) as defined by Section 404 of the Clean Water Act, the Washington Administrative Code (WAC) 220-660-030, and the Revised Code of Washington (RCW) 90.58.030 and guidance documents including *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Anderson 2016) and *A Guide to Ordinate High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (Mersel 2016).

Public-domain information on the subject properties was reviewed for this reconnaissance study. Resources and review findings are presented in Table 2 of the "Environmental Setting" section of this letter.

Environmental Setting

The study area is within in the Bear Creek-Sammamish River sub-basin (HUC 171100120304) of the Cedar-Sammamish Water Resource Inventory Area (WRIA 8). It is located in the Hollywood neighborhood near Woodinville, just east of the Sammamish River valley. The site is located along a gently sloping valley that faces downhill to the south.

The subject property is approximately 1.5 acres in size and is developed with a single-family residence and associated infrastructure and out-structures. The property is primarily landscaped as lawn with the some interspersed trees and shrubby vegetation.

Reviewed public-domain information for the site is summarized below (Table 2).

Table 2. Summary of online mapping and inventory resources.

Resource	Summary
USDA NRCS: Web Soil Survey	<i>Alderwood gravelly sandy loam</i>
USFWS: NWI Wetland Mapper	<i>No wetlands or streams</i>
WDFW: PHS on the Web	<i>No priority habitats or species</i>
WDFW: SalmonScape	<i>No streams</i>
WA-DNR: Forest Practices Activity Mapping Tool	<i>No wetlands or streams</i>
King County iMap	<i>No wetlands or streams</i>
WETS Climatic Condition	<i>Wetter than normal</i>

Findings

Wetlands

One wetland (Wetland A) was delineated and flagged in the study area (Table 3). Wetland A originates upgradient of the study area where surface water appears to be expressed through a groundwater seep. Two impoundments were observed (one of timber and one of yard debris), creating small depressions that are cumulatively estimated to be less than 10% of the wetland area. Soils on the property are not typical of wetland conditions, exhibiting black or very dark brown soils near the surface and high chroma strong brown soils (between 10YR 3/3 and 10YR 3/4) starting at around 10 inches, suggesting problematic soils conditions. However, surface water (around 1-foot), water table (to surface), saturation, and flowing water from groundwater seeps well into the growing season are indicative of an aquic moisture regime, thus soils are hydric. There is evidence that hydrology is sustained including a sparsely vegetated concave surface and sorted sediments in areas where surface water flows through herbaceous vegetation. The upgradient and downgradient extent of Wetland A has been estimated based on visual estimates and aerial photographs. Water from this wetland system was observed flowing downgradient where it intersects with 162nd Ave NE, which suggests that the wetlands are likely continuous through the valley center and do not entirely infiltrate. A review of historic

orthophotos is suggestive of a wetland signature, with visible differentiation between conditions in the wetland and adjacent vegetation. This occurs where wet soils support different plant species which stay greener into the dry season.

Non-Wetland Conditions

Vegetation outside of Wetland A is primarily lawn with interspersed trees and shrubs. Other plants which were relatively abundant on the property include Douglas-fir, blue spruce, English hawthorn, dandelion, cat's ear, dead nettle, and dovefoot geranium. This assemblage is a non-hydrophytic.

Soils typically exhibit two layers that are black (10YR 2/1) or very dark brown (10YR 2/2) near the surface, and strong brown soils (10YR 4/6) starting at a depth of approximately ten inches. These are ubiquitous throughout the site and are not hydric. Soils appear to be well drained with no surface water, groundwater, or saturation observed in non-wetland data points.

Table 3. Wetland A assessment summary.

THE WATERSHED COMPANY		WETLAND A – Assessment Summary					
Location:		Center of parcel					
WRIA / Sub-basin:		WRIA 8, HUC 171100120304					
		2014 Western WA Ecology Rating:	Category III				
		Buffer Width and Buffer Setback:	60 Feet				
		Wetland Size:	Approx. 0.5-acre				
		Cowardin Classification(s):	Palustrine emergent				
		HGM Classification(s):	Slope				
		Wetland Data Sheet(s):	DP-1, DP-3				
		Upland Data Sheet (s):	DP-2, DP-4				
		Flag Color:	Pink and black				
		Flag Numbers:	A-1 through A-18				
Vegetation	Tree stratum:	Pacific willow, English hawthorn					
	Shrub stratum:	Black twinberry					
	Herb stratum:	Grass, reed canarygrass, creeping buttercup					
Soils	Soil survey:	Alderwood gravelly sandy loam					
	Field data:	Aquic moisture regime, soils did not meet field indicators for hydric soils					
Hydrology	Source:	Groundwater seeps, precipitation					
	Field data:	Surface water, high water table, saturation					
Wetland Functions							
	Improving Water Quality		Hydrologic	Habitat			
Site Potential	H	M	<u>L</u>	H	M	<u>L</u>	
Landscape Potential	H	<u>M</u>	L	H	<u>M</u>	L	
Value	<u>H</u>	M	L	<u>H</u>	M	L	TOTAL
Score Based on Ratings	6			6		5	17
Description and Comments							
See description above.							

Streams

No streams were identified within the study area. No bed and bank characteristics, scour, sorted sediments, drainage patterns or other OHWM indicators were observed.

Local Regulations

Wetlands in King County are regulated according to King County Code (KCC) 21A.24 – Critical Areas. Wetlands are rated according to the 2014 Washington State Wetland Rating System for Western Washington in which a wetland is assigned a category of I-IV, and a habitat score from one through nine. Buffers in King County are determined according to the wetland category, habitat score, and intensity of the proposed land use. Residential land use outside the urban growth area is considered a moderate land use intensity. The wetland was rated as Category III with a habitat score of 5 points, which requires a standard buffer of 60 feet for moderate land use intensity (KCC 21A.24.325.A).

Buffer averaging is allowed in King County up to 25% of the buffer width, a maximum reduction of 15 feet for Wetland A (KCC 21A.24.325.B.1). Buffer averaging must provide equivalent or greater function and maintain the same total area of the standard buffer. The Code states that construction of on-site sewage disposal (septic) is an allowed use if “there is no alternative location with less adverse impact on the critical area and buffer and clearing is minimized to the maximum extent practical” (KCC 21A.24.045.D.63)

State and Federal Regulations

Federal Agencies

Most wetlands and streams are regulated by the Corps under Section 404 of the Clean Water Act. Any proposed filling or other direct impacts to Waters of the U.S., including wetlands (except isolated wetlands), would require notification and permits from the Corps. Wetland A is not isolated. Unavoidable impacts to jurisdictional wetlands are typically required to be compensated through implementation of an approved mitigation plan. If activities requiring a Corps permits are proposed, a Joint Aquatic Resource Permit Application (JARPA) could be submitted to obtain authorization.

Federally permitted actions that could affect endangered species may also require a biological assessment study and consultation with the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service. Compliance with the Endangered Species Act must be demonstrated for activities within jurisdictional wetlands and the 100-year floodplain. Application for Corps permits may also require an individual 401 Water Quality Certification and Coastal Zone

Management Consistency determination from Ecology and a cultural resource study in accordance with Section 106 of the National Historic Preservation Act.

Washington Department of Ecology (Ecology)

Similar to the Corps, Ecology, under Section 401 of the Clean Water Act, is charged with reviewing, conditioning, and approving or denying certain federally permitted actions that result in discharges to state waters. However, Ecology review under the Clean Water Act would only become necessary if a Section 404 permit from the Corps was issued. However, Ecology also regulates wetlands, including isolated wetlands, under the Washington Water Pollution Control Act, but only if direct wetland impacts are proposed. Therefore, if filling activities are avoided, authorization from Ecology would not be needed.

If filling is proposed, a JARPA may be also be submitted to Ecology in order to obtain a Section 401 Water Quality Certification and Coastal Zone Management Consistency Determination. Ecology permits are either issued concurrently with the Corps permit or within 90 days following the Corps permit.

In general, neither the Corps nor Ecology regulates wetland and stream buffers, unless direct impacts are proposed. When direct impacts are proposed, mitigated wetlands and streams may be required to employ buffers based on Corps and Ecology joint regulatory guidance.

Disclaimer

The information contained in this letter is based on the application of technical guidelines currently accepted as the best available science and in conjunction with the manuals and criteria referenced above. All discussions, conclusions and recommendations reflect the best professional judgment of the author(s) and are based upon information available at the time the study was conducted. All work was completed within the constraints of budget, scope, and timing. The findings of this report are subject to verification and agreement by the appropriate local, state and federal regulatory authorities. No other warranty, expressed or implied, is made.

Please call if you have any questions or if we can provide you with any additional information.

Sincerely,

A handwritten signature in black ink that reads "Sam Payne". The signature is written in a cursive style with a large, stylized 'S' and 'P'.

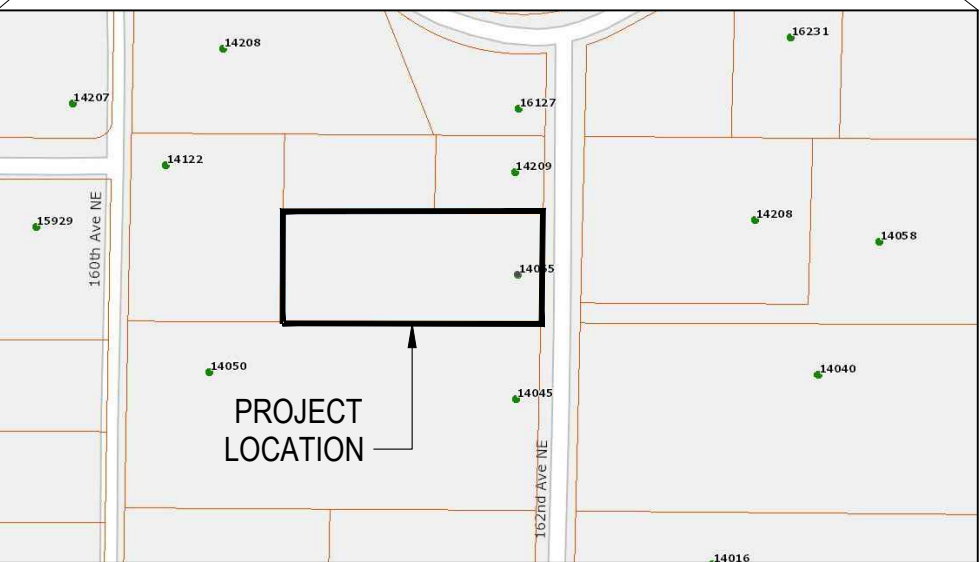
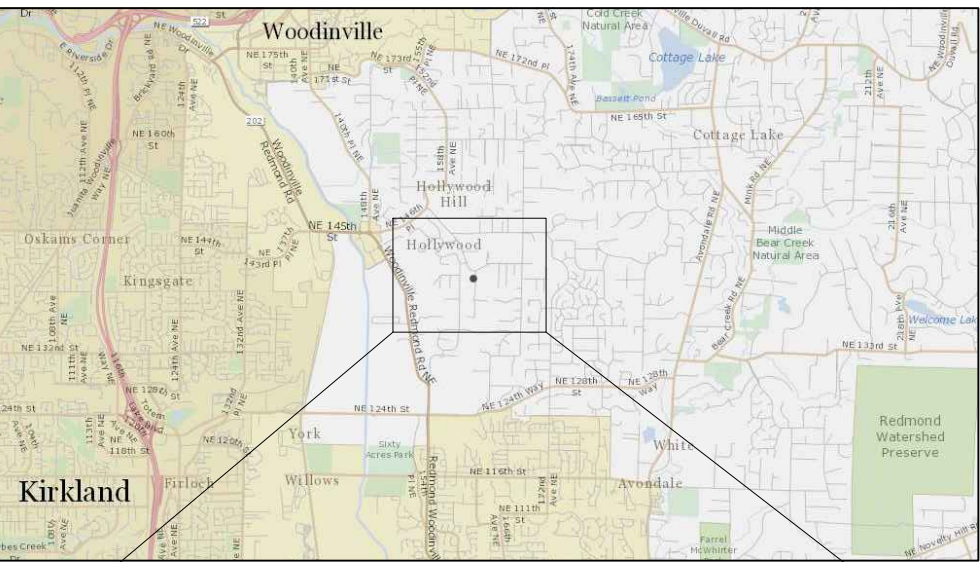
Sam Payne,
Ecologist

References

- Anderson, P.S. et al. 2016. Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State. (Publication #16-06-029). Olympia, WA: Shorelands and Environmental Assistance Program, Washington Department of Ecology.
- Department of Ecology (Ecology). 2018. July 2018 Modifications for Habitat Score Ranges. Modified from Wetland Guidance for CAO Updates, Western Washington Version. (Publication #16-06-001). Accessed 8/16/18:
<https://fortress.wa.gov/ecy/publications/parts/1606001part1.pdf>.
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- Hruby, T. 2014. Washington State Wetland Rating System for Western Washington: 2014 Update. (Publication #14-06-029). Olympia, WA: Washington Department of Ecology.
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- U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). ed. J. S. Wakely, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2015. National Engineering Handbook, Part 650 Engineering Field Handbook, Chapter 19 Hydrology Tools for Wetland Identification and Analysis. ed. R. A. Weber. 210-VI-NEH, Amend. 75. Washington, DC.



WETLAND DELINEATION FIGURE



VICINITY MAP

LEGEND

- DELINEATED WETLAND BOUNDARY
- APPROXIMATE WETLAND BOUNDARY
- 60-FT WETLAND BUFFER
- 15-FT BUILDING SETBACK LINE
- PARCEL BOUNDARIES
- DATA POINT

NOTES

- WETLAND DELINEATED BY THE WATERSHED COMPANY ON MARCH 7TH, 2022. SEE WETLAND DELINEATION REPORT BY THE WATERSHED COMPANY, DATED APRIL 5TH, 2022.
- GPS DATA DISPLAYED ON THIS MAP WAS COLLECTED IN THE FIELD USING A TRIMBLE GEOXH HAND HELD UNIT. THE DATA WAS DIFFERENTIALLY CORRECTED USING TRIMBLE PATHFINDER OFFICE SOFTWARE TO FURTHER INCREASE POSITION ACCURACY. GPS DATA IS BELIEVED RELIABLE FOR GENERAL PLANNING AND MOST REGULATORY PURPOSES. HOWEVER, ACCURACY IS VARIABLE AND SHOULD NOT BE CONSIDERED EQUIVALENT TO A PROFESSIONAL LAND SURVEY. NO WARRANTY IS EXPRESSED OR IMPLIED.



REVISIONS:		
NO.	DESCRIPTION	DATE
1	DELINEATION FIG	04/05/22

Site Photos



Photo 1. Back yard of property, Wetland A in center of depression.



Photo 2. Gently sloping valley with wetland in center (facing southwest).



Photo 3. Surface water flowing through vegetation, near DP-3.



Photo 4. Backyard view toward the existing house.

Project/Site: 14065 162nd Avenue NE City/County: King County Sampling date: 3/7/22
 Applicant/Owner: Kellin Homes State: WA Sampling Point: DP-1
 Investigator(s): S. Payne Section, Township, Range: S23, T26N, R05E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI classification: None

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present on the site? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

(If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetter than normal per WETS method.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>75</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
			<u>0</u> = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Lonicera involucrata</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Sambucus racemosa</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. _____				
4. _____				
5. _____				
			<u>30</u> = Total Cover	
Herb Stratum (Plot size: 1-m diameter)				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Ranunculus repens</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Phalaris arundinacea</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
			<u>35</u> = Total Cover	
Woody Vine Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____				
2. _____				
			<u>0</u> = Total Cover	
% Bare Ground in Herb Stratum: <u>65</u>				
Remarks:				

SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 2/1	100					Sandy loam	
6-10	10YR 3/2 10YR 2/1	70 30					Sandy loam	Mixed matrix
10-16	10YR 3/3 10YR 3/2	60 40					Sandy loam	Mixed matrix
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ 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)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☒ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☒ No ☐		
Remarks: Problematic wetland soils, aquic moisture regime evidenced by persistent moisture for at least two weeks in the growing season.								

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required: check all that apply)		Secondary Indicators (2 or more required)	
☒ Surface water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☒ No ☐ Depth (in): <u>6"</u> Water Table Present? Yes ☒ No ☐ Depth (in): _____ Saturation Present? Yes ☒ No ☐ Depth (in): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: 14065 162nd Avenue NE City/County: King County Sampling date: 3/7/22
 Applicant/Owner: Kellin Homes State: WA Sampling Point: DP-2
 Investigator(s): S. Payne Section, Township, Range: S23, T26N, R05E
 Landform (hillslope, terrace, etc): Slope Local relief (concave, convex, none): Convex Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present on the site? ☒ Yes ☐ No
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	
Remarks: Wetter than normal per WETS method.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) 1. <u>Platanus × acerifolia</u> Absolute % Cover <u>50</u> Dominant Species? <u>Y</u> Indicator Status <u>NL</u> 2. <u>*Acer sp.</u> Absolute % Cover <u>50</u> Dominant Species? <u>Y</u> Indicator Status <u>FACU</u> 3. _____ 4. _____ <u>100</u> = Total Cover	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A/B)
Sapling/Shrub Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ <u>0</u> = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Herb Stratum (Plot size: 1-m diameter) 1. <u>Lapsana communis</u> Absolute % Cover <u>5</u> Dominant Species? <u>Y</u> Indicator Status <u>FACU</u> 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ <u>5</u> = Total Cover	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ <u>0</u> = Total Cover % Bare Ground in Herb Stratum: <u>95</u>	Hydrophytic Vegetation Present? Yes ☐ No ☒
Remarks: *Maple not identified to species, presumed FACU.	

SOIL

Sampling Point: DP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks		
0-10	10YR 2/2	100					Sandy loam			
10-16	10YR 4/6	100					Sandy loam			
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)	
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)		Secondary Indicators (2 or more required)	
☐ Surface water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): _____ Water Table Present? Yes ☐ No ☒ Depth (in): _____ Saturation Present? Yes ☐ No ☒ Depth (in): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: 14065 162nd Avenue NE City/County: King County Sampling date: 3/7/22
 Applicant/Owner: Kellin Homes State: WA Sampling Point: DP-3
 Investigator(s): S. Payne Section, Township, Range: S23, T26N, R05E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI classification: None

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present on the site? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

(If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetter than normal per WETS method.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Salix lasiandra</u>	30	Y	FACW	
2. _____				
3. _____				
4. _____				
			<u>30</u> = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
			<u>0</u> = Total Cover	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Ranunculus repens</u>	80	Y	FAC	
2. <u>*Poaceae</u>	10	N	FAC	
3. <u>Phalaris arundinacea</u>	15	N	FACW	
4. <u>Geranium molle</u>	3	N	UPL	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
			<u>108</u> = Total Cover	Hydrophytic Vegetation Present? Yes ☒ No ☐
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				
2. _____				
			<u>0</u> = Total Cover	
% Bare Ground in Herb Stratum: <u>2</u>				
Remarks: *Mowed grass not identifiable to species, presumed FAC.				

SOIL

Sampling Point: DP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 2/1	100					Sandy loam	
6-10	10YR 3/2	100					Sandy loam	
10-16	10YR 3/4 10YR 2/2	70 30					Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ 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)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☒ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☒ No ☐		
Remarks: Problematic wetland soils, aquic moisture regime evidenced by persistent moisture for at least two weeks in the growing season.								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☒ Surface water (A1)	☐ Water Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Water Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)		
☒ High Water Table (A2)	☐ Salt Crust (B11)	☐ Dry-Season Water Table (C2)	☐ Saturation Visible on Aerial Imagery (C9)		
☒ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Geomorphic Position (D2)	☐ Shallow Aquitard (D3)		
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ FAC-Neutral Test (D5)	☐ Raised Ant Mounds (D6) (LRR A)		
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Frost-Heave Hummocks			
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)				
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)				
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)				
☐ Surface Soil Cracks (B6)	☐ Other (explain in remarks)				
☐ Inundation Visible on Aerial Imagery (B7)					
☐ Sparsely Vegetated Concave Surface (B8)					
Field Observations: Surface Water Present? Yes ☒ No ☐ Depth (in): <u>0.5"</u> Water Table Present? Yes ☒ No ☐ Depth (in): _____ Saturation Present? Yes ☒ No ☐ Depth (in): _____ (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: 14065 162nd Avenue NE City/County: King County Sampling date: 3/7/22
 Applicant/Owner: Kellin Homes State: WA Sampling Point: DP-4
 Investigator(s): S. Payne Section, Township, Range: S23, T26N, R05E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): Concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present on the site? ☒ Yes ☐ No
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	
Remarks: Wetter than normal per WETS method.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Taraxacum officinale</u>	<u>70</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Lamium purpureum</u>	<u>20</u>	<u>N</u>	<u>UPL</u>	
3. <u>*Poaceae</u>	<u>20</u>	<u>N</u>	<u>FAC</u>	
4. <u>Geranium molle</u>	<u>3</u>	<u>N</u>	<u>UPL</u>	
5. <u>Galium aparine</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>115</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Present? Yes ☐ No ☒
1. _____				
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum: <u>0</u>				
Remarks: *Mowed grass not identifiable to species, presumed FAC.				

SOIL

Sampling Point: DP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 2/1	100					Sandy loam	
10-16	10YR 3/4	100					Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)					Indicators for Problematic Hydric Soils ³ :			
☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)			
					☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)			
					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
Restrictive Layer (if present):					Hydric soil present?			
Type: _____					Yes ☐ No ☒			
Depth (inches): _____								
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required: check all that apply)		Secondary Indicators (2 or more required)	
☐ Surface water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations:		Wetland Hydrology Present?	
Surface Water Present?	Yes ☐ No ☒	Depth (in): _____	Yes ☐ No ☒
Water Table Present?	Yes ☐ No ☒	Depth (in): _____	
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (in): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: 14065 162nd Avenue NE City/County: King County Sampling date: 3/7/22
 Applicant/Owner: Kellin Homes State: WA Sampling Point: DP-5
 Investigator(s): S. Payne Section, Township, Range: S23, T26N, R05E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): None Slope (%): 1
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI classification: None

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present on the site? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

(If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒		
Wetland Hydrology Present?	Yes ☐ No ☒		
Remarks: Wetter than normal per WETS method.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
	<u>0</u>	= Total Cover	
Sapling/Shrub Stratum (Plot size: 3-m diameter)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	<u>0</u>	= Total Cover	
Herb Stratum (Plot size: 1-m diameter)			
1. <i>*Poaceae</i>	80	Y	FAC
2. <i>Hypochaeris radicata</i>	25	Y	FACU
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
	<u>105</u>	= Total Cover	
Woody Vine Stratum (Plot size: 3-m diameter)			
1. _____			
2. _____			
	<u>0</u>	= Total Cover	
% Bare Ground in Herb Stratum: <u>0</u>			

Dominance Test worksheet:
 Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across all Strata: 2 (B)
 Percent of Dominant Species that are OBL, FACW, or FAC: 50 (A/B)

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

Hydrophytic Vegetation Indicators:
☐ 1 – Rapid Test for Hydrophytic Vegetation
☐ 2 – Dominance Test is > 50%
☐ 3 – Prevalence Index is ≤ 3.0¹
☐ 4 – Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ 5 – Wetland Non-Vascular Plants¹
☐ Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: ***Mowed grass not identifiable to species, presumed FAC.**

SOIL

Sampling Point: DP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-9	10YR 2/2	100					Sandy loam	
9-26	10YR 4/6 10YR 5/2	95 5					Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ 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)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
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)		Secondary Indicators (2 or more required)	
☐ Surface water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): _____ Water Table Present? Yes ☐ No ☒ Depth (in): _____ Saturation Present? Yes ☐ No ☒ Depth (in): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: 14065 162nd Avenue NE City/County: King County Sampling date: 3/7/22
 Applicant/Owner: Kellin Homes State: WA Sampling Point: DP-6
 Investigator(s): S. Payne Section, Township, Range: S23, T26N, R05E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): Convex Slope (%): 3
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI classification: None

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present on the site? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

(If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒		
Wetland Hydrology Present?	Yes ☐ No ☒		
Remarks: Wetter than normal per WETS method.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
	<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: 3-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	<u>0</u>	= Total Cover	

Herb Stratum (Plot size: 1-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>*Poaceae</i>	35	Y	FAC
2. <i>Taraxacum officinale</i>	30	Y	FACU
3. <i>Dactylis glomerata</i>	20	Y	FACU
4. <i>Lamium purpureum</i>	15	N	UPL
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
	<u>100</u>	= Total Cover	

Woody Vine Stratum (Plot size: 3-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
	<u>0</u>	= Total Cover	

% Bare Ground in Herb Stratum: 0

Remarks: ***Mowed grass not identifiable to species, presumed FAC.**

Dominance Test worksheet:

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 33.3 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 – Rapid Test for Hydrophytic Vegetation

☐ 2 – Dominance Test is > 50%

☐ 3 – Prevalence Index is ≤ 3.0¹

☐ 4 – Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ 5 – Wetland Non-Vascular Plants¹

☐ Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes ☐ No ☒

SOIL

Sampling Point: DP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks		
0-4	10YR 2/2	100					Sandy loam			
4-9	10YR 3/1	100					Sandy loam			
9-16	10YR 4/6	100					Sandy loam			
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)	
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)		Secondary Indicators (2 or more required)	
☐ Surface water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): _____ Water Table Present? Yes ☐ No ☒ Depth (in): _____ Saturation Present? Yes ☐ No ☒ Depth (in): _____ (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**
DP - 7

Project/Site: 14065 162nd Avenue NE City/County: King County Sampling date: 3/7/22
 Applicant/Owner: Kellin Homes State: WA Sampling Point: DP-7
 Investigator(s): S. Payne Section, Township, Range: S23, T26N, R05E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): None Slope (%): 1
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Alderwood gravelly sandy loam NWI classification: None

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present on the site? ☒ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

(If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	
Remarks: Wetter than normal per WETS method.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) 1. <u>Ilex aquifolium</u> Absolute % Cover <u>30</u> Dominant Species? <u>Y</u> Indicator Status <u>FACU</u> 2. _____ 3. _____ 4. _____ <u>30</u> = Total Cover	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>50</u> (A/B)
Sapling/Shrub Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ <u>0</u> = Total Cover	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
Herb Stratum (Plot size: 1-m diameter) 1. <u>*Poaceae</u> Absolute % Cover <u>100</u> Dominant Species? <u>Y</u> Indicator Status <u>FAC</u> 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ <u>100</u> = Total Cover	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ <u>0</u> = Total Cover % Bare Ground in Herb Stratum: <u>0</u>	Hydrophytic Vegetation Present? Yes ☐ No ☒
Remarks: *Mowed grass not identifiable to species, presumed FAC.	

SOIL

Sampling Point: DP-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks	
0-5	10YR 3/2	100					Sandy loam		
5-16	10YR 4/6	100					Sandy loam		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
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)		Secondary Indicators (2 or more required)	
☐ Surface water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): _____ Water Table Present? Yes ☐ No ☒ Depth (in): _____ Saturation Present? Yes ☐ No ☒ Depth (in): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Wetland name or number: Wetland A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): **Wetland A** Date of site visit: 3/7/2022

Rated by: S. Payne Trained by Ecology? ☒ Y ☐ N Date of training: June 2017

HGM Class used for rating: Slope

Wetland has multiple HGM classes? ☐ Y ☒ N

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map: ESRI, King County iMap

OVERALL WETLAND CATEGORY (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
☐ **Category IV** – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H M <u>L</u>	H M <u>L</u>	H M <u>L</u>	
Landscape Potential	H <u>M</u> L	H <u>M</u> L	H <u>M</u> L	
Value	<u>H</u> M L	<u>H</u> M L	H <u>M</u> L	TOTAL
Score Based on Ratings	6	6	5	17

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

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

Wetland name or number: Wetland A

Maps and figures required to answer questions correctly for Western Washington

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	1
Hydroperiods	H 1.2	3
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	2
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	2
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	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	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	6

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

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

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

☒ NO – go to 2

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

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

NO – Saltwater Tidal Fringe (Estuarine)

YES – Freshwater Tidal Fringe

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

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

☒ NO – go to 3

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

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

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

☐ The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m).

☒ NO – go to 4

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

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

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

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

☒ The water leaves the wetland **without being impounded**.

☐ NO – go to 5

☒ YES – The wetland class is **Slope**

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

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

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

☐ The overbank flooding occurs at least once every 2 years.

Wetland name or number: Wetland A

☐ 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.*

Wetland name or number: Wetland A

SLOPE WETLANDS

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

S 1.0. Does the site have the potential to improve water quality?		
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance) ☐ Slope is 1% or less points = 3 ☐ Slope is > 1%-2% points = 2 ☒ Slope is > 2%-5% points = 1 ☐ Slope is greater than 5% points = 0		1
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 ☐ No = 0 ☒		0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. <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 ☐ 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		0 Wetland mostly mowed
Total for S 1 Add the points in the boxes above		1

Rating of Site Potential If score is: ☐ 12 = H ☐ 6-11 = M ☒ 0-5 = L

Record the rating on the first page

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

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

Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?		
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? ☐ Yes = 1 ☒ No = 0		0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? At least one aquatic resource in the basin is on the 303(d) list. ☒ Yes = 1 ☐ No = 0		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 unit is found. ☒ Yes = 2 ☐ No = 0		1
Total for S 3 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

Wetland name or number: Wetland A

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. *Stems of plants should be thick enough (usually >1/8₈ in), or dense enough, to remain erect during surface flows.*

- ☐ Dense, uncut, **rigid** plants cover > 90% of the area of the wetland
☒ All other conditions

points = 1
points = 0

0
Wetland mostly
mowed

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

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?

S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?
☒ Yes = 1 ☐ No = 0

1

Rating of Landscape Potential If score is: ☒ **1 = M** ☐ **0 = L**

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?

S 6.1. Distance to the nearest areas downstream that have flooding problems:

- ☒ The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2
☐ Surface flooding problems are in a sub-basin farther down-gradient points = 1
☐ 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 the rating on the first page

NOTES and FIELD OBSERVATIONS:

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

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

- | | | |
|---|----------------------------------|---|
| ☐ Aquatic bed | 4 structures or more: points = 4 | 0 |
| ☒ 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 | |
| <i>If the unit has a Forested class, check if:</i> | | |
| ☐ 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 | | |

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 | 1 |
| ☐ Seasonally flooded or inundated | 3 types present: points = 2 | |
| ☒ Occasionally flooded or inundated | 2 types present: points = 1 | |
| ☒ Saturated only | 1 type present: points = 0 | |
| | | |
| ☐ Permanently flowing stream or river in, or adjacent to, the wetland | | |
| ☐ Seasonally flowing stream in, or adjacent to, the wetland | | |
| ☐ Lake Fringe wetland | 2 points | |
| ☐ Freshwater tidal wetland | 2 points | |

H 1.3. Richness of plant species

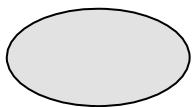
Count the number of plant species in the wetland that cover at least 10 ft².

*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***

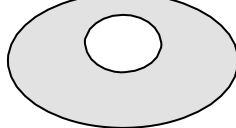
- | | | | |
|-----------------|--|------------|---|
| If you counted: | ☐ > 19 species | points = 2 | 1 |
| | ☒ 5 - 19 species | points = 1 | |
| | ☐ < 5 species | points = 0 | |

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.*



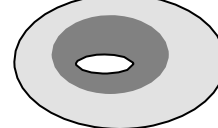
☒ **None** = 0 points



☐ **Low** = 1 point



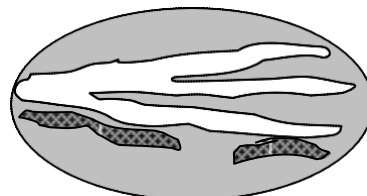
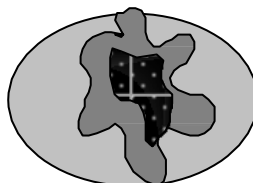
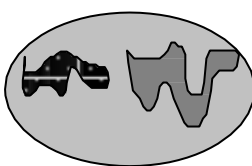
☐ **Moderate** = 2 points



0

All three diagrams in this row are

☐ **HIGH** = 3 points



Wetland name or number: Wetland A

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i> ☐ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). ☐ Standing snags (dbh > 4 in) within the wetland. ☐ Undercut banks are present for at least 6.6 ft (2 m) AND/OR overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m). ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>). ☐ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>). ☒ Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>).		1
Total for H 1	Add the points in the boxes above	3

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 functions of the site?		
H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). <i>Calculate: % undisturbed habitat + [(%moderate and low intensity land uses)/2] = 9% + (24%/2) = 21%</i> 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		2
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. <i>Calculate: % undisturbed habitat + [(%moderate and low intensity land uses)/2] = 20% + (55%/2) = 44.5%</i> ☐ 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 1 km Polygon is high intensity points = 0		0
Total for H 2	Add the points in the boxes above	3

Rating of Landscape Potential If score is: ☐ 4-6 = H ☒ 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?		
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i> Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan ☒ Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1 ☐ Site does not meet any of the criteria above points = 0		1

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

Record the rating on the first page

Wetland name or number: Wetland A

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.

Presumed based on landcover, but not visually confirmed

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

Wetland name or number: Wetland A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland name or number: Wetland A

SC 4.0. Forested Wetlands Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i> ☐ 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. ☐ 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). ☐ Yes = Category I ☒ No = Not a forested wetland for this section	Cat. I
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks ☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) ☐ Yes – Go to SC 5.1 ☒ No = Not a wetland in a coastal lagoon SC 5.1. Does the wetland meet all of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. ☐ The wetland is larger than 1/10 ac (4350 ft²) ☐ Yes = Category I ☐ No = Category II	Cat. I Cat. II
SC 6.0. Interdunal Wetlands 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> In practical terms that means the following geographic areas: ☐ Long Beach Peninsula: Lands west of SR 103 ☐ Grayland-Westport: Lands west of SR 105 ☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109 ☐ Yes – Go to SC 6.1 ☒ No = not an interdunal wetland for rating 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)? ☐ Yes = Category I ☐ No – Go to SC 6.2 SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? ☐ Yes = Category II ☐ No – Go to SC 6.3 SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? ☐ Yes = Category III ☐ No = Category IV	Cat I Cat. II Cat. III Cat. IV
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	NA

Wetland Rating Figure 1. Cowardin Classifications



- | | |
|--|---|
|  Palustrine Emergent |  Palustrine Forested |
|  Palustrine Scrub-Shrub |  Wetland Boundary |

Cowardin plant classes – D1.3, H1.1, H1.4. Rating boundaries are estimated and not to scale. Forest and scrub-shrub class less than 10%.



0 75 150 300 Feet

Wetland Rating Figure 2. Plant Structure



-  Dense Woody Vegetation (>75% cover)
-  Does not meet criteria (mowed or sparse)
-  Wetland Boundary

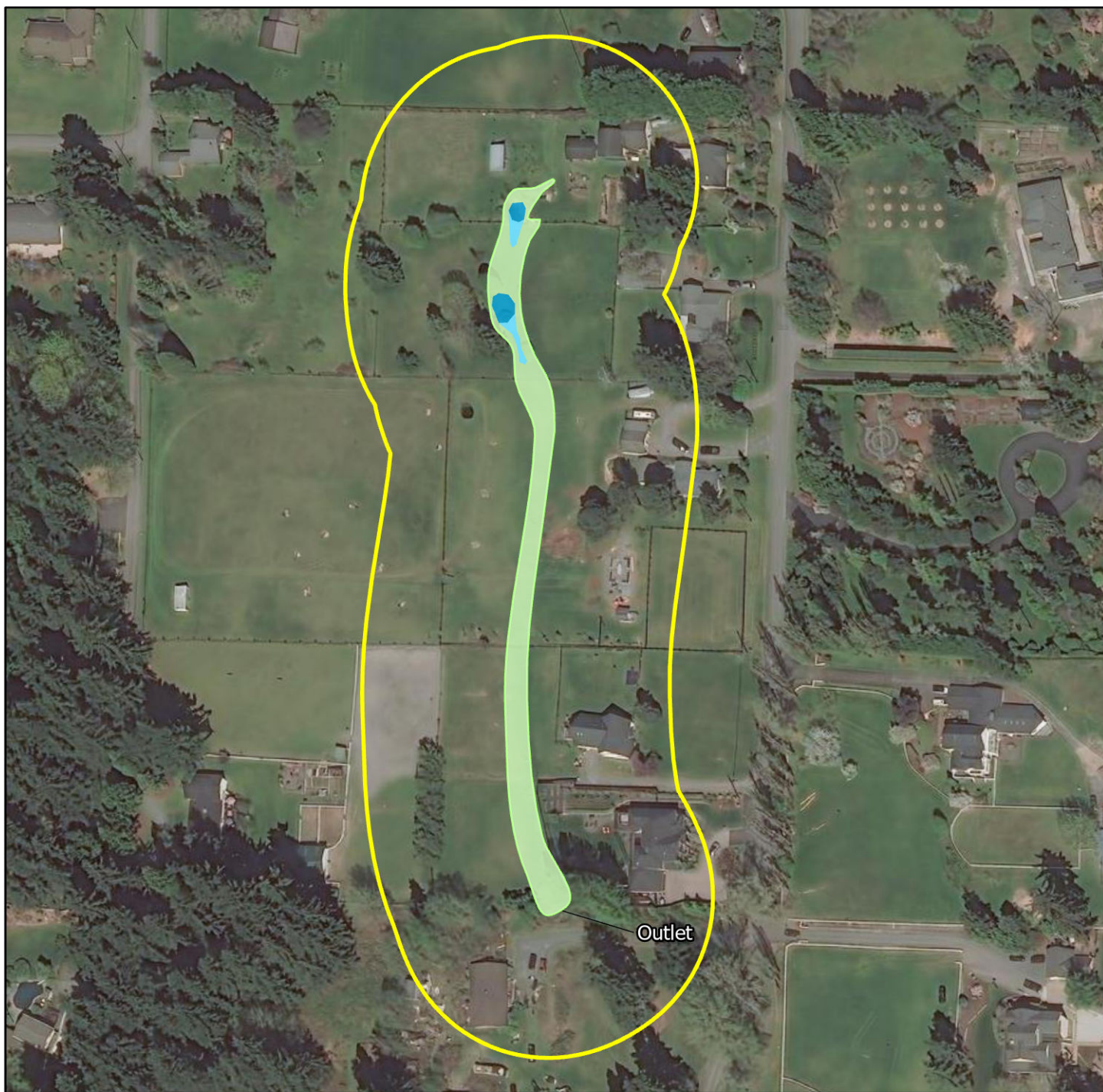
Structure of plants in wetland at person height or below – S4.1.
All herbaceous vegetation is dense, but mowed.



0 75 150 300 Feet

A horizontal scale bar with four segments. The first segment is black and labeled '0'. The second segment is white and labeled '75'. The third segment is black and labeled '150'. The fourth segment is white and labeled '300'. The word 'Feet' is at the end of the bar.

Wetland Rating Figure 3. Hydroperiods



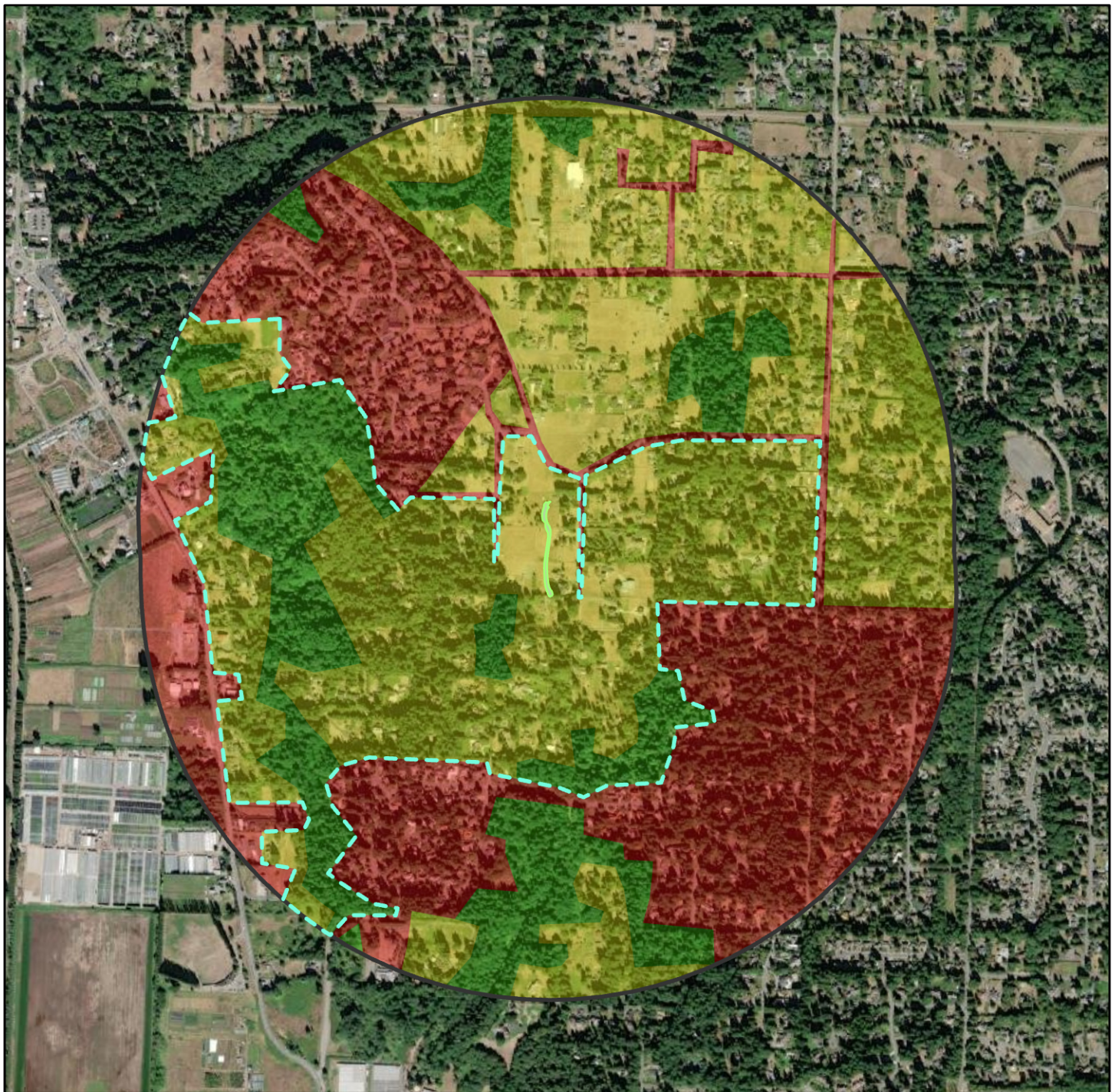
- Saturated Only
- Occasionally Inundated
- Seasonally Inundated
- Wetland Boundary
- 150-Foot Rating Area (Not Regulatory Buffer)

Hydroperiods and 150-ft area – H1.2, S2.1, S5.1



0 95 190 380 Feet

Wetland Rating Figure 4. Land Use Intensity



- | | |
|------------------------|--------------------|
| Undisturbed Habitat | Accessible Habitat |
| Low/Moderate Intensity | Wetlands |
| High Intensity | |

Undisturbed habitat, low/moderate intensity, and high intensity land uses within 1 km from wetland edge including polygon for accessible habitat – H2.1, H2.2, H2.3



0 1,250 2,500 Feet

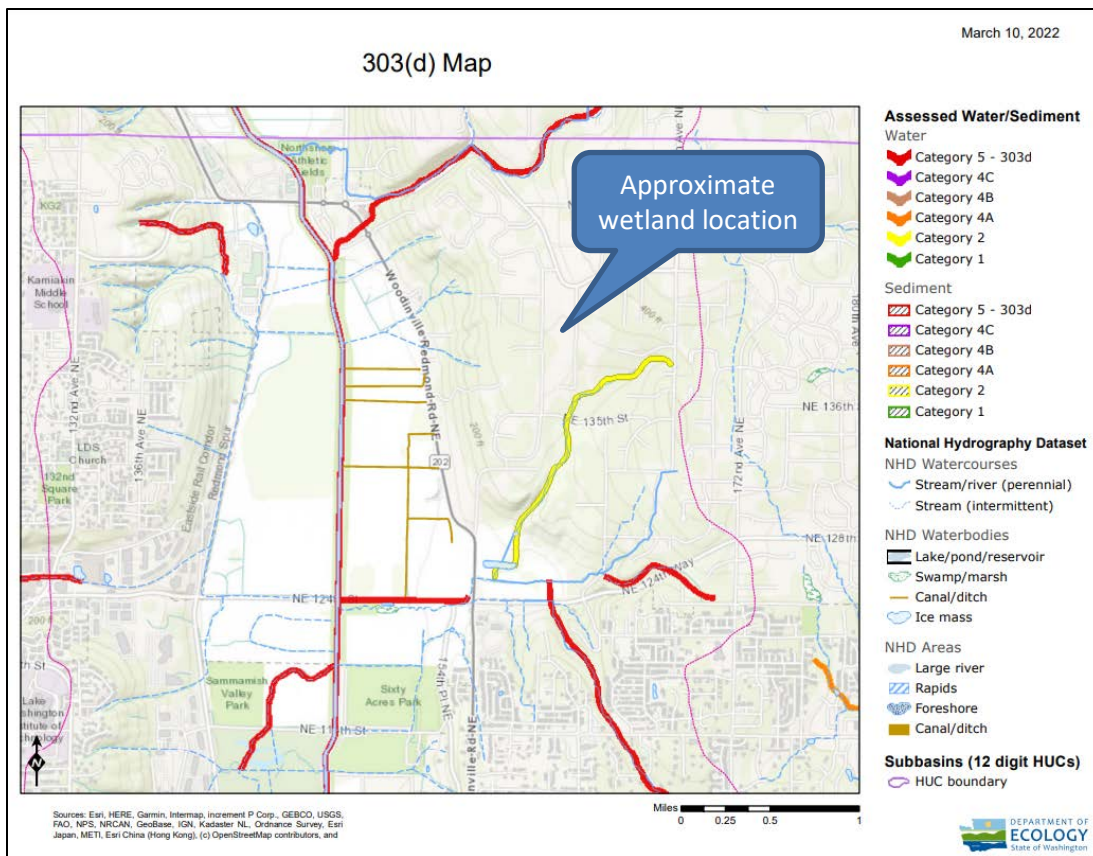


Figure 5. Screen-capture of 303(d) listed waters in basin – S3.1, S3.2

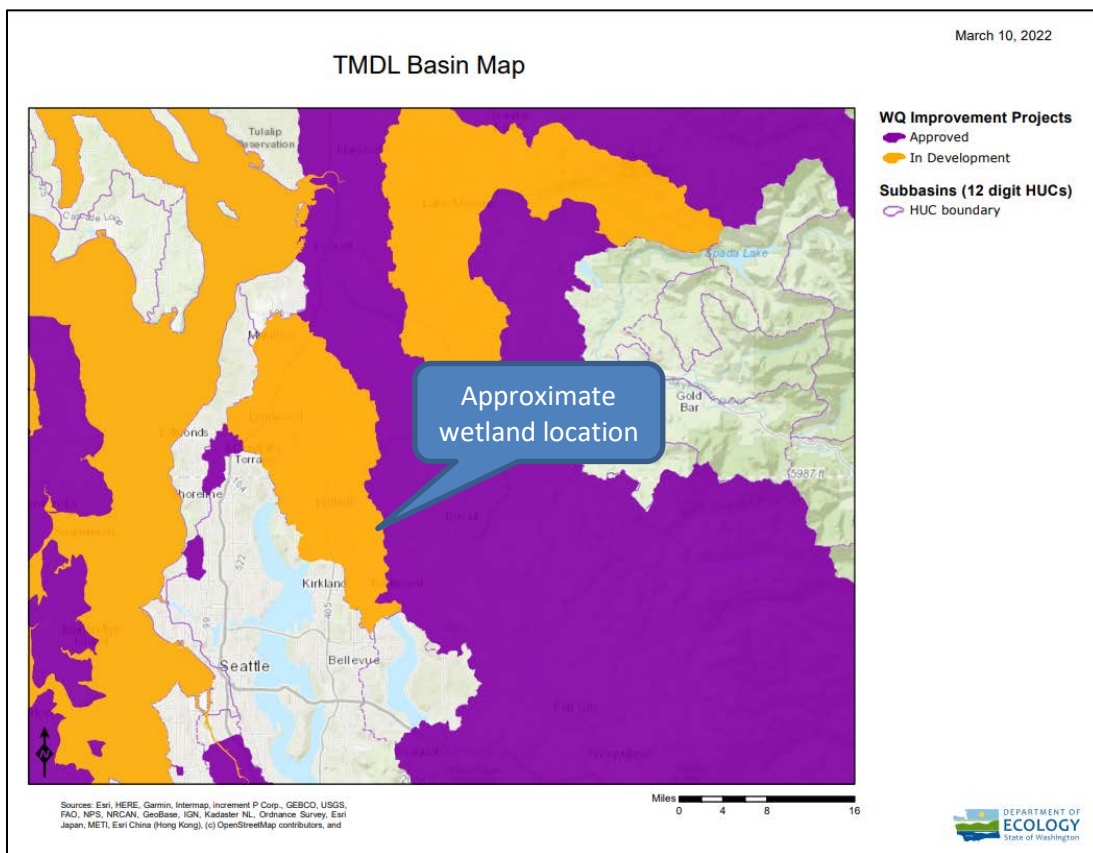


Figure 6. Screen-capture of TMDL list for WRIA in which unit is found – S3.3