

SHORELINE, WETLAND AND FISH AND WILDLIFE ASSESSMENT

GAGES CROSSING

REVISED OCTOBER 2023

JULY 2023



**Soundview
Consultants**
Environmental Assessment
Planning + Land Use Solutions

SHORELINE, WETLAND AND FISH AND WILDLIFE ASSESSMENT

GAGES CROSSING

REVISED OCTOBER 19, 2023

JULY 17, 2023

PROJECT LOCATION

900 SOUTH PINE STREET
BURLINGTON, WASHINGTON 98233

PREPARED FOR

GAGES CROSSING LLC

504 EAST FAIRHAVEN AVE
BURLINGTON, WASHINGTON 98223

PREPARED BY

SOUNDVIEW CONSULTANTS LLC

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**Soundview
Consultants**
Environmental Assessment
Planning + Land Use Solutions

Executive Summary

Soundview Consultants LLC (SVC) has been assisting Gages Crossing LLC (Applicant) with a shoreline, wetland and fish and wildlife habitat assessment for proposed residential development on a 13.30-acre site located at 900 South Pine Street within the City of Burlington, Skagit County, Washington (Skagit County Tax Parcels P62772, P72178, P72179, P72180, P72181, P133597 and P133596). The subject property is situated in the Northwest ¼ of Section 05, Township 34 North, Range 04 East.

SVC investigated the subject property for the presence of potentially-regulated wetlands, waterbodies, and fish and wildlife habitat in March of 2022. Using current methodology, the site assessment identified one potentially regulated wetland (Wetland A) onsite. In addition, one potentially regulated offsite wetland (Wetland 1) was identified approximately 25-feet to the southwest of the subject property. Wetland A is classified as Category III wetland per BMC 14.15.180.B. Per BMC 14.15.185, Category III wetlands are subject to a standard 150-foot buffer for proposed high impact land use. Offsite Wetland 1 is classified as a Category II wetland per BMC 14.15.180.B. Per BMC 14.15.185, Category II wetlands are subject to a standard 300-foot buffer for proposed high impact land use. An additional 15-foot setback from critical areas is required for all structures per BMC 14.15.420.E.4.

Gages Slough is classified as a Type S (Shoreline of the State) waterbody according to DNR Stream Typing mapping, and therefore subject to Burlington's codified Shoreline Master Program BMC 18.07.010.A. As Gages Slough is controlled by a pump station and does not act as a free flowing stream channel, it is not regulated as a typed water despite the Type S classification. Instead, per BMC 18.06.020.B, it is considered an associated wetland of the Skagit River. Per BMC 18.07.040.A.3.b, the shoreline designation of Gages Slough onsite is Urban Conservancy.

No other potentially-regulated wetlands, waterbodies, or fish and wildlife habitat conservation areas were identified on or within 300-feet of the subject property. The table below identifies the onsite critical areas and summarizes the potential regulatory status by local, state, and federal agencies.

Waterbody Name	Size (Onsite)	Category ¹	Regulated Under BMC Chapter 14.15	Regulated Under RCW 90.48	Regulated Under Clean Water Act
Wetland A	66,707 SF	III	Yes	Yes	Likely
Wetland 1	N/A	II	Yes	Yes	Likely

1. Washington State Department of Ecology (WSDOE) wetland rating system (Hruby, 2014) per BMC 14.15.180

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Chapter 1. Introduction

Soundview Consultants LLC (SVC) has been assisting Gages Crossing LLC (Applicant) with a shoreline, wetland and fish and wildlife habitat assessment for the proposed residential development of a 13.3-acre site located at 900 South Pine Street within the City of Burlington, Skagit County, Washington (Skagit County Tax Parcels P62772, P72178, P72179, P72180, P72181, P133597 and P133596). The subject property is situated in the northwest ¼ of Section 05, Township 34 North, Range 04 East.

The purpose of this shoreline, wetland and fish and wildlife habitat assessment report is to identify the presence of potentially-regulated wetlands, waterbodies, fish and wildlife habitat, and/or priority species on or near the subject property.

This report provides conclusions, recommendations, and preliminary specifications regarding:

- Site description and area of assessment;
- Background research and identification of potentially-regulated critical areas within the vicinity of the proposed project;
- Identification and assessment of potentially-regulated wetlands and other hydrologic features;
- Identification and assessment of potentially-regulated fish and wildlife habitat;
- Existing site map detailing identified critical areas and associated buffers, and
- Supplemental information necessary for regulatory review.

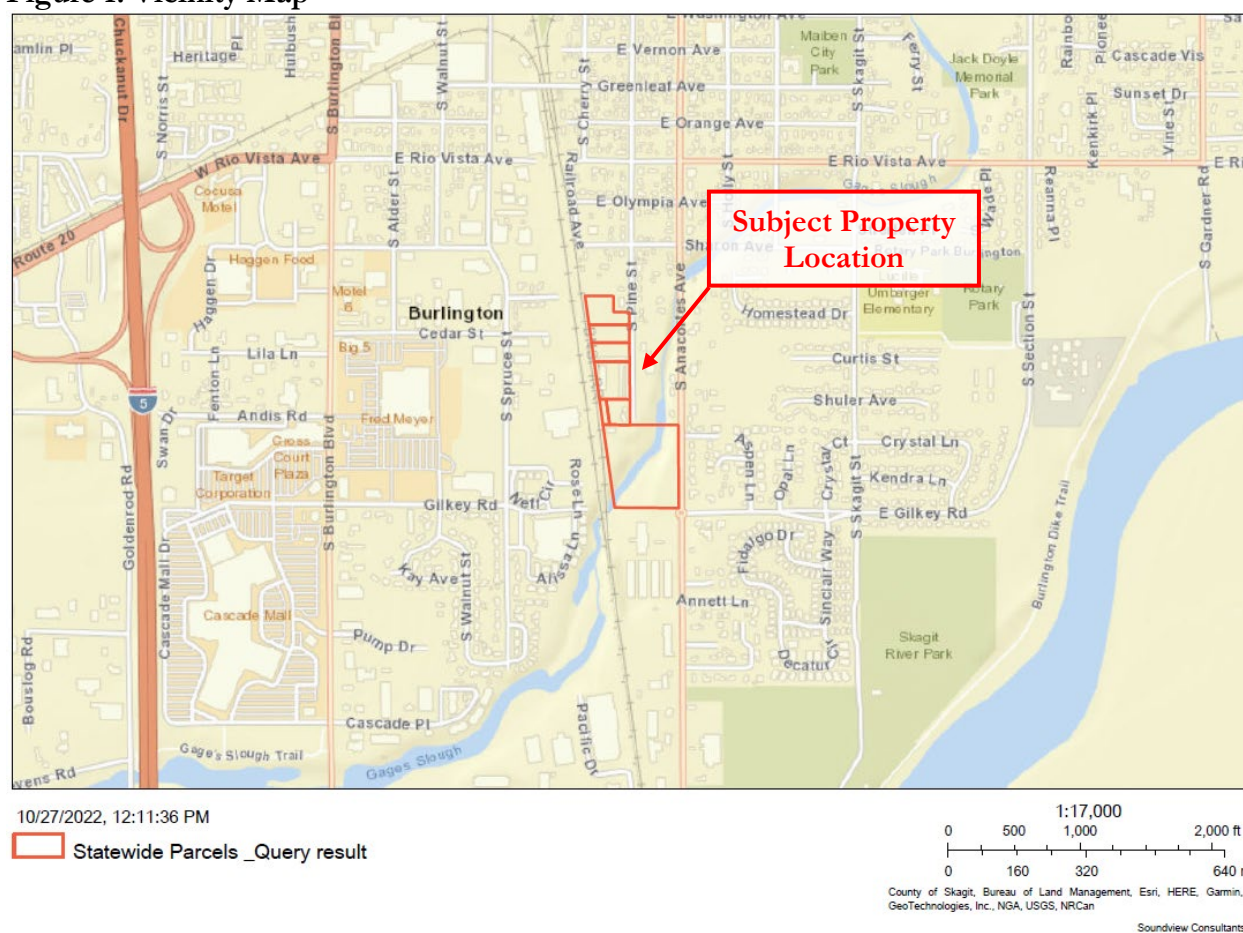
Chapter 2. Project Location

2.1 Project Location

The subject property consists of a 13.3-acre site located at 900 South Pine Street within the City of Burlington, Washington (Skagit County Tax Parcels P62772, P72178, P72179, P72180, P72181, P133597 and P133596). The subject property is situated in the northwest ¼ of Section 05, Township 34 North, Range 04 East.

To access the site from Interstate-5 North in the Mount Vernon area, take Exit 230 for WA-20 toward Burlington. Continue straight onto East Rio Vista Ave and after 0.2-miles turn left onto Spruce Street and continue for 0.1-miles. Turn right onto Greenleaf Ave and continue for 0.2-miles before turning right onto South Pine Street. Continue driving south on South Pine Street and after 0.2-miles, the subject property will be located on the west and south sides of the road.

Figure 1. Vicinity Map



Chapter 3. Methods

SVC investigated, assessed, and delineated the boundaries of any potentially-regulated wetlands, waterbodies, and other fish and wildlife habitat conservation areas on and within 300-feet of the subject property on March 29, 2022. All determinations were made using observable vegetation, hydrology, and soils in conjunction with data from the U.S. Geological Survey (USGS) topographic maps, National Hydrography Dataset (NHD), National Resource Conservation Service (NRCS) soil survey, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI), Washington State Department of Natural Resources (DNR) water typing system, Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) and SalmonScape mapping tools, Skagit County Geographic Information Systems (GIS) data, and various orthophotographic resources (Appendix B). Appendix A contains further details for the methods and tools used to prepare this report.

Wetland boundaries were determined in accordance with BMC 14.15.180, and as outlined in the U.S. Army Corps of Engineers' (USACE) *Wetlands Delineation Manual* (Environmental Laboratory, 1987) as modified according to the guidelines established in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region, Version 2.0* (USACE, 2010) and *Field Indicators of Hydric Soils in the United States* (USDA, 2018). Qualified wetland scientists marked the boundaries of the onsite wetland with orange surveyor's flagging labeled alpha-numerically and tied to 3-foot lath or vegetation along the wetland boundary. Pink surveyor's flagging was labeled alpha-numerically and tied to 3-foot lath or vegetation at formal sampling locations to mark the points where detailed data was collected (DP-1 to DP-5). Additional tests pits were excavated at regular intervals inside and outside of the wetland boundary to further confirm the delineation.

Wetlands were classified using both the hydrogeomorphic (Brinson, 1993) and Cowardin (Cowardin, 1979; Federal Geographic Data Committee, 2013) classification systems. Following classification and assessment, all wetlands were rated and categorized using the updated *Washington State Wetlands Rating System for Western Washington – Washington State Department of Ecology Publication No. 14-06-029*, published October 2014 (Hruby, 2014) and guidelines established under Burlington Municipal Code (BMC) 14.15.180.B.

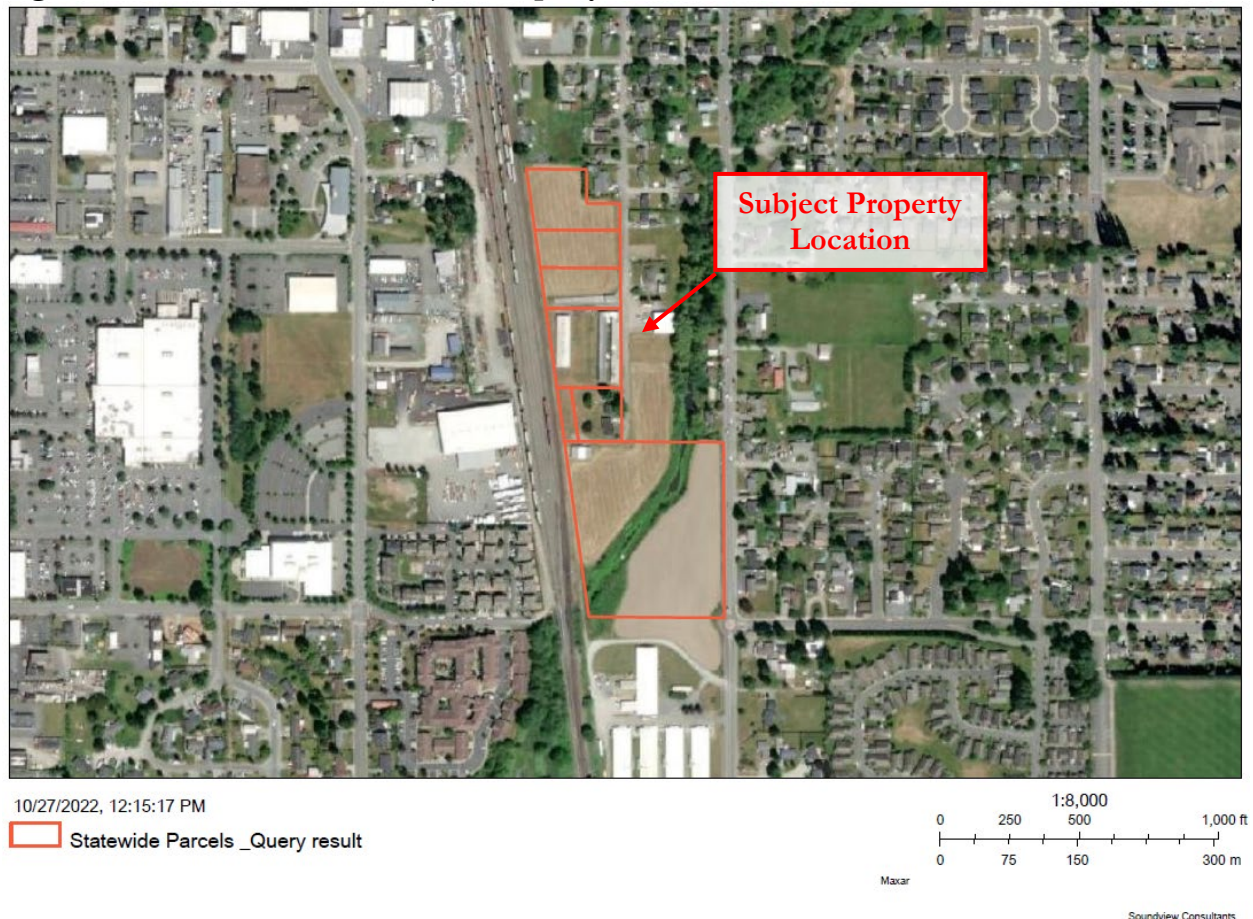
The fish and wildlife habitat assessment was conducted during the same site visit by qualified fish and wildlife biologists. The experienced biologists made visual and auditory observations using stationary and walking survey methods for both aquatic and upland habitats noting any special habitat features and direct and indirect signs of fish and wildlife activity (e.g. nesting, foraging, and migration/movement). Special attention was given to assessing the presence of fish and wildlife habitat conservation areas outlined under BMC 14.15.350.

Chapter 4. Existing Conditions

4.1 Landscape Setting

The subject property is located in a mixed urban and commercial setting within the City of Burlington, Washington (Figure 2). The northern portion of the subject property consists of maintained fields and farm infrastructure. The southern portion of the subject property consists of two single-family residences with associated infrastructure, maintained fields and Gages Slough runs through the center of the southern parcel. The subject property is bound by residential housing to the north, South Pine Street and South Anacortes Street to the east, commercial buildings to the south and a railroad to the west. Topography onsite slopes from the east and west boundaries of the site downward to Gages Slough, which is the topographic low point on the subject property. Elevations onsite range from approximately 41-feet above mean sea level (amsl) to 25-feet amsl at the edge of the slough (Appendix B1). The subject property is located within Water Resource Inventory Area (WRIA) 3 – Lower Skagit-Samish.

Figure 2. Aerial View of the Subject Property



4.2 Soils

The NRCS Soil Survey of the Skagit County Area, Washington identifies four soil series present on the subject property: Briscot fine sandy loam (21), Mt. Vernon very fine sandy loam (96), Sumas silt

loam (136), and Urban land-Mt. Vernon-Field complex (152). A soil map is provided in Appendix B2. Below is a detailed description of the soil profiles.

Briscot fine sandy loam (21)

According to the NRCS soil survey, Briscot fine sandy loam is a very deep, poorly drained soil formed in flood plains. Drainage of these soils has been altered by tilling. In a typical profile the surface layer is dark grayish brown fine sandy loam 16-inches thick. The upper subsoil is grayish brown, stratified loamy fine sand 14 inches thick. The lower subsoil is an olive gray silt loam to 60 inches. These soils have moderate permeability and high water capacity. Briscot fine sandy loam is listed as hydric by the NRCS (NRCS, n.d.).

Mt. Vernon very fine sandy loam (96)

According to the NRCS soil survey, Mt. Vernon very fine sandy loam is very deep, moderately well drained soil formed in flood plains. These soils have moderate permeability and high water capacity. In a typical profile, the upper 10-inches of the surface layer consists of dark brown very fine sandy loam. The subsoil is dark yellowish brown and grayish brown stratified fine sand to silt loam to 29 inches. The lower subsoil to a depth of 60 inches is grayish brown and olive gray, stratified silt loam, very fine sandy loam, fine sandy loam, loamy fine sand, and fine sand. Mt. Vernon very fine sandy loam is listed as not hydric by the NRCS (NRCS, n.d.).

Sumas silt loam (136)

According to the NRCS soil survey, Sumas silt loam is a very deep, poorly drained soil found on flood plains and deltas formed in alluvium. Drainage of these soils has been altered by tilling, and these soils are partially protected from flooding. These soils have moderate permeability in the upper layers, and rapid permeability in the lower layers, and available water capacity is moderately high. In a typical profile, the upper 6-inches of the surface layer consists of dark grayish brown silt loam, and the lower 7-inches is a very dark grayish brown silty clay loam. The upper subsoil is about 3-inches thick and consists of gray silt loam. The following 14-inches consists of gray loamy sand. The lower subsoil to a depth of 60-inches or greater consists of a dark gray coarse sand. Sumas silt loam is listed as hydric by the NRCS (NRCS, n.d.).

Urban land-Mt. Vernon-Field complex (152)

According to the NRCS soil survey, Urban land-Mt. Vernon- Field complex is approximately 40-percent Urban land, 30-percent Mt. Vernon very fine sandy loam, and 20-percent Field silt loam. Urban land consists of areas covered by streets, buildings, parking lots, and other structures. In a typical profile, the surface layer is dark brown very fine sandy loam 10 inches thick. The upper subsoil is dark yellowish brown and grayish brown, stratified very fine sandy loam, fine sandy loam, loamy fine sand, and fine sand 19 inches thick. The lower subsoil is a grayish brown and olive gray stratified silt loam, very fine sandy loam, fine sandy loam, loamy fine sand, and fine sand to 60 inches. The upper subsoil consists of a dark brown very fine sandy loam. Permeability of the soil is moderate. Urban land-Mt. Vernon- Field complex is listed as non-hydric by the NRCS (NRCS, n.d.).

4.3 Critical Area Inventories

The USFWS NWI Map (Appendix B3) and WDFW PHS Map (Appendix B4) identify the Gages Slough wetland onsite, which extends offsite to the north and south of the subject property. The DNR Stream Typing Map (Appendix B5) identifies Gages Slough as a Type S shoreline of the state, which continues offsite to the north and south of the subject property. The WDFW Salmonscape

map (Appendix B6) identifies the modeled presence of pink, fall chum, coho, winter steelhead, and fall chinook. In addition to the identified Gages Slough, the WDFW PHS map identifies the potential presence of gray wolf (*Canis lupus*) in the township; however, not necessarily onsite. According to the USFWS IPaC mapping database, marbled murrelet (*Brachyramphus marmoratus*), yellow-billed cuckoo (*Coccyzus americanus*), bull trout (*Salvelinus confluentus*), and Taylor's checkerspot (*Euphydryas editha taylori*) have the potential to occur within 300-feet of the subject property. The FEMA 100-year floodplain map (Appendix B7) identifies 100-year floodplain areas associated with the Skagit River onsite. No other potentially regulated wetlands, streams, fish and wildlife habitat, or priority habitats or species are identified on or within 300-feet of the subject property.

4.4 Precipitation

Precipitation data was obtained from the National Oceanic and Atmospheric Administration (NOAA) weather station at Sedro-Woolley, Washington in order to obtain percent of normal precipitation for during and preceding the investigations. A summary of data collected is provided in Table 1.

Table 1. Precipitation Summary

Date	Day of	Day Before	1 Week Prior	2 Weeks Prior	Last 30 Days (Observed/Normal)	Year-to-Date (Observed/Normal) ²	Percent of Normal (last 30 days/year)
3/29/2022	0.08	0.04	0.73	4.09	6.77/4.71	41.12/32.17	144/128

Notes:

1. Precipitation levels provided in inches. Data obtained from the NOAA (<http://w2.weather.gov/climate/xmacis.php?wfo=sew>) for Sedro-Woolley, Washington.
2. Year-to-date precipitation is for the 2021/2022 water year from October 1, 2021 to the onsite date for the 2022 site visit.

Precipitation levels during the March 2022 site investigation were above the statistical normal range for the prior 30 days (144 percent of normal) and within statistical normal range for the 2022 water year (128 percent of normal). This precipitation data suggests that hydrologic conditions at the time of the site investigation were likely normal to wetter than normal, potentially resulting in exaggerated hydrologic conditions onsite. Such conditions were considered in making professional wetland determinations.

Chapter 5. Results

The site investigation in March of 2022 identified one potentially-regulated wetland (Wetland A) on the subject property; one offsite wetland (Wetland 1) was identified approximately 25 feet offsite to the southwest of the subject property. Wetlands A and 1 are sections of Gages Slough, which is considered an associated wetland of the Skagit River Shoreline. No other potentially-regulated wetlands, waterbodies, fish and wildlife habitat, or priority species were identified in the vicinity of the subject property.

5.1 Upland Characterization

The site is partially developed with barns, two single-family residences and associated infrastructure on parcels P72178, P72179 and P72181. The remaining four parcels that make up the majority of the site consist of upland fields that are maintained through regular mowing and are dominated by herbaceous plant species. Vegetation in the maintained fields is dominated by orchard grass (*Dactylis glomerata*), red clover (*Trifolium pratense*), white clover (*Trifolium repens*), curly dock (*Rumex crispus*), and non-native invasive species Himalayan blackberry (*Rubus armeniacus*).

5.2 Wetlands

One wetland was identified on the subject property (Wetland A). An additional offsite wetland (Wetland 1) was identified offsite to the west of the subject property. The identified wetlands contained indicators of hydric soils, wetland hydrology, and a predominance of hydrophytic vegetation according to current wetland delineation methodology. Due to its offsite location, Wetland 1 was not formally delineated and as such hydric soils were assumed. Existing conditions are depicted in Appendix C. Wetland data forms are provided in Appendix D, wetland rating forms are provided in Appendix E, wetland rating maps are provided in Appendix F, and general site photographs are included in Appendix G. Table 2 summarizes the wetlands identified during the site investigation.

Table 2. Wetland Summary

Wetland	Predominant Wetland Classification / Rating			Wetland Size Onsite (SF)
	Cowardin ¹	HGM	City of Burlington ²	
A	PFO/EM/ABBH	Depressional	III	66,707
1	PFO/EMCH	Depressional	III	N/A- Offsite

Notes:

1. Cowardin et al. (1979), Federal Geographic Data Committee (2013), or NWI Class based on vegetation: PFO= Palustrine Forested, PSS = Palustrine Scrub Shrub, PEM = Palustrine Emergent, AB= Aquatic Bed; Modifiers for Water Regime: B= Seasonally Saturated, C = Seasonally Flooded, H= Permanently Flooded.
2. BMC 14.15.180 wetland identification and rating according to Washington State Wetland Rating System for Western Washington (Hruby, 2014).

Wetland A

Wetland A is approximately 1.53 acres (66,707 square feet) in size onsite and is located on the southern parcel of the subject property and extends offsite to the north. Hydrology for Wetland A is provided by surface sheet flow from adjacent uplands, direct precipitation, and a seasonally high groundwater table. Wetland A drains into a culvert beneath the road adjacent to the southwest corner of the subject property, which ultimately flows offsite into Wetland 1. Unidirectional flow from Wetland A into Wetland 1 separate the two wetland units. Vegetation in Wetland A is dominated by Pacific willow

(*Salix lasiandra*), red alder (*Alnus rubra*), salmonberry (*Rubus spectabilis*), creeping buttercup (*Ranunculus repens*), common rush (*Juncus effusus*), American speedwell (*Veronica americana*), bird's-foot trefoil (*Lotus corniculatus*), common velvetgrass (*Holcus lanatus*), and non-native invasive Himalayan blackberry (*Rubus armerniacus*), reed canarygrass (*Phalaris arundinacea*), and yellowflag iris (*Iris pseudacorus*). Hydric soil indicators F6 (Redox Dark Surface) and A11 (Depleted Below Dark Surface) were observed. The wetland was delineated based on topography drop, a transition to a hydrophytic plant community, and hydrology. The onsite buffer is degraded due to agricultural land use. Wetland A is a Palustrine Forested, Emergent, Aquatic Bed, Seasonally Saturated, Permanently Flooded wetland (PFO/EM/ABBH). Per BMC 14.15.180 Wetland A is a Category III depressional wetland. Table 3 summarizes Wetland A.

Table 3. Wetland A Summary.

WETLAND A	
	Local Jurisdiction
	City of Burlington
	City of Burlington Rating
	III
	Wetland Size (Onsite)
	66,707 SF
	Cowardin Classification
Wetland Functions Summary	PFO/EM/ABBH
	HGM Classification
	Depressional
	Wetland Data Sheet
	DP-1
	Upland Data Sheet(s)
	DP-2
Wetland Functions Summary	
Water Quality (Scores 7 out of 9 points)	- Low site potential to trap sediments and pollutants and remove nitrogen due to the highly constricted permanent outlet, presence of persistent, ungrazed vegetation in over half the wetland. - High landscape potential to receive sediment and pollutants due to the surrounding agricultural and commercial land uses, nearby septic systems, and pollutants from the adjacent railroad. - High societal value for water quality functions due to degraded waters within the sub-basin.
Hydrologic (Scores 7 out of 9 points)	- Low site potential to reduce flooding and erosion due to the highly constricted permanent outlet, moderate storage depth during wet periods, and large size within the watershed. - High landscape potential to provide flood protection due to the adjacent agricultural land use and high intensity land uses within the contributing basin. - High societal value for hydrologic functions due to surface flooding within the sub-basin.
Habitat (Scores 5 out of 9 points)	- Moderate site potential to provide diverse and complex habitat due to multiple Cowardin classes and hydroperiods, moderate species richness and interspersions, and presence of several special habitat features. - Low landscape potential to support habitat accessibility due to surrounding agricultural, commercial, and residential development. - Moderate societal value for habitat functions due to the presence of two WDFW Priority Habitat.

Wetland 1

Wetland 1 is approximately 8.50 acres in size and is located entirely offsite, approximately 25-feet to the southwest of the subject property. Hydrology for Wetland 1 is provided by surface sheet flow from adjacent uplands, direct precipitation, a seasonally high groundwater table, and surface runoff from Wetland A that is conveyed through a culvert. Vegetation in Wetland 1 is dominated by non-native invasive reed canarygrass, creeping buttercup, common rush, American speedwell, bird's-foot trefoil, and non-native invasive Himalayan blackberry. Wetland 1 is a Palustrine Forested, Emergent, Seasonally Flooded and Permanently Flooded (PFO/EMCH) depressional wetland. Wetland 1 is a Category II wetland.

5.3 Shorelines

The City of Burlington's Shoreline Master Program (SMP) has been codified under BMC Title 18.

Gages Slough

Gages Slough was identified on the south-central portion of the subject property. The onsite portion of the slough is approximately 690-feet in length. Gages Slough originates approximately 3.25- linear miles to the northeast of the subject property. Gages Slough flows from the northeast to southwest, eventually flowing into the Skagit River approximately 1.70-miles southwest of the subject property, managed by the Gages Slough Pump Station prior to discharging into the Skagit River. The WDFW SalmonScape map identifies Gages Slough as gradient accessible for pink, coho, steelhead, chum, and chinook, however the presence of the pump station precludes fish from accessing the slough.

Gages Slough is classified as a Type S (Shoreline of the State) waterbody according to DNR Stream Typing mapping. As Gages Slough is controlled by a pump station and does not act as a free flowing stream channel, is not regulated as a typed water despite the Type S classification. Instead, per BMC 18.06.020.B, it is considered an associated wetland of the Skagit River and therefore subject to Burlington's codified Shoreline Master Program BMC 18.07.010.A. Per BMC 18.07.040.A.3.b, the shoreline designation of Gages Slough onsite is Urban Conservancy. Table 4 summarizes the Gages Slough shoreline.

Table 4. Gages Slough Shoreline Summary

SHORELINE INFORMATION SUMMARY		
	Feature Name	Gages Slough
	WRIA	3 – Lower Skagit-Samish
	Local Jurisdiction	City of Burlington
	DNR Stream Type	Type S
	Local Stream Rating	Type S
	Shoreline Designation	Urban Conservancy
Fish Use	Modeled presense (i.e. gradient accessible) for odd year pink, coho, winter steelhead, fall chum, and fall chinook.	
Location of Feature	Gages Slough is located on the south-central portion of the subject property, extending offsite to the north.	

SHORELINE INFORMATION SUMMARY	
Connectivity (where water flows from/to)	Gages Slough originates approximately 3.25- linear miles to the northeast of the subject property. Gages Slough flows northeast to southwest, eventually flowing into the Skagit River approximately 1.70-miles southwest of the subject property, and is managed by the Gages Slough Pump Station prior to discharging into the Skagit River.
Riparian/ Buffer Condition	The buffer of Gages Slough is highly disturbed from regular mowing and ongoing agricultural activity within the buffer. Vegetation within the buffer is dominated by non-native invasive reed canarygrass and Himalayan blackberry.

5.4 Fish and Wildlife Conservation Areas

According to the USFWS IPaC mapping database, marbled murrelet (*Brachyramphus marmoratus*), yellow-billed cuckoo (*Coccyzus americanus*), Taylor's checkerspot (*Euphydryas editha taylori*), and bull trout (*Salvelinus confluentus*) have the potential to occur within 300 feet of the subject property. Marbled murrelet that occurs in the state of Washington are year-round residents on coastal waters and primarily feed in waters within 500 feet of the shore out to 1.2 miles from shore at depths of less than one hundred feet. Potential suitable nesting habitat typically consists of tree stands 5 or more acres in size composed of 60% or more conifer cover with minimum 15-inch diameter at breast height (DBH). Marbled Murrelets have been found in the largest numbers in marine waters near the coastal waters surrounding the Olympic Peninsula (Pearson et.al. 2010). The subject property is not suitable for marbled murrelet nesting habitat due to a lack of significant tree stands, and the site is located approximately 8.5 miles from the nearest marine shoreline.

Yellow-billed cuckoo habitat consists of low to mid-level riparian forests dominated by cottonwoods and willows. Suitable habitat is approximately 100 to 198 acres and wider than 200 meters; marginal habitat is approximately 20 to 100 acres and 100 to 200 meters wide; and unsuitable habitat is smaller than approximately 37 acres and less than 100 meters wide (Wiles & Kalasz, 2017). The subject site does not provide the required low to mid-level riparian forests for suitable yellow billed cuckoo habitat. The stream and riparian areas onsite contain a minimal tree canopy that is not suitable habitat for the yellow-billed cuckoo.

Taylor's checkerspot is found primarily in open prairie and grass/oak woodland habitat (Potter, 2016). In Washington, there are seven populations remaining and are primarily found on coastal bluffs and estuarine grasslands along the Strait of Juan de Fuca and in post-glacial, gravelly outwash prairies in Thurston, Mason, Pierce and Lewis counties. No habitat for this species is found in the vicinity of the project.

Bull trout require cold water temperatures, clean stream substrates, complex streams, and connectivity to rivers, lakes, and ocean habitats. Gages Slough is a wetland with minimal surface flow and does not provide suitable habitat for bull trout.

WDFW PHS maps identify the gray wolf as potentially present within the township, but not necessarily onsite. Gray wolves generally inhabit temperate forests, mountains, tundra, taiga and grassland environments. While they are somewhat habitat generalists, gray wolves do require ungulate prey or other wild animals for scavenging. In addition, they require a large amount of space (minimum of 10,000 to 13,000 square km) with low road density to support a viable population (Wiles et al., 2011). No suitable gray wolf habitat occurs within the project vicinity.

Chapter 6. Regulatory Considerations

The site investigation in March of 2022 identified one potentially-regulated wetland (Wetland A) on the subject property and one wetland (Wetland 1) was identified approximately 25 feet offsite to the southwest of the subject property. Wetlands A and 1 are sections of Gages Slough, which is considered an associated wetland of the Skagit River Shoreline. No other potentially-regulated wetlands, waterbodies, fish and wildlife habitat, or priority species were identified in the vicinity of the subject property.

6.1 Local Critical Area Requirements

6.1.1 Buffer Standards

BMC 14.15.180.B has adopted the current wetland rating system for western Washington (Hruby, 2014). Category III wetlands are wetlands with a moderate level of functions, as characterized by a score ranging from 16 to 19 points. Generally, these wetlands have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands. Category II wetlands are wetlands that perform functions well, as characterized by a score of 20 to 22 points. Category II wetlands are difficult, though not impossible, to replace and provide high levels of some functions.

BMC 14.15.185 established wetland buffers based on wetland rating and the intensity of land uses proposed on the development site. Table 5 presents the standard wetland buffer widths for the identified wetlands. Wetland A is classified as a Category III wetland per BMC 14.15.180.B. Per BMC 14.15.185, Category III wetlands are subject to a standard 150-foot buffer for proposed high impact land use. Offsite Wetland 1 is classified as a Category II wetland per BMC 14.15.180.B. Per BMC 14.15.185, Category II wetlands are subject to a standard 300-foot buffer for proposed high impact land use. Per BMC 14.15.420.E.4, an additional 15-foot setback from critical areas is required for all structures. Per BMC 14.15.185.C, buffer averaging is allowed when the conditions outlined in BMC.14.15.185.C.1 are met. Category III wetlands may be reduced to a minimum of 50 feet or three quarters of the required width, whichever is greater; and Category II wetlands may be reduced to a minimum of 75 feet or three quarters of the required width, whichever is greater.

Table 5. Wetland Buffer Summary.

Wetland	Category	Habitat Score	Proposed/Potential Future Land Use Intensity	Standard Buffer Width	Minimum Buffer Widths through buffer averaging
A	III	5	High	150	112.5
1	II	5	High	300	225

1. An additional 15-foot building setback from the edge of the wetland buffer is required for all structures.

6.1.2 Shoreline Considerations

As Gages Slough is identified as an associated wetland to the Skagit River according to BMC 18.06.020.B, the slough (associated wetland) itself is subject to shoreline jurisdiction. According to Chapter 5 of the Washington Department of Ecology Shoreline Master Program (SMP) Handbook (page 17) and codified in RCW 90.58.030(2)(f), shoreline designation does not extend an additional

200-feet from the wetland boundary or associated buffer. However, any work occurring in the wetland itself would be subject to shoreline permitting requirements; while work occurring within the wetland buffer would only be subject to the City of Burlington's critical area code and would not require shoreline permitting. According to the existing 18.07.040.A, Gages Slough is within the Urban Conservancy Designation. Per BMC 18.07.040.A.4.d, residential development is prohibited within the Urban Conservancy Designation. Per BMC 18.07.040.A.3.b, the shoreline designation of Gages Slough onsite is Urban Conservancy, which aims to "protect and restore ecological functions of open space, floodplain, and other sensitive lands where they exist in developed shoreline settings, while allowing for compatible uses and public access". However, the proposed residential development will occur landward of the associated wetland corridor, and therefore outside of the Urban Conservancy shoreline designation. Any work occurring in the wetland itself would be subject to shoreline permitting requirements; while work occurring within the wetland buffer would only be subject to the City of Burlington's critical area code and would not require shoreline permitting.

6.2 Federal and State Requirements

On January 18, 2023, USACE and EPA published a revised definition of "Waters of the United States." The revised rule became effective on March 20, 2023. Under the 2023 revised rule, Waters of the United States is described as follows (USACE and EPA, 2023):

(a) Waters of the United States means:

(1) Waters which are: (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (ii) The territorial seas; or (iii) Interstate waters, including interstate wetlands;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section: (i) That are relatively permanent, standing or continuously flowing bodies of water; or (ii) That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section;

(4) Wetlands adjacent to the following waters: (i) Waters identified in paragraph (a)(1) of this section; or (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3)(i) of this section and with a continuous surface connection to those waters; or (iii) Waters identified in paragraph (a)(2) or (3) of this section when the wetlands either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section;

(5) Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4) of this section: (i) That are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3)(i) of this section; or (ii) That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section.

On May 25, 2023, the U.S. Supreme Court issued a decision affecting the definition of Waters of the United States in *Sackett Et Ux. V Environmental Protection Agency Et Al.* While USACE is in receipt of the Supreme Court decision, no formal, revised definition of Waters of the United States has been issued at the time of this report drafting. Given the hydraulic connection to the Skagit River, a traditionally navigable water, Wetlands A and 1 are likely regulated. Wetlands A (Gages Slough) and 1 would also likely regulated as natural waters by WSDOE under the Revised Code of Washington (RCW) 90.48.

Chapter 7. Closure

The findings and conclusions documented in this report have been prepared for specific application to the Gages Crossing site. They have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. Our work was also performed in accordance with the terms and conditions set forth in our proposal. The conclusions and recommendations presented in this report are professional opinions based on an interpretation of information currently available to us and are made within the operation scope, budget, and schedule of this project. No warranty, expressed or implied, is made. In addition, changes in government codes, regulations, or laws may occur. Because of such changes, our observations and conclusions applicable to this project may need to be revised wholly or in part.

The critical area determinations by Soundview Consultants LLC are based on conditions present at the time of the site inspection and considered preliminary until the presence or absence and location of critical areas are validated by the jurisdictional agencies. Validation of the critical area determinations by the regulating agencies provides a certification, usually written, that the critical area boundaries or lack thereof verified are the boundaries that will be regulated by the agencies until a specific date or until the regulations are modified. Only the regulating agencies can provide this certification.

Since critical areas are dynamic communities affected by both natural and human activities, changes in critical area determinations and/or boundaries may be expected; therefore, critical area determinations cannot remain valid for an indefinite period of time. Local agencies typically recognize the validity of critical area determinations for a period of 5 years after completion of a wetland delineation and fish and wildlife habitat assessment report. Development activities on a site 5 years after the completion of this report may require revision of the critical area determinations and/or delineations. In addition, changes in government codes, regulations, or laws may occur. Because of such changes, our observations and conclusions applicable to this site may need to be revised wholly or in part.

Chapter 8. References

- Anderson, P.S., S. Meyer, P. Olson, and E. Stockdale. 2016. *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State*. Publication No. 16-06-029. Final Review Draft. Shorelands and Environmental Assistance Program, Washington State Department of Ecology. Olympia, Washington.
- Burlington Municipal Code (BMC). 2022. *Chapter 14.15 – Critical Area Regulations*. Website: <https://www.codepublishing.com/WA/Burlington/#!/Burlington14/Burlington1415.html#14.15>. Current through December 8, 2022.
- Burlington Municipal Code (BMC). 2022. *Chapter 18 – Shoreline Master Program*. Website: <https://www.codepublishing.com/WA/Burlington/html/Burlington18/Burlington18.html>. Current through December 8, 2022.
- City of Burlington Community Development. 2022. *Technical Review Committee Memo - Townhomes at Dynes Farm*.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1*, US Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
- Federal Emergency Management Agency (FEMA). 2017. *FEMA Region X - Puget Sound BiOp Floodplain Habitat Assessment Worksheet, Version 1.6*. November 2017.
- FEMA. 2018. *National Flood Insurance Program Record of Decision*. April 2018.
- Hitchcock, C.L. & A. Cronquist, Ed. by D. Giblin, B. Ledger, P. Zika, and R. Olmstead. 2018. *Flora of the Pacific Northwest, 2nd Edition*. U.W. Press and Burke Museum. Seattle, Washington.
- Klungland, Michael W and Michael McArthur. 1989. *Soil Survey of Skagit County Area, Washington*. United States Department of Agriculture, Soil Conservation Service, in cooperation with the Washington Agricultural Experiment Station. Washington, D.C.
- Munsell® Color. 2000. *Munsell® Soil Color Charts*. New Windsor, New York.
- Natural Resources Conservation Services (NRCS). N.d. Soil Data Access Hydric Soils List (Soil Data Access Live). Website: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316620.html
- NRCS. 2018. Field Indicators of Hydric Soils in the United States, Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
- Potter, A. 2016. Periodic Status Review for Taylor's Checkerspot. Washington State Department of Fish and Wildlife. Olympia, Washington.

Supreme Court of the United States. Sackett Et Ux. V Environmental Protection Agency (EPA) Et Al. May 25, 2023. <https://www.epa.gov/system/files/documents/2023/05/Sackett%20Opinion.pdf>.U.S.

USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center. Vicksburg, Mississippi.

USACE and EPA. 2012. *Guidance on Identifying Waters Protected by the Clean Water Act*. EPA/USACE. February 17, 2012.

USACE. 2018. *National Wetland Plant List, version 3.4*. <http://wetland-plants.usace.army.mil/>.

USACE and Environmental Protection Agency (EPA). 2023. “*Revised Definition of Waters of the United States*.” 88 FR 3004. January 18, 2023.

Washington Department of Fish and Wildlife (WDFW). 2019. *Fish Passage Inventory, Assessment, and Prioritization Manual*. Olympia, Washington.

Wiles, G. J., H. L. Allen, and G. E. Hayes. 2011. Wolf conservation and management plan for Washington. Washington Department of Fish and Wildlife, Olympia, Washington. 297 pp.

Appendix A – Methods and Tools

Table A1. Methods and tools used to prepare the report.

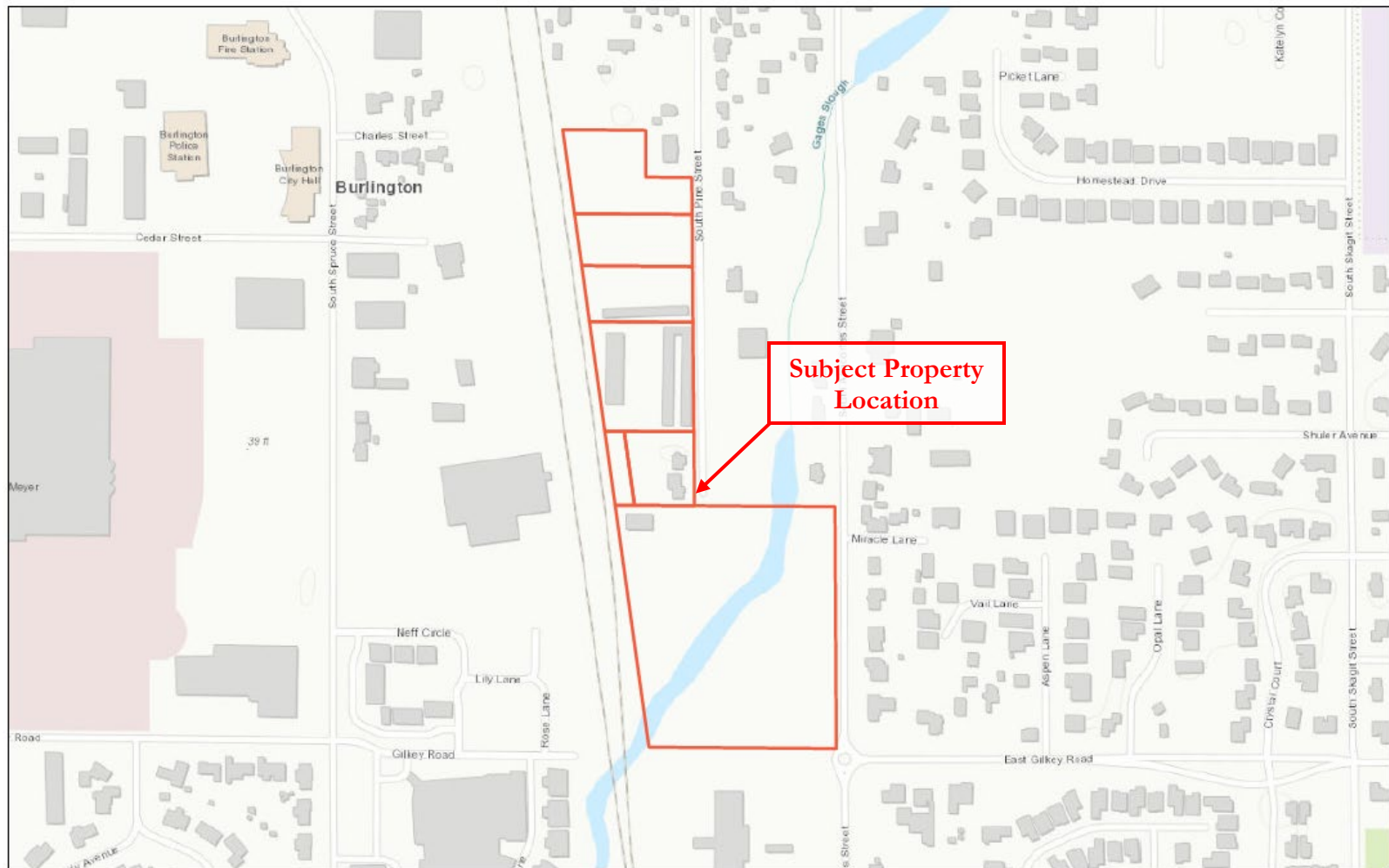
Parameter	Method or Tool	Website	Reference
Wetland Presence/Absence	USACE 1987 Wetland Delineation Manual	http://el.erdc.usace.army.mil/elpubs/pdf/wlman87.pdf	Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
	Western Mountains, Valleys, and Coast Region Regional Supplement	http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/west_mt_finalsupp.pdf	U.S. Army Corps of Engineers. 2010. <i>Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)</i> , ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
Wetland Indicator Status	2018 National Wetland Plant List	http://wetland-plants.usace.army.mil/	Website.
OHW Delineation	Washington State Shoreline Management Act	https://fortress.wa.gov/ecy/publications/summarypages/1606029.html	Anderson, P.S., S. Meyer, P. Olson, and E. Stockdale. 2016. <i>Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State</i> . Publication No. 16-06-029. Final Review Draft. Shorelands and Environmental Assistance Program, Washington State Department of Ecology. Olympia, Washington.
Stream Classification	Department of Natural Resources (DNR) Water Typing System	http://www.stage.dnr.wa.gov/forestpractices/watertyping/	Washington Administrative Code (WAC) 222-16-030. DNR Water typing system.
Plant Names and Identification	USDA Plant Database	http://plants.usda.gov/	Website.
	Flora of the Pacific Northwest	http://www.washington.edu/uwpress/search/books/HITFLC.html	Hitchcock, C.L. & A. Cronquist, Ed. by D. Giblin, B. Ledger, P. Zika, and R. Olmstead. 2018. <i>Flora of the Pacific Northwest, 2nd Edition</i> . U.W. Press and Burke Museum. Seattle, Washington.
Soils Data	NRCS Soil Survey	http://websoilsurvey.nrcs.usda.gov/app/	Klungland, Michael W and Michael McArthur. 1989. Soil Survey of Skagit County Area, Washington. United States Department of Agriculture, Soil Conservation Service, in cooperation with the Washington Agricultural Experiment Station. Washington, D.C.
	Soil Data Access Hydric Soils List	https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316620.html	Natural Resources Conservation Service. N.d. Soil Data Access Hydric Soils List (Soil Data Access Live).
	Soil Color Charts		Munsell® Color. 2000. Munsell® Soil Color Charts. New Windsor, New York.

Parameter	Method or Tool	Website	Reference
Threatened and Endangered Species	Washington Natural Heritage Program	http://data-wadnr.opendata.arcgis.com/datasets/wnhp-current-element-occurrences	Washington Natural Heritage Program. Endangered, threatened, and sensitive plants of Washington. Washington State Department of Natural Resources, Washington Natural Heritage Program, Olympia, WA
	Washington Priority Habitats and Species	http://wdfw.wa.gov/hab/p/hspage.htm	Priority Habitats and Species (PHS) Program Map of priority habitats and species in project vicinity. Washington Department of Fish and Wildlife.
Species of Local Importance	WDFW GIS Data	http://wdfw.wa.gov/mapping/salmonscape/	Website
Report Preparation	City of Burlington Municipal Code	https://www.codepublishing.com/WA/Burlington/#!/Burlington14/Burlington1415.html#14.15 https://www.codepublishing.com/WA/Burlington/#!/Burlington18/Burlington1807.html#18.07	BMC Chapter 14.15 – Critical Areas Regulations. BMC Chapter 18.07 – Shorelines Environment Designations
	Skagit County Shoreline Master Program	https://www.skagitcounty.net/PlanningAndPermit/Documents/SMP/Skagit%20County%20SMP%20Public%20Review%20Draft%204-12-21%20v2.pdf	Skagit County Shoreline Master Program. Public review draft, April 12, 2021.

Appendix B – Background Information

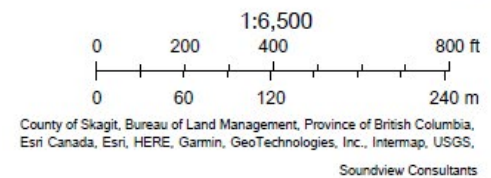
This Appendix includes a USGS Topographic Map (B1); NRCS Soil Survey Map (B2); USFWS NWI Map (B3); WDFW PHS Map (B4); DNR Stream Typing Map (B5); WDFW SalmonScape Map (B6); FEMA Floodplain Map (B7).

Appendix B1. Skagit County Contours Map



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 Statewide Parcels _Query result



Appendix B2. NRCS Soil Survey Map



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Statewide Parcels _Query result

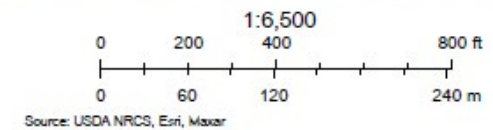
USA Soils Map Units

152- Urban land-Mt. Vernon- Field Complex

96- Mt. Vernon very fine sandy loam

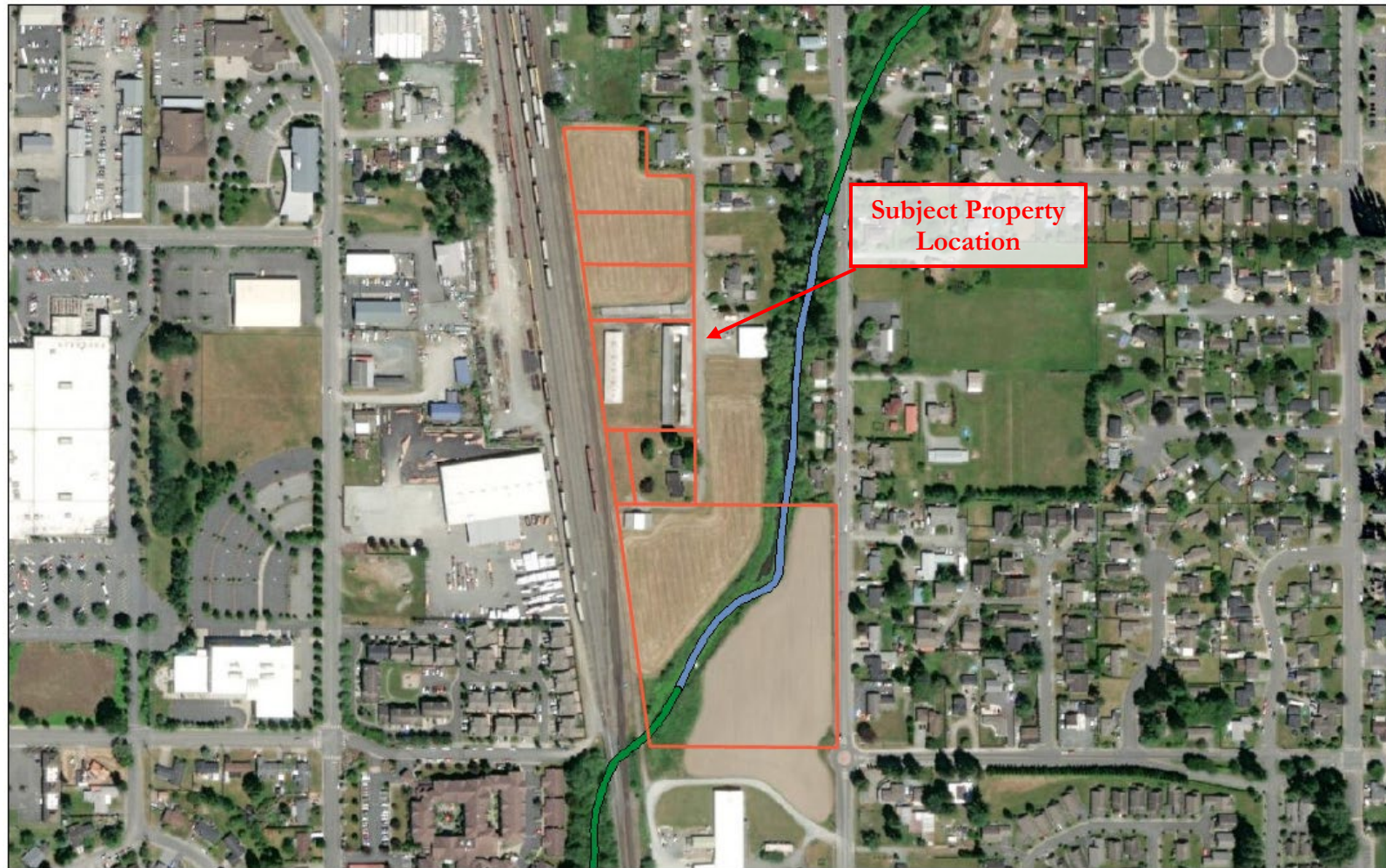
136- Sumas silt loam

21- Briscot fine sandy loam



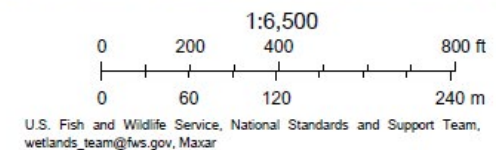
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Appendix B3. USFWS NWI Map



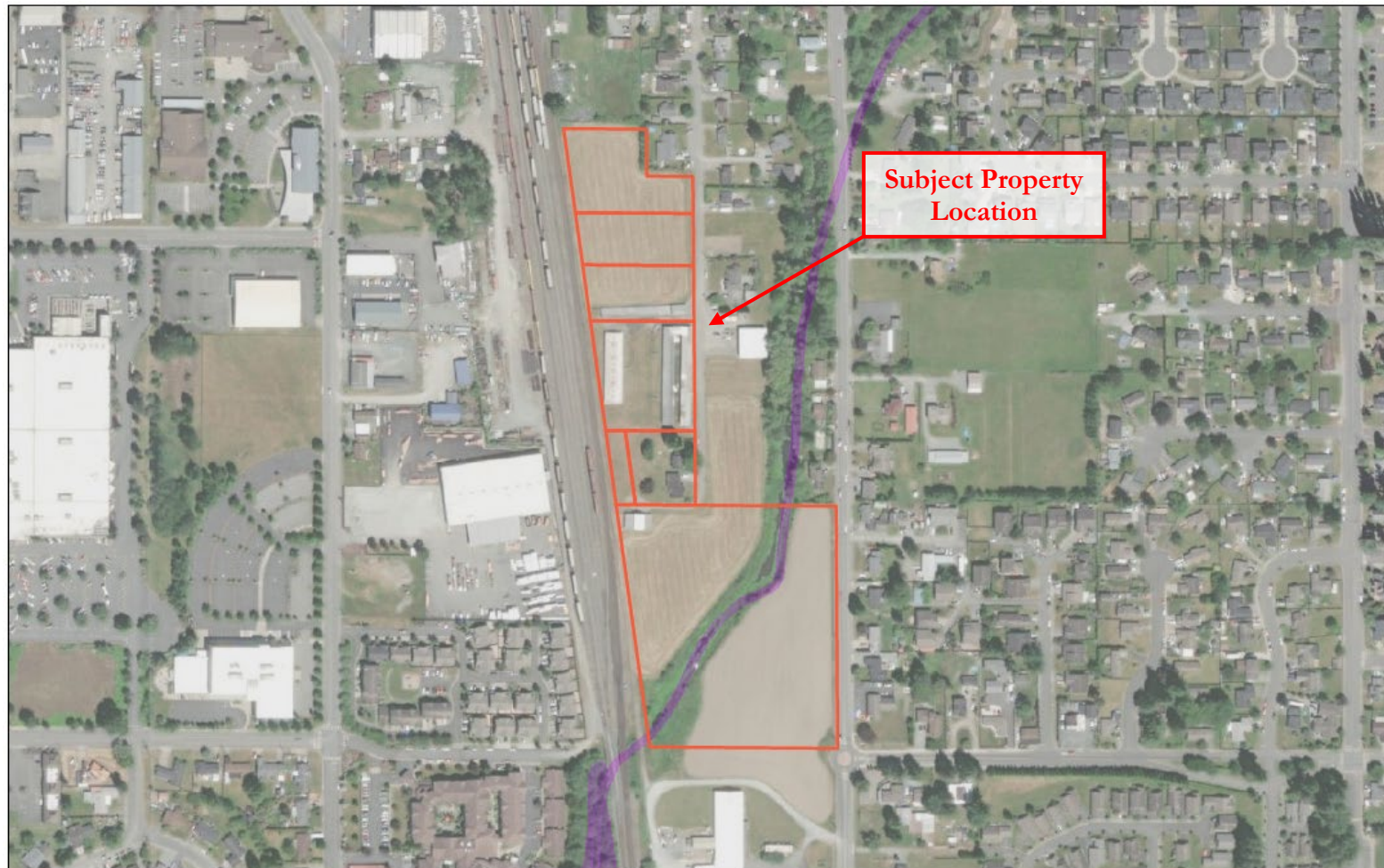
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- | | | |
|---|--|--|
| Statewide Parcels _Query result | Estuarine and Marine Wetland | Freshwater Pond |
| Wetlands | Freshwater Emergent Wetland | Lake |
| Estuarine and Marine Deepwater | Freshwater Forested/Shrub Wetland | Other |



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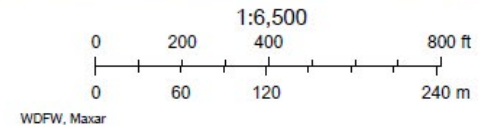
Appendix B4. WDFW PHS Map



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PHS Public Polygon Outlines PHS Public Polygons Statewide Parcels _Query result

 AS MAPPED	 AS MAPPED
 Masked	 TOWNSHIP



Soundview Consultants

Occurrence Name	Federal Status	State Status	Sensitive Location
Wetlands	N/A	N/A	No
Freshwater Pond	N/A	N/A	No
Freshwater Forested/Shrub Wetland	N/A	N/A	No
Gray wolf	Endangered	Endangered	Yes

Wetlands	
Priority Area	Aquatic Habitat
Site Name	SKAGIT RIVER WETLANDS.
Accuracy	1/4 mile (Quarter Section)
Notes	VARIOUS WETLAND TYPES ASSOCIATED WITH THE LOWER SKAGIT RIVER AND TRIBUTARIES FROM DISTRIBUTARY FORKS UPSTREAM TO SEDRO WOOLLEY.
Source Record	902765
Source Dataset	PHSREGION
Source Name	STENDAL, ART
Source Entity	WA Dept. of Fish and Wildlife
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

Freshwater Pond	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Pond - NWI Code: PABF
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

Freshwater Forested/Shrub Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Forested/Shrub Wetland - NWI Code: PSSC
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

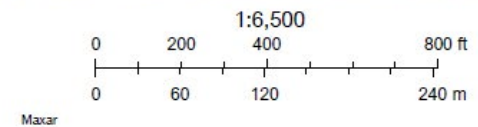
Gray wolf	
Scientific Name	<i>Canis lupus</i>
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release (360-902-2543) for obtaining information about masked sensitive species and habitats.
Federal Status	Endangered
State Status	Endangered
PHS Listing Status	PHS Listed Occurrence
Sensitive	Y
SGCN	Y
Display Resolution	TOWNSHIP

Appendix B5. DNR Stream Typing Map



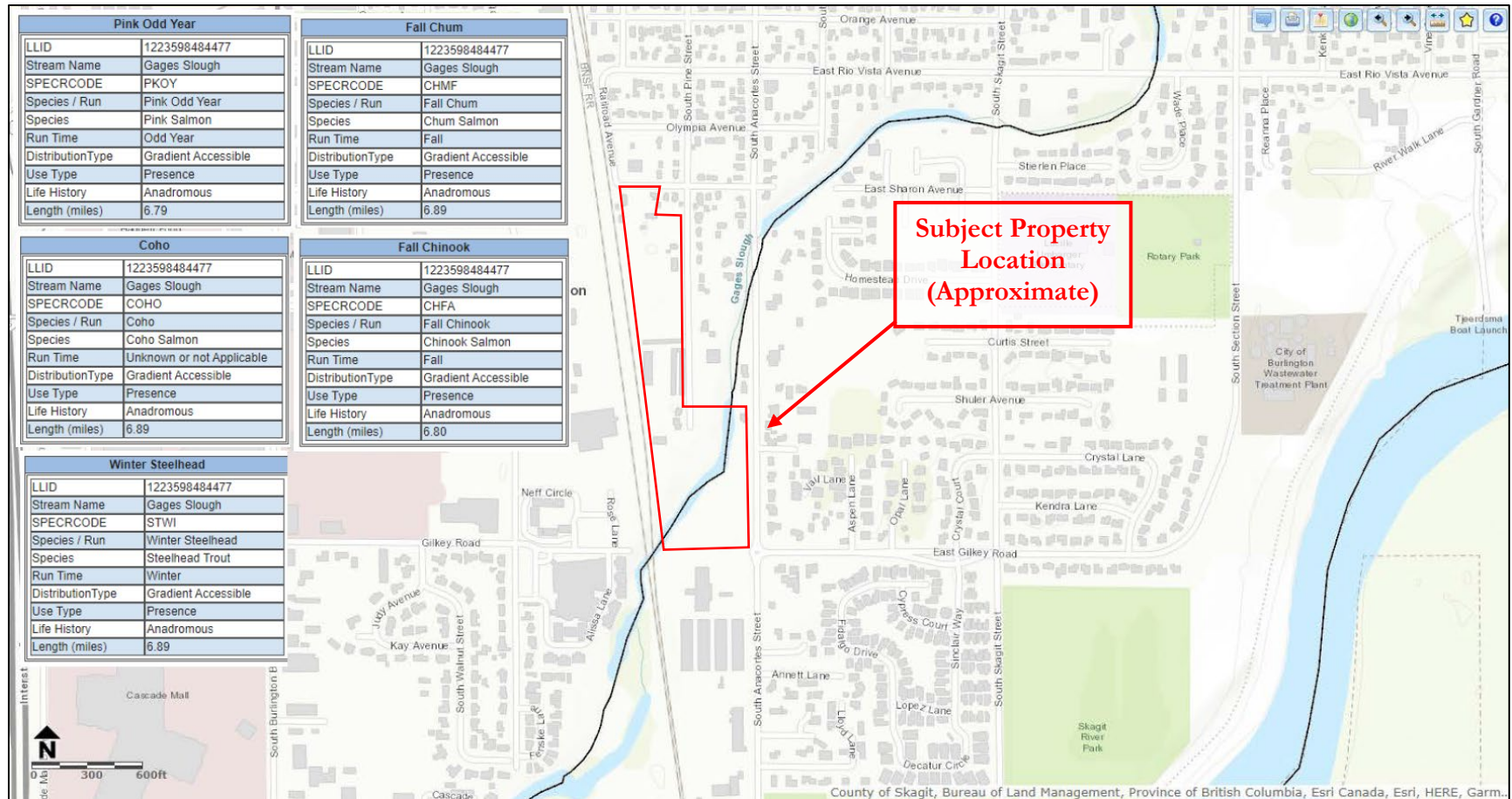
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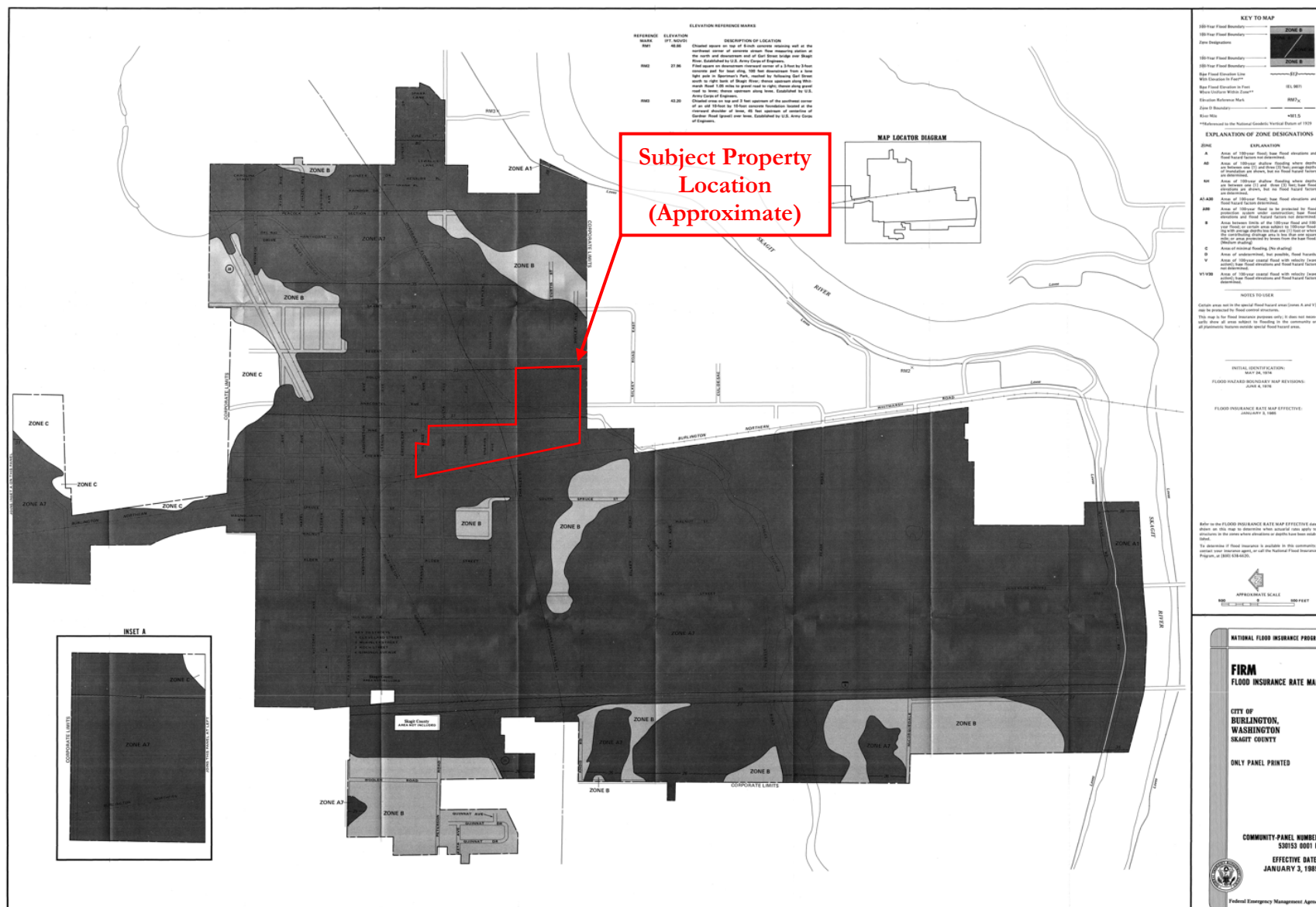
 Statewide Parcels _Query result DNR - Stream Typing - Watercourses (DNR)
 Type S



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Appendix B6. WDFW SalmonScape Map





Appendix C – Existing Condition Exhibit

Appendix D – Data Forms

Project/Site: 1916.0003- Gages Crossing City/County: Burlington/ Skagit Sampling Date: 3/29/2022
 Applicant/Owner: Corner 9 Properties LLC State: WA Sampling Point: DP-1
 Investigator(s): Lauren Templeton and Kramer Canup Section, Township, Range: 05, 34N, 4E
 Landform (hillslope, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): A2 Lat: 48.465882 Long: -122.32574415 Datum: WGS 84
 Soil Map Unit Name: 96 - Mt. Vernon very fine sandy loam NWI classification: N/A

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

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: All wetland criteria met. DP-1 is located in Wetland A. Plot shape was adjusted to 25'x5' to fit within wetland area on bank of slough.			

Tree Stratum (Plot size: 30 ft)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Salix lasiandra</u>	5	Yes	FACW
2.	<u>Alnus rubra</u>	2	Yes	FAC
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
		7	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: 30 ft)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		0	= Total Cover	
<u>Herb Stratum</u> (Plot size: 10 ft)				
1.	<u>Phalaris arundinacea</u>	30	Yes	FACW
2.	<u>Iris pseudacorus</u>	15	Yes	OBL
3.	<u>Juncus effusus</u>	10	No	FACW
4.	<u>Ranunculus repens</u>	5	No	FAC
5.	<u>Periscaria maculosa</u>	5	No	FACW
6.	<u>Arrhenatherum elatius</u>	5	No	UPL
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
		70	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: 30 ft)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
		0	= Total Cover	
% Bare Ground in Herb Stratum <u>30</u>				
Remarks: <u>Hydrophytic vegetation met through the Dominance Test.</u>				

Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</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>100%</u>	(A/B)
Prevalence Index worksheet:	
Total % Cover of: _____	Multiply by: _____
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____
Prevalence Index = B/A = _____	
Hydrophytic Vegetation Indicators:	
☐ Rapid Test for Hydrophytic Vegetation	
☒ Dominance Test is >50%	
☐ Prevalence Index is ≤3.0 ¹	
☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
☐ Wetland Non-Vascular Plants ¹	
☐ Problematic Hydrophytic Vegetation ¹ (Explain)	
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Hydrophytic Vegetation Present?	
Yes ☒	No ☐

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		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0 - 7	5Y 2.5/2	100	-	-	-	-	SaLo	Sandy loam
7 - 11	5Y 3/1	92	10YR 4/4	8	C	M	SaLo	Sandy loam
11 - 17	2.5Y 4/1	85	10YR 4/4	10	C	M	LoSa	Loamy sand
			7.5YR 3/4	5	C	PL		

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.)

- | | |
|---|--|
| ☐ 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:

- ☐ 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:

Hydric soil criteria met through indicator F6 and A11.

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| ☒ High Water Table (A2) | ☐ Salt Crust (B11) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ 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) | |

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): None

Water Table Present? Yes ☒ No ☐ Depth (inches): 2

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

Wetland Hydrology Present? Yes ☒ No ☐

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

-

Remarks:

Wetland hydrology met directly through primary indicators A2 and A3.

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

Project/Site: 1916.0003- Gages Crossing City/County: Burlington/ Skagit Sampling Date: 3/29/2022
 Applicant/Owner: Corner 9 Properties LLC State: WA Sampling Point: DP-2
 Investigator(s): Lauren Templeton and Kramer Canup Section, Township, Range: 05, 34N, 4E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 4
 Subregion (LRR): A2 Lat: 48.465885 Long: -122.32578774 Datum: WGS 84
 Soil Map Unit Name: Mt. Vernon very fine sandy loam NWI classification: NA

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

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

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soil Present? Yes ☐ No ☒	
Wetland Hydrology Present? Yes ☐ No ☒	
Remarks: No wetland criteria met. DP-2 is upland plot to Wetland A, located west bank of Gages Slough.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	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. _____	_____	_____	_____	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: 30 ft) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
Herb Stratum (Plot size: 10 ft) 1. <u>Arrhenatherum elatius</u> <u>100</u> <u>Yes</u> <u>UPL</u> 2. <u>Trifolium pratense</u> <u>5</u> <u>No</u> <u>FACU</u> 3. <u>Rumex obtusifolius</u> <u>5</u> <u>No</u> <u>FAC</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ _____ = Total Cover				
Woody Vine Stratum (Plot size: 30 ft) 1. _____ 2. _____ _____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				Hydrophytic Vegetation Indicators: ☐ Rapid Test for Hydrophytic Vegetation ☐ Dominance Test is >50% ☐ Prevalence Index is ≤3.0 ¹ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Remarks: Hydrophytic vegetation criteria not met. Prevalence test not warranted due to a lack of combine hydric soils and wetland hydrology.				

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		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0 - 8	2.5Y 4/2	100	-	-	-	-	LoSa	Loamy sand
8 - 14	2.5Y 4/1	70	10YR 3/4	5	C	M, PL	LoSa	Loamy sand
			5Y 4/3	25	-	-	LoSa	Loamy sand

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.)

- | | |
|--|--|
| ☐ 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:

- ☐ 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:

No hydric soil criteria met. Redox in second layer begins too deep (>6") to meet S5 requirements.

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| ☐ High Water Table (A2) | ☐ Salt Crust (B11) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ 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) | |

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): None

Water Table Present? Yes ☐ No ☒ Depth (inches): None

Saturation Present? Yes ☐ No ☒ Depth (inches): None
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

No wetland hydrology criteria met. No wetland hydrology to 15 inches.

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

Project/Site: 1916.0003- Gages Crossing City/County: Burlington/ Skagit Sampling Date: 3/29/2022
 Applicant/Owner: Corner 9 Properties LLC State: WA Sampling Point: DP-3
 Investigator(s): Lauren Templeton and Kramer Canup Section, Township, Range: 05, 34N, 4E
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Convex Slope (%): 2
 Subregion (LRR): A2 Lat: 48.464737 Long: -122.32556687 Datum: WGS 84
 Soil Map Unit Name: Mt. Vernon very fine sandy loam (92) NWI classification: NA

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

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

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Remarks: No wetland criteria met. DP-3 is located in the southeast portion of the site.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30 ft)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 10 ft)				
1. <u>Cardamine hirsuta</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Lamium purpureum</u>	<u>4</u>	<u>Yes</u>	<u>UPL</u>	
3. <u>Myosotis discolor</u>	<u>3</u>	<u>No</u>	<u>FAC</u>	
4. <u>Senecio vulgaris</u>	<u>3</u>	<u>No</u>	<u>FACU</u>	
5. <u>Geranium robertianum</u>	<u>2</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
	<u>17</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30 ft)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>83</u>				
Remarks: No hydrophytic vegetation criteria met. Dominance test failed, prevalence index not warranted due to lack of combined hydric soil and hydrology.				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

 Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

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

Hydrophytic Vegetation Indicators:
☐ Rapid Test for Hydrophytic Vegetation
☐ Dominance Test is >50%
☐ Prevalence Index is ≤3.0¹
☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ 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-3

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0 - 14	2.5Y 4/2	100	-	-	-	-	LoSa	Loamy sand
14+	2.5Y 5/2	99	10YR 4/4	1	C	M	LoSa	Loamy sand

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.)

- | | |
|--|--|
| ☐ 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:

- ☐ 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:

No hydric soils criteria met. Redox in second layer is too deep (>6") and not abundant enough (<2%) to meet S5 requirements.

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| ☐ High Water Table (A2) | ☐ Salt Crust (B11) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ 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) | |

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): None

Water Table Present? Yes ☐ No ☒ Depth (inches): None

Saturation Present? Yes ☐ No ☒ Depth (inches): None
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

NA

Remarks:

No wetland hydrology criteria met. No wetland hydrology to 16 inches,

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

Project/Site: 1916.0003- Gages Crossing City/County: Burlington/ Skagit Sampling Date: 3/29/2022
 Applicant/Owner: Corner 9 Properties LLC State: WA Sampling Point: DP-4
 Investigator(s): Lauren Templeton and Kramer Canup Section, Township, Range: 05, 34N, 4E
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2
 Subregion (LRR): A2 Lat: 48.468704 Long: -122.32738896 Datum: WGS 84
 Soil Map Unit Name: Urban land-Mt. Vernon- Field complex NWI classification: NA

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

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

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soil Present? Yes ☐ No ☒	
Wetland Hydrology Present? Yes ☐ No ☒	
Remarks: <u>No wetland criteria met. DP-4 is located in the northwest corner of the site and is located in the lowest point in the northwest field.</u>	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30 ft</u>)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	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. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30 ft</u>)				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>10 ft</u>)				Hydrophytic Vegetation Indicators: ☐ Rapid Test for Hydrophytic Vegetation ☐ Dominance Test is >50% ☐ Prevalence Index is ≤3.0 ¹ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Dactylis glomerata</u>	<u>93</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Trifolium pratense</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
3. <u>Taraxacum officinale</u>	<u>2</u>	<u>No</u>	<u>FACU</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
11. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>100</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft</u>)				Hydrophytic Vegetation Present? Yes ☐ No ☒
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: <u>Hydrophytic vegetation criteria not met. Dominance test failed, prevalence index not warranted due to a lack of combined wetland hydrology and hydric soils.</u>				

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		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0 - 6	10YR 3/3	100	-	-	-	-	LoSa	Loamy sand
6 - 11	10YR 3/3	90	-	-	-	-	LoSa	Loamy sand. Mixed matrix.
	2.5Y 5/4	10	-	-	-	-	LoSa	Loamy sand. Mixed matrix.
11 - 14	2.5YR 5/4	60	-	-	-	-	SaClLo	Sandy clay loam. Mixed matrix.
	2.5Y 5/1	40	-	-	-	-	SaClLo	Sandy clay loam. Mixed matrix.

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.)

- | | |
|--|--|
| ☐ 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:

- ☐ 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: None

Depth (inches): N/A

Hydric Soil Present? Yes ☐ No ☒

Remarks:

No hydric soil criteria met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| ☐ High Water Table (A2) | ☐ Salt Crust (B11) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ 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) | |

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): None

Water Table Present? Yes ☐ No ☒ Depth (inches): None

Saturation Present? Yes ☐ No ☒ Depth (inches): None
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

No wetland hydrology criteria met. No hydrology observed to 15 inches.

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

Project/Site: 1916.0003- Gages Crossing City/County: Burlington/ Skagit Sampling Date: 3/29-2022
 Applicant/Owner: Corner 9 Properties LLC State: WA Sampling Point: DP-5
 Investigator(s): Lauren Templeton and Kramer Canup Section, Township, Range: 05, 34N, 4E
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Convex Slope (%): 2
 Subregion (LRR): A2 Lat: 48.465884 Long: -122.32649678 Datum: WGS 84
 Soil Map Unit Name: Urban land-Mt. Vernon- Field complex (92) NWI classification: NA

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

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

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

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

Hydrophytic Vegetation Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soil Present? Yes ☐ No ☒	
Wetland Hydrology Present? Yes ☐ No ☒	
Remarks: No wetland criteria met. DP-5 is located in the upland pasture area on the west side of the subject property.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	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. _____	_____	_____	_____	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: 30 ft) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
Herb Stratum (Plot size: 10 ft) 1. <u>Dactylis glomerata</u> 85 Yes <u>FACU</u> 2. <u>Trifolium pratense</u> 10 No <u>FACU</u> 3. <u>Taraxacum officinale</u> 5 No <u>FACU</u> 4. <u>Lamium purpureum</u> 2 No <u>UPL</u> 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ _____ = Total Cover				
Woody Vine Stratum (Plot size: 30 ft) 1. _____ 2. _____ _____ = Total Cover				
% Bare Ground in Herb Stratum <u>-2</u>				Hydrophytic Vegetation Indicators: ☐ Rapid Test for Hydrophytic Vegetation ☐ Dominance Test is >50% ☐ Prevalence Index is ≤3.0 ¹ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Remarks: No hydrophytic vegetation criteria met. Dominance test failed, prevalence index not warranted due to a lack of combined wetland hydrology and hydric soils.				

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		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0 - 9	10YR 3/3	100	-	-	-	-	LoSa	Loamy sand
9 - 14	10YR 3/3	70	-	-	-	-	LoSa	Loamy sand, mixed matrix
	2.5Y 4/3	29	5YR 3/4	1	C	M	LoSa	Loamy sand, mixed matrix

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.)

- | | |
|--|--|
| ☐ 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:

- ☐ 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:

No hydric soil criteria met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| ☐ High Water Table (A2) | ☐ Salt Crust (B11) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ 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) | |

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): None

Water Table Present? Yes ☐ No ☒ Depth (inches): None

Saturation Present? Yes ☐ No ☒ Depth (inches): None
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

No wetland hydrology criteria met. No hydrology observed to 16 inches.

Appendix E – Wetland Rating Forms

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): A Date of site visit: 3/29/22
Rated by Lauren Templeton, Kramer Canup Trained by Ecology? ☒ Yes ☐ No Date of training 3/2021
HGM Class used for rating Depressional 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 ArcGIS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
Site Potential	L	L	M	
Landscape Potential	H	H	L	
Value	H	H	M	TOTAL
Score Based on Ratings	7	7	5	19

**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	N/A

Wetland name or number A

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	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

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 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 A

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. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	2
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ 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	3
D 1.4. Characteristics of seasonal ponding or inundation: <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	0
Total for D 1	5

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

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 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?	Yes = 1 No = 0
Source _____	
Total for D 2	4

Rating of Landscape Potential If score is: X 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
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
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
Total for D 3	4

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

NOTES and FIELD OBSERVATIONS:

Wetland name or number A

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. Characteristics of surface water outflows from the wetland:

- | | | |
|---|------------|---|
| Wetland is a depression or flat depression with no surface water leaving it (no outlet) | points = 4 | 2 |
| 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. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.

- | | | |
|--|------------|---|
| Marks of ponding are 3 ft or more above the surface or bottom of outlet | points = 7 | 3 |
| Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet | points = 5 | |
| Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet | points = 3 | |
| 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. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.

- | | | |
|---|------------|---|
| The area of the basin is less than 10 times the area of the unit | points = 5 | 0 |
| The area of the basin is 10 to 100 times the area of the unit | points = 3 | |
| The area of the basin is more than 100 times the area of the unit | points = 0 | |
| Entire wetland is in the Flats class | points = 5 | |

Total for D 4 Add the points in the boxes above 5

Rating of Site Potential If score is: 12-16 = H 6-11 = M X 0-5 = L

Record the rating on the first page

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

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0 1

D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0 1

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0 1

Total for D 5 Add the points in the boxes above 3

Rating of Landscape Potential If score is: X 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. The unit is in a landscape that has flooding problems. 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.

- | | | |
|---|------------|---|
| The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): | | 2 |
| • Flooding occurs in a sub-basin that is immediately down-gradient of unit. | points = 2 | |
| • Surface flooding problems are in a sub-basin farther down-gradient. | points = 1 | |
| Flooding from groundwater is an issue in the sub-basin. | points = 1 | |
| 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 | |
| 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 2

Total for D 6 Add the points in the boxes above 4

Rating of Value If score is: X 2-4 = H 1 = M 0 = L

Record the rating on the first page

Wetland name or number A

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 | 2 |
| ☒ 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

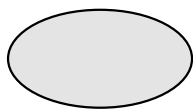
Count the number of plant species in the wetland that cover at least 10 ft².

*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***

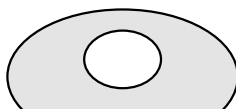
- | | | |
|------------------------------|------------|---|
| If you counted: > 19 species | points = 2 | 1 |
| 5 - 19 species | points = 1 | |
| < 5 species | points = 0 | |

H 1.4. Interspersion of habitats

Decide from the diagrams below whether 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. *If you have four or more plant classes or three classes and open water, the rating is always high.*



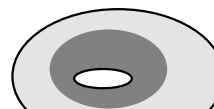
None = 0 points



Low = 1 point

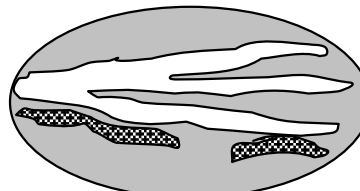
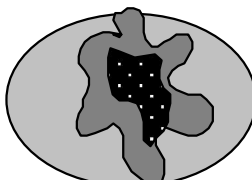
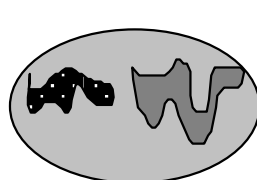


Moderate = 2 points



2

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



Wetland name or number 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>)		2
Total for H 1	Add the points in the boxes above	8

Rating of Site Potential If score is: 15-18 = H X 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>). Calculate: <u>0.00</u> % undisturbed habitat + [(% moderate and low intensity land uses) <u>0.00</u> /2] = <u>0</u> % 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		0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: <u>2.37</u> % undisturbed habitat + [(% moderate and low intensity land uses) <u>14.62</u> /2] = <u>9.68</u> % 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		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 1 km Polygon is high intensity points = 0		-2
Total for H 2	Add the points in the boxes above	-2

Rating of Landscape Potential If score is: 4-6 = H 1-3 = M X < 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 X 1 = M 0 = L

Record the rating on the first page

Wetland name or number 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.

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 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	
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	
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? ☐ 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://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.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	
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	

Wetland name or number 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	
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 unmowed grassland. — The wetland is larger than $\frac{1}{10}$ ac (4350 ft²) ☐ Yes = Category I ☐ No = Category 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	
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	

Wetland name or number A

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Wetland name or number 1

RATING SUMMARY – Western Washington

Name of wetland (or ID #): 1 Date of site visit: 3/29/22

Rated by Lauren Templeton, Kramer Canup Trained by Ecology? ☒ Yes ☐ No Date of training 3/2021

HGM Class used for rating Depressional 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 ArcGIS

OVERALL WETLAND CATEGORY II (based on functions ☒ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

 Category I – Total score = 23 - 27

X Category II – Total score = 20 - 22

 Category III – Total score = 16 - 19

 Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
Site Potential	M	L	M	
Landscape Potential	H	H	L	
Value	H	H	M	
Score Based on Ratings	8	7	5	20

**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	N/A

Wetland name or number 1

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	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

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 1

☒ 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 1

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. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	2	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0	0	
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ 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	3	
D 1.4. Characteristics of seasonal ponding or inundation: <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	2	
Total for D 1	Add the points in the boxes above	
	7	

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

D 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	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?		1
Source _____	Yes = 1 No = 0	
Total for D 2	Add the points in the boxes above	
	3	

Rating of Landscape Potential If score is: X 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	1
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	
	4	

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

NOTES and FIELD OBSERVATIONS:

Wetland name or number 1

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. Characteristics of surface water outflows from the wetland:

Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4

Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing 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

2

D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.

Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7

Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5

Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3

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

3

D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.

The area of the basin is less than 10 times the area of the unit points = 5

The area of the basin is 10 to 100 times the area of the unit points = 3

The area of the basin is more than 100 times the area of the unit points = 0

Entire wetland is in the Flats class points = 5

0

Total for D 4

Add the points in the boxes above

5

Rating of Site Potential If score is: 12-16 = H 6-11 = M X 0-5 = L

Record the rating on the first page

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

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0

1

D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0

1

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0

1

Total for D 5

Add the points in the boxes above

3

Rating of Landscape Potential If score is: X 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. The unit is in a landscape that has flooding problems. 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.

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):

• Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2

• Surface flooding problems are in a sub-basin farther down-gradient. points = 1

Flooding from groundwater is an issue in the sub-basin. points = 1

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

There are no problems with flooding downstream of the wetland. points = 0

2

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

2

Total for D 6

Add the points in the boxes above

4

Rating of Value If score is: X 2-4 = H 1 = M 0 = L

Record the rating on the first page

Wetland name or number 1

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

4

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 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 |

1

H 1.3. Richness of plant species

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

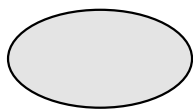
*Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. **Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

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

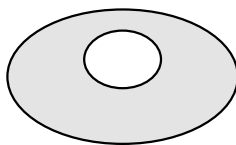
1

H 1.4. Interspersion of habitats

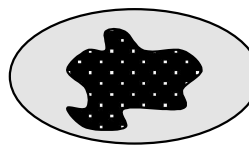
Decide from the diagrams below whether interspersions among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



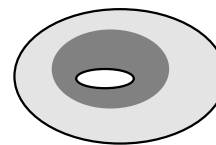
None = 0 points



Low = 1 point

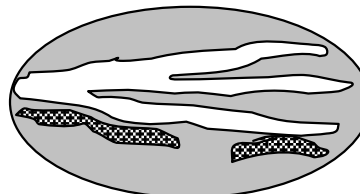
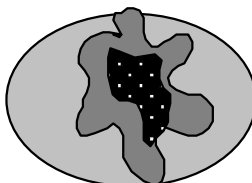
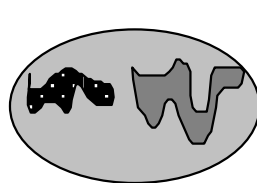


Moderate = 2 points



3

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



Wetland name or number 1

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>)		3
Total for H 1	Add the points in the boxes above	12

Rating of Site Potential If score is: 15-18 = H X 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>). Calculate: <u>0.37</u> % undisturbed habitat + [(% moderate and low intensity land uses) <u>0.00</u> /2] = <u>0.37</u> % 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		0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: <u>2.37</u> % undisturbed habitat + [(% moderate and low intensity land uses) <u>14.62</u> /2] = <u>9.68</u> % 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		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 1 km Polygon is high intensity points = 0		-2
Total for H 2	Add the points in the boxes above	-2

Rating of Landscape Potential If score is: 4-6 = H 1-3 = M X < 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 X 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.

Wetland name or number 1

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	
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	
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? ☐ 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://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.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	
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	

Wetland name or number 1

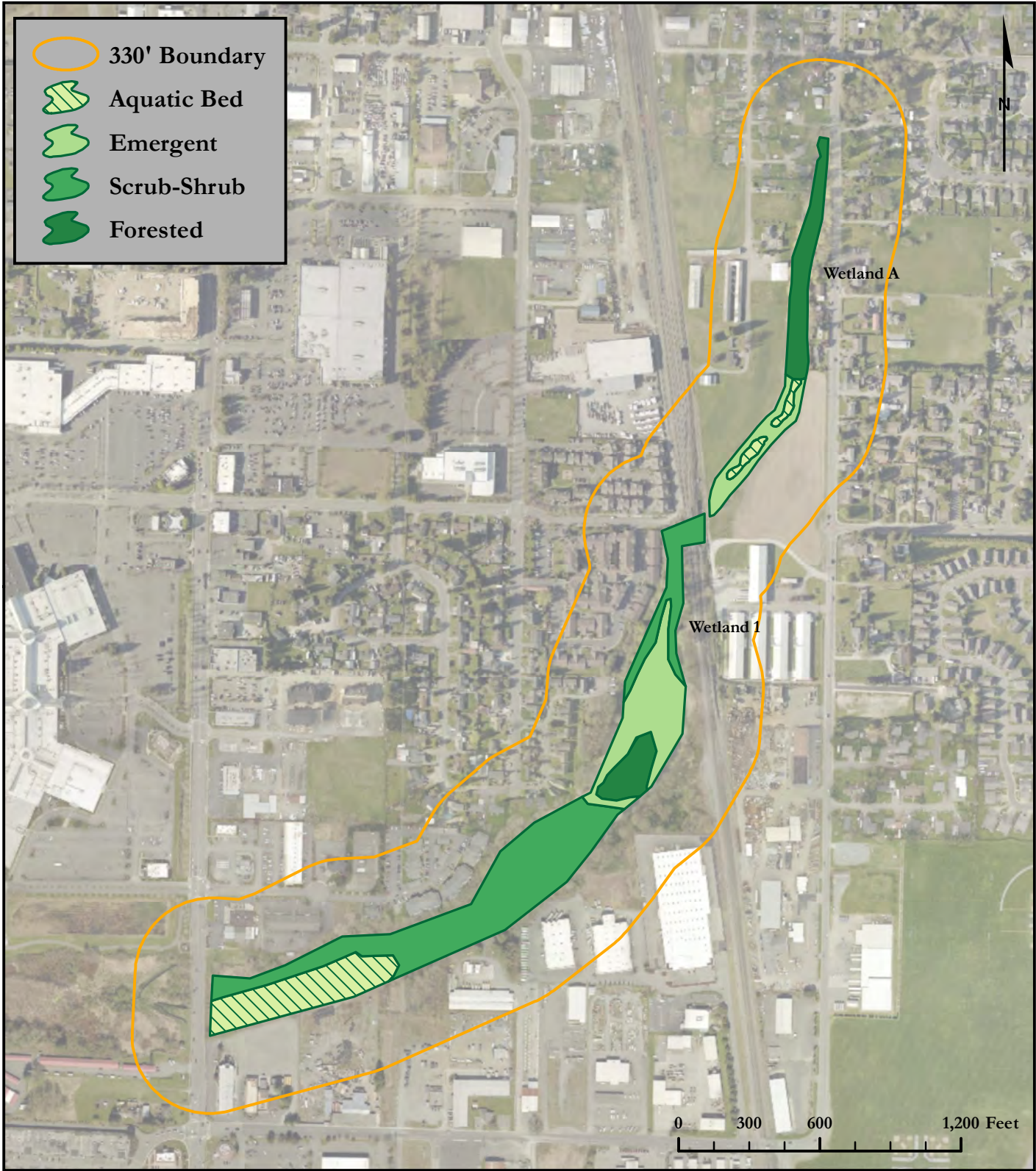
SC 4.0. Forested Wetlands Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i> — Old-growth 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	
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 unmowed grassland. — The wetland is larger than $\frac{1}{10}$ ac (4350 ft²) ☐ Yes = Category I ☐ No = Category 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	
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	

Wetland name or number 1

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Appendix F – Wetland Rating Figures

COWARDIN MAP



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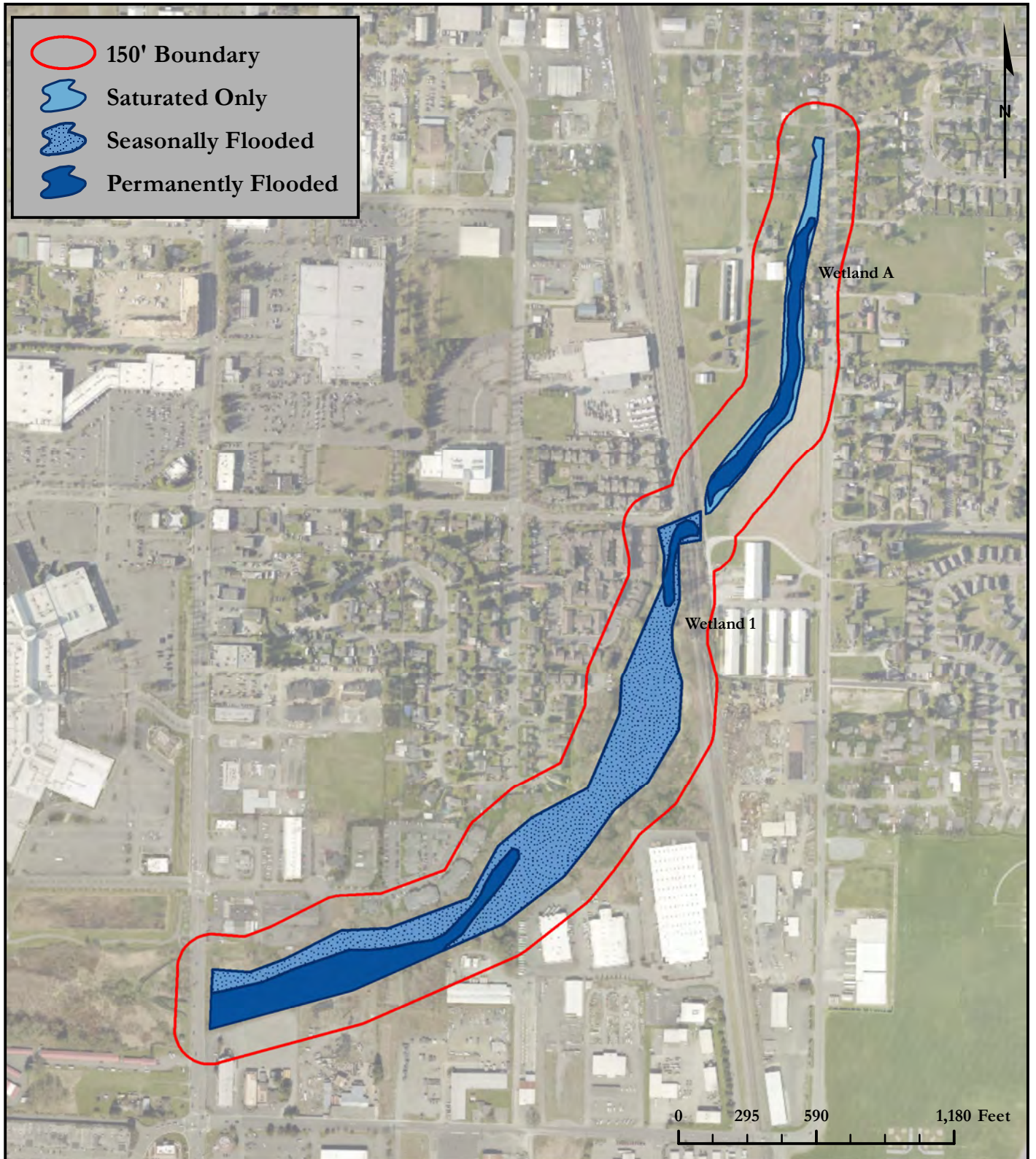
GAGES CROSSING

900 S PINE ST
BURLINGTON, WA 98233

SKAGIT COUNTY PARCEL NUMBERS:
P62772, P62771, P72172, P72173, P72175,
P72178, P72179, P72180, P72181, P133597, & P133596

DATE: 7/3/2023
JOB: 1916.0003
BY: DS
SCALE: 1" = 600'
FIGURE NO. 1 of 5

HYDROPERIOD MAP



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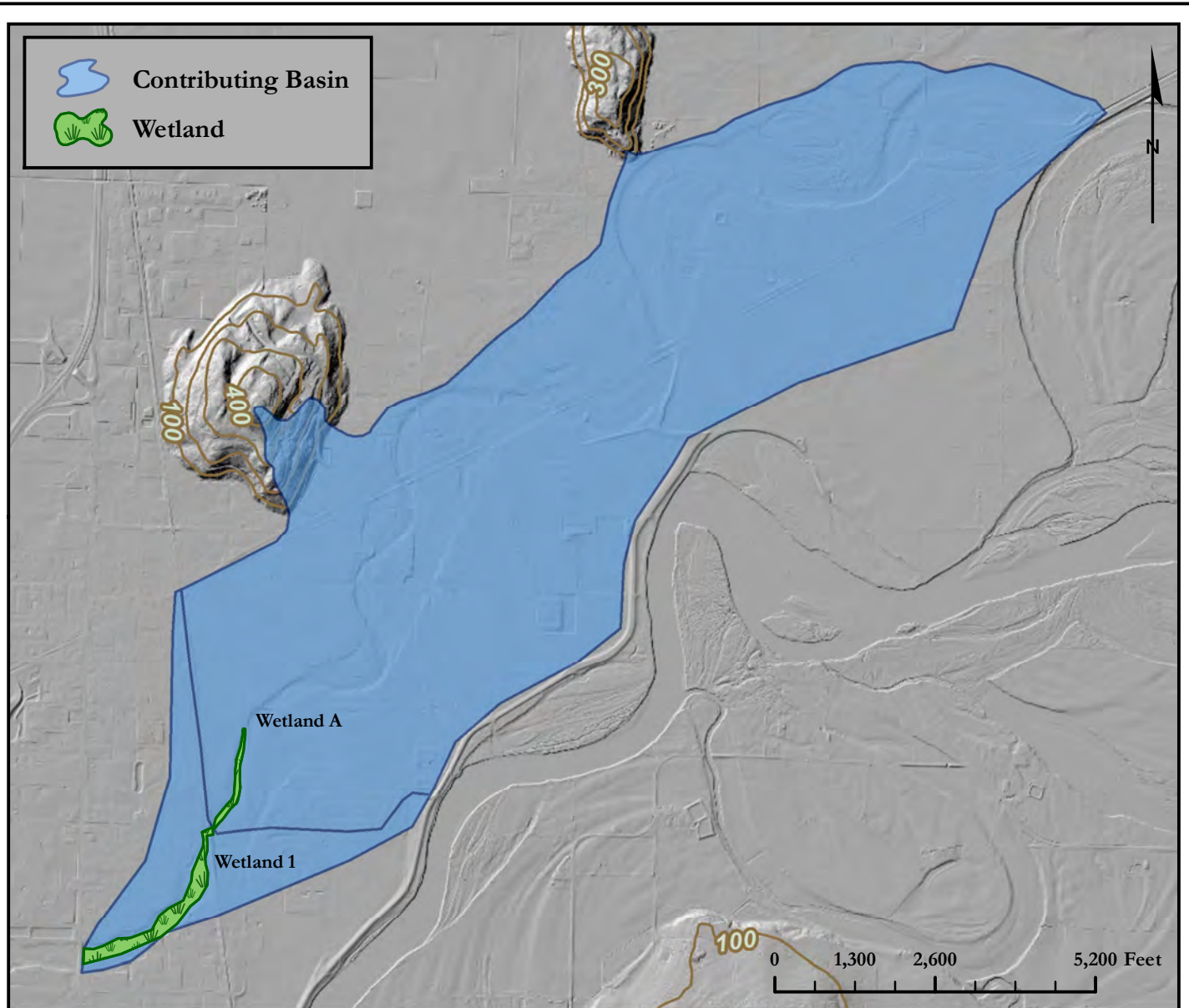
JOB: 1916.0003

BY: DS

SCALE: 1" = 600'

FIGURE NO. 2 of 5

CONTRIBUTING BASIN MAP



D.4.0		
D.4.3		
	Area of Contributing Basin (SF)	72,312,963
	Area of Wetland A (SF)	131,783
	Percent of Wetland A within Contributing Basin	0.18%
	Is the Percentage of Humand Land Use Greater than 25% in the Contributing Basin?	Yes
	Area of Contributing Basin (SF)	79,289,625
	Area of Wetland 1 (SF)	258,415
	Percent of Wetland 1 within Contributing Basin	0.33%
	Is the Percentage of Humand Land Use Greater than 25% in the Contributing Basin?	Yes


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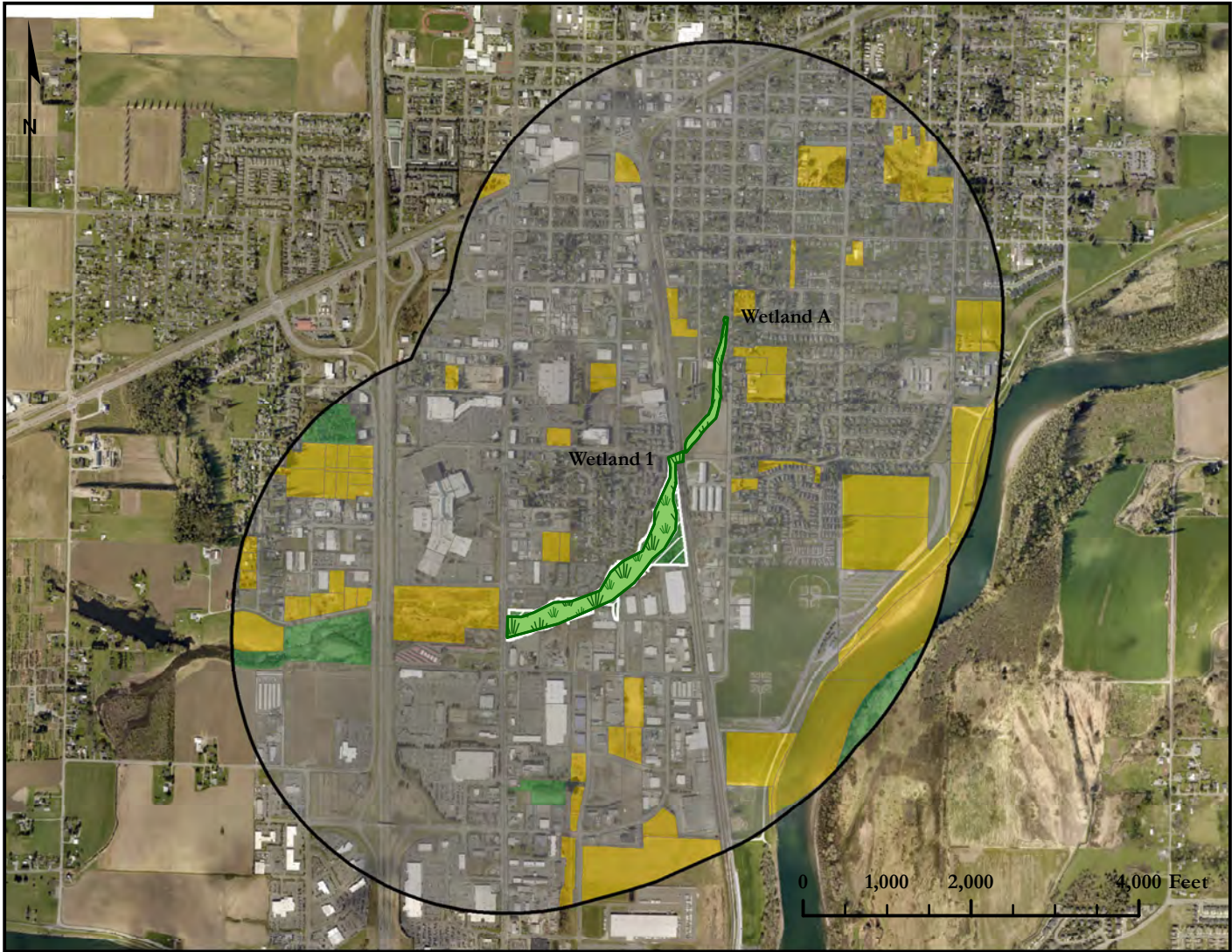
GAGES CROSSING

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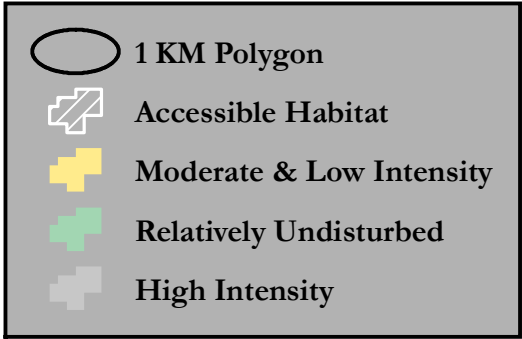
SKAGIT COUNTY PARCEL NUMBERS:
P62772, P62771, P72172, P72173, P72175,
P72178, P72179, P72180, P72181, P133597, & P133596

DATE: 7/3/2023
 JOB: 1916.0003
 BY: DS
 SCALE: 1" = 2,600'
 FIGURE NO. 3 of 5

HABITAT MAP



H.2.0 Wetland A		
H.2.1		
	Abutting Undisturbed Habitat	0.00%
	Abutting Moderate & Low Intensity Land Uses	0.00%
	Accessible Habitat	0.00%
H.2.0 Wetland 1		
H.2.1		
	Abutting Undisturbed Habitat	0.37%
	Abutting Moderate & Low Intensity Land Uses	0.00%
	Accessible Habitat	0.37%
H.2.2		
	Undisturbed Habitat	2.37%
	Moderate & Low Intensity Land Uses	14.62%
	Undisturbed Habitat in 1 KM Polygon	9.68%
H.2.3		
	High Intensity Land Use in 1 KM Polygon	83.01%

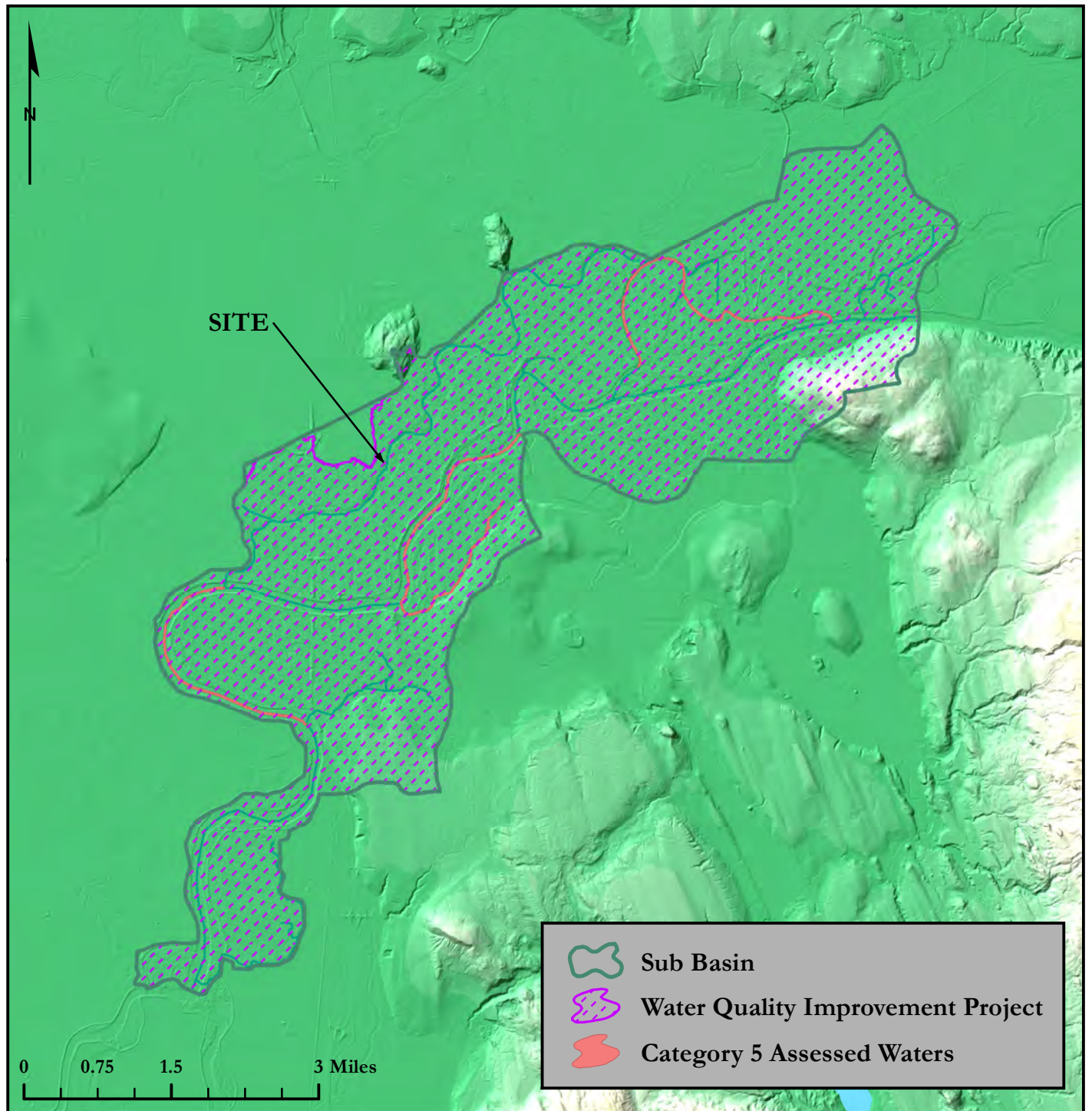



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SKAGIT COUNTY PARCEL NUMBERS:
P62772, P62771, P72172, P72173, P72175,
P72178, P72179, P72180, P72181, P133597, & P133596

DATE: 7/3/2023
JOB: 1916.0003
BY: DS
SCALE: 1" = 2,000'
FIGURE NO. 4 of 5



Name	Pollutants	TMDL ID	WRIA	Year Approved
Lower Skagit Basin Bacteria TMDL	Bacteria	32	3	2000


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DATE: 7/3/2023

JOB: 1916.0003

BY: DS

SCALE: 1" = 1.5 mi

FIGURE NO. 5 of 5

Appendix G – Site Photographs

General upland conditions, facing north



General upland conditions, facing northwest



Gages Slough, facing east



General upland conditions (left) and soil profile (right) at DP-2.



General upland conditions (left) and soil profile (right) at DP-3.



General upland conditions (left) and soil profile (right) at DP-4.



General upland conditions (left) and soil profile (right) at DP-5.



Appendix H – Qualifications

All field inspections, habitat assessments, wetland and waterbody assessments, and supporting documentation, including this *Shoreline, Wetland and Fish and Wildlife Habitat Assessment Report* prepared for the *Gages Crossing Project* and were prepared by, or under the direction of Jon Pickett of SVC. In addition, the field investigations were performed by Lauren Templeton and Kramer Canup and report preparation was completed by Kramer Canup and Cody Berthiaume, and additional project oversight and quality assurance/quality control was completed by Rachael Hyland.

Jon Pickett

Principal

Professional Experience: 14+ years

Jon Pickett is a Principal and Senior Scientist with a diverse background in environmental and shoreline compliance and permitting, wetland and stream ecology, fish and wildlife biology, mitigation compliance and design, and environmental planning and land use due diligence. Jon oversees a wide range of large-scale industrial, commercial, and multi-family residential projects throughout Western Washington, providing environmental permitting and regulatory compliance assistance for land use entitlement projects from feasibility through mitigation compliance. Jon performs wetland, stream, and shoreline delineations and fish & wildlife habitat assessments; conducts code and regulation analysis and review; prepares reports and permit applications and documents; provides environmental compliance recommendation; and provides restoration and mitigation design.

Jon earned a Bachelor of Science degree in Natural Resource Sciences from Washington State University and Bachelor of Science and Minor in Forestry from Washington State University. Jon has received 40-hour wetland delineation training (Western Mountains, Valleys, & Coast and Arid West Regional Supplements) and regularly performs wetland, stream, and shoreline delineations. Jon is a Whatcom County Qualified Wetland Specialist and Wildlife Biologist and is a Pierce County Qualified Wetland Specialist. He has been formally trained by WSDOE in the use of the Washington State Wetland Rating System 2014, How to Determine the Ordinary High-Water Mark (Freshwater and Marine), Using Field Indicators for Hydric Soils, and the Using the Credit-Debit Method for Estimating Mitigation Needs.

Rachael Hyland, PWS, Certified Ecologist

Senior Environmental Scientist

Professional Experience: 10 years

Rachael Hyland is a Senior Environmental Scientist with extensive wetland and stream delineation and regulatory coordination experience. Rachael has a background in wetland and ecological habitat assessments in various states, most notably Washington, Connecticut, Massachusetts, Rhode Island, and Ohio. She has experience in assessing wetland, stream, riparian, and tidal systems, as well as complicated agricultural and disturbed sites. She currently performs wetland, stream, and shoreline delineations and fish and wildlife habitat assessments; conducts environmental code analysis; and prepares environmental assessment and mitigation reports, biological evaluations, and permit applications to support clients through the regulatory and planning process for various land use projects. She also has extensive knowledge of bats and their associated habitats and white nose

syndrome (*Pseudogymnoascus destructans*), a fungal disease affecting bats which was recently documented in Washington.

Rachael earned a Bachelor of Science degree in Ecology and Evolutionary Biology from the University of Connecticut, with additional ecology studies at the graduate level. Rachael is a Professional Wetland Scientist (PWS #3480) through the Society of Wetland Scientists as well as a Certified Ecologist through the Ecological Society of America. She has completed 40-hour wetland delineation training for Western Mountains, Valleys, & Coast and Arid West Regional Supplement, in addition to formal training for the Northcentral and Northeast supplement, and experience with the Midwest, Eastern Mountains and Piedmont, and Atlantic and Gulf Coast supplements. She has also received formal training from the Washington State Department of Ecology in the Using the Revised 2014 Wetland Rating System for Western Washington, How to Determine the Ordinary High Water Mark, Navigating SEPA, Selecting Wetland Mitigation Sites Using a Watershed Approach, Wetland Classification, and Using the Credit-Debit Method for Estimating Mitigation Needs. Rachael has also received training from the Washington State Department of Transportation in Biological Assessment Preparation for Transportation Projects and is listed by WSDOT as a junior author for preparing Biological Assessments. Rachael is a Pierce County Qualified Wetland Specialist and Wildlife Biologist.

Lauren Templeton

Environmental Scientist/Planner

Professional Experience: 4 years

Lauren Templeton is an Environmental Scientist with three plus years of experience in conducting wetland delineations, biological surveys, and in-situ water quality monitoring. Lauren has a background in wetland and biological assessments in various states, most notably Washington, Montana, Oregon, and New Mexico. Her project experience includes residential land use and developments, transportation, and water resources projects, working for federal, state, tribal, and private agencies. Lauren has experience developing various environmental documentation including environmental assessments, biological evaluations, mitigation reports, and permit applications at the federal, state and tribal levels. Additionally, Lauren has experience utilizing desktop and remote GIS software and equipment to collect and process data, perform data analysis, and develop delineation exhibits. Lauren currently performs wetland delineations, conducts environmental code analysis, and prepares various environmental compliance documentation including fish and wildlife habitat assessments, biological evaluations, and permit applications.

Lauren graduated from Western Washington University with a Bachelor of Arts in Environmental Science and Policy where she gained hands-on experience associated with water quality, statistical analysis, CERCLA projects, and ecological biomonitoring. Lauren has completed Basic Wetland Delineator Training with the Wetland Training Institute and received 40-hour USACE wetland delineation training. Lauren has been formally trained through the Washington State Department of Ecology, Coastal Training Program, How to Determine the Ordinary High-Water Mark and Using the Washington State Wetland Rating System. Additionally, Lauren has been trained through the Shipley Group on the National Environmental Policy Act, Endangered Species Act, National Historic Preservation Act, and Administrative Record.

Kramer Canup

Environmental Scientist

Professional Experience: 6 years

Kramer Canup is an Environmental Scientist with a professional background in project management, habitat restoration, vegetation monitoring, invasive plant management, monitoring protocol development, grant writing, tropical ecology, wildlife monitoring and environmental education. Kramer brings years of experience coordinating logistics for a variety of habitat restoration projects, vegetation monitoring programs, along with study abroad and backpacking courses. Previously, Kramer has managed riparian and upland habitat restoration projects, managed vegetation monitoring programs, and he has taught study abroad courses in the Peruvian Amazon and Andes for the University of Washington. Kramer currently performs wetland delineations, conducts environmental code analysis, and prepares various environmental compliance documentation including fish and wildlife habitat assessments, biological evaluations, and permit applications.

Kramer has completed Basic Wetland Delineator Training with the Wetland Training Institute and received 40-hour USACE wetland delineation training. Kramer has been formally trained through the Washington State Department of Ecology, Coastal Training Program, How to Determine the Ordinary High Water Mark, and Using the Washington State Wetland Rating System. Beyond Kramer's project management, coordination, and delineation skills, he brings over 10 years of experience performing ecological field work such as vegetation monitoring, plant installation and invasive weed control.

Cody Berthiaume

Staff Scientist

Professional Experience: 5+ years

Cody Berthiaume is a Staff Scientist with a background in wildlife research, ecological monitoring, and natural resource management. Cody's experience comes from a variety of seasonal positions, spanning multiple disciplines and ecosystems. Currently, he assists with tree assessments, wetland delineations, and report writing. Previously, he has contributed to the creation and implementation of field protocols regarding arboreal surveys and captures of red tree voles in working timber stands. Cody has also led remote field crews collecting standardized vegetation and soil data (AIM/IIRH), in conjunction with the Bureau of Land Management. Additionally, as an AmeriCorps volunteer, Cody has worked closely with NPS personnel assisting with invasive species removal and priority wildlife and habitat monitoring. Cody graduated from the University at Buffalo with a Bachelor of Science in Environmental Studies with a concentration in Environmental Resources & Management.