

# CONCEPTUAL MITIGATION PLAN

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## REX DEVELOPMENT

MARCH 2022



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## REX DEVELOPMENT

MARCH 30, 2022

### PROJECT LOCATION

15808 AND 16204 51<sup>ST</sup> AVENUE NORTHEAST  
MARYSVILLE, WASHINGTON 98271

### PREPARED FOR

**WILLIAMS INVESTMENTS**  
2517 COLBY AVENUE  
EVERETT, WASHINGTON 98201

### PREPARED BY

**SOUNDVIEW CONSULTANTS LLC**  
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## Executive Summary

Soundview Consultants LLC (SVC) is assisting William Investments (Applicant) with a Conceptual Mitigation Plan for the industrial development of an approximately 135-acre site located at 15808 and 16204 51st Avenue Northeast in the City of Marysville, Washington. The subject property consists of two parcels situated in the Northeast and Southeast ¼, of Section 28, Township 31 North, Range 5 East, W.M (Snohomish County Tax Parcel Numbers 31052800400100 and 31052800400400).

SVC conducted a wetland delineation, groundwater monitoring, and fish and wildlife habitat field assessments in 2018 and 2020. An initial site investigation was conducted in early February 2018 and identified highly disturbed soil and vegetation conditions due to ongoing agricultural practices throughout most of the subject property. Following wetland delineation methodology for disturbed site conditions, forty-two groundwater monitoring observation wells were installed and monitored from early March 2018 to early June 2018. Additional site investigations were completed in May and December 2020 to confirm the prior wetland delineations and assessments. Observations of water table elevations were compared with precipitation data to determine where wetland hydrologic conditions were present on the subject property. These wetland hydrologic conditions were used to inform wetland delineations where soil and vegetation conditions were highly disturbed. The site investigations identified and delineated six potentially-regulated onsite wetlands (Wetlands A through F) in June 2018. Wetlands A, B, D, and E are Category IV depressional wetlands with standard 35-foot buffers under Marysville Municipal Code (MMC) 22E.010.100.4. Wetland C is a Category III depressional wetland with a standard 75-foot buffer. Wetland F is a Category II depressional wetland with a standard 100-foot buffer. One stream (Hayho Creek) was identified onsite along the western boundary of the subject property. Hayho Creek is a Type F stream with a 150-foot buffer under MMC 22E.010.220.1.a. No other potentially-regulated wetlands or fish and wildlife habitat were identified within 300 feet of the subject property.

The Applicant proposes industrial development of the subject property to include four warehouses, car and truck parking, new public access roads and internal site access, and associated infrastructure including stormwater management and utilities. The proposed project has been carefully designed to avoid and minimize impacts to the identified critical areas to the greatest extent feasible by utilizing all upland areas onsite and avoiding direct impacts to Hayho Creek and Wetland F, the highest functioning critical areas onsite. Minimization measures include locating stormwater infrastructure belowground to maximize developable uplands onsite and reorienting the warehouse adjacent to Wetland F and Hayho Creek in an east-west alignment which positions the high activity areas associated with truck courts and loading docks away from the critical areas. However, complete avoidance of aquatic features is not possible due to the scattered distribution of wetlands and ditches throughout the subject property, the large spatial footprints required for industrial buildings and associated utilities, the required alignment for the new public roadways, and the presence of a natural gas line through the site which inhibits building construction. In order to accommodate the purpose and need for the industrial site development, the project requires the necessary and unavoidable fill of five low-functioning Category III and Category IV wetlands (Wetlands A- E) on the subject property.

Compensatory mitigation for direct impacts to Wetlands A through E onsite will be provided by onsite, in-kind wetland creation, rehabilitation, and enhancement utilizing the combination compensation ratios as outlined under MMC 22E.010.120(3) and in accordance with the interagency mitigation guidance (WSDOE et. al, 2021). Additional wetland and stream buffer restoration actions

will occur to create new functioning buffer areas between the mitigation areas and proposed development. The proposed onsite, in-kind mitigation actions have been designed utilizing interagency guidance to ensure no net loss of ecological functions onsite of within the greater Snohomish watershed (WRIA 7) in accordance with MMC 22E.010.120(2). A Conceptual Mitigation Plan is provided in Chapter 2 of this report.

The table below identifies the wetlands and stream observed during the site investigation and summarizes the potential regulatory status by local, state, and federal agencies.

| Wetland/<br>Waterbody | Size/Length<br>(onsite) | Category <sup>1</sup> or<br>Type <sup>2</sup> | Regulated under<br>MMC 22E.010 or<br>AMC 20.93 | Regulated under<br>RCW 90.48 | Regulated under<br>Section 404 of the<br>CWA <sup>3</sup> |
|-----------------------|-------------------------|---|--|------------------------------|---|
| Wetland A             | 87,149 SF               | IV  | Yes  | Yes                          | No  |
| Wetland B             | 18,005 SF               | IV  | Yes  | Yes                          | No  |
| Wetland C             | 56,433 SF               | III   | Yes  | Yes                          | No  |
| Wetland D             | 5,347 SF                | IV  | Yes  | Yes                          | No  |
| Wetland E             | 7,049 SF                | IV  | Yes  | Yes                          | No  |
| Wetland F             | 645,855 SF              | II  | Yes  | Yes                          | No  |
| Hayho Creek           | ~2,000 linear<br>feet   | F   | Yes  | Yes                          | No  |

Notes:

1. Current Washington State Department of Ecology (WSDOE) wetland rating (Hruby, 2014) per MMC 15.040.090.C.1 or AMC 20.93.800(a).
2. DNR Water Typing system per MMC 22E.010.060.1.
3. Approved jurisdictional determinations (AJD) dated February 24, 2021 and July 13, 2021 confirm that Wetlands A-F and Hayho Creek are not jurisdictional waters of the U.S.

The table below summarizes the proposed direct critical area impacts.

| Critical Area       | Category <sup>1</sup> | Existing Area Onsite | Impact Area        |
|---------------------|-----------------------|----------------------|--------------------|
| Wetlands A, B, D, E | IV                    | 117,550 SF; 2.7 AC   | 117,550 SF; 2.7 AC |
| Wetland C           | III                   | 56,433 SF; 1.30 AC   | 56,433 SF; 1.30 AC |

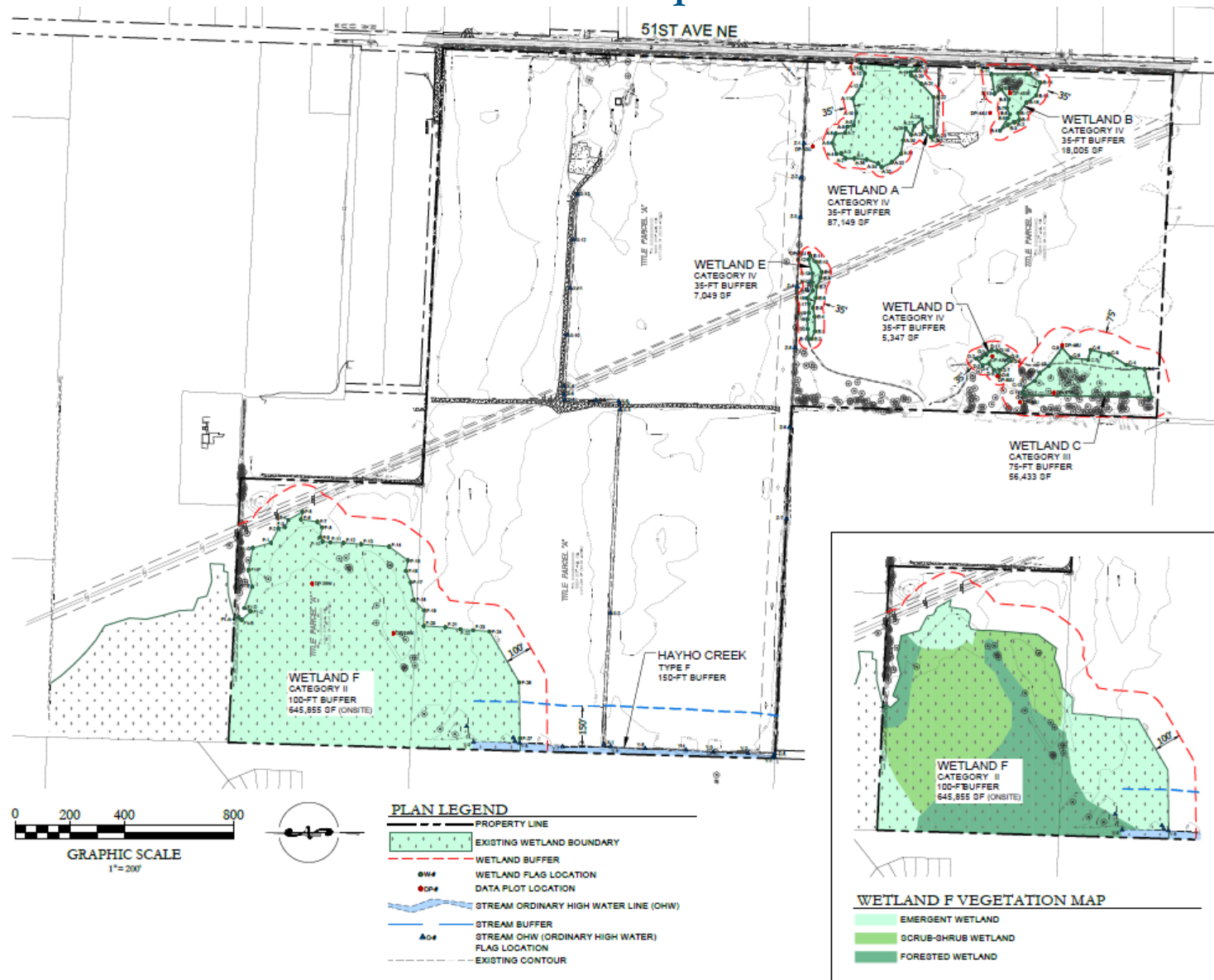
Note:

1. Current Washington State Department of Ecology (WSDOE) wetland rating (Hruby, 2014) per MMC 15.040.090.C.1 or AMC 20.93.800(a).

The table below summarizes the proposed compensatory and non-compensatory mitigation to offset the proposed critical area impacts.

| Mitigation Type                         | Mitigation Area     |
|---|---------------------|
| Wetland Creation                        | 220,900 SF; 5.07 AC |
| Wetland Rehabilitation                  | 144,471 SF; 3.32 AC |
| Wetland Enhancement                     | 230,391 SF; 5.29 AC |
| Non-Compensatory Wetland Creation       | 16,698 SF; 0.38 AC  |
| Non-Compensatory Wetland Rehabilitation | 23,072 SF; 0.53 AC  |
| Non-Compensatory Buffer Restoration     | 266,937 SF; 6.13 AC |

# Site Map



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# Chapter 1. Regulatory Considerations

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The site investigations identified and delineated six potentially-regulated onsite wetlands (Wetlands A through F) on the subject property. One stream (Hayho Creek) was also identified onsite. No other potentially-regulated wetlands, waterbodies, or priority habitats or species were identified within 300 feet of the site.

## 1.1 Local Regulatory Requirements

### 1.1.1 Critical Area Buffers

MMC 22E.010.060.1 has adopted the 2014 wetland rating system (Hruby, 2014). Category II wetlands provide moderately high levels of functions and score between 20 and 22 points on the *Washington State Wetland Rating System for Western Washington*. Category III wetlands generally provide moderate levels of functions and score less than 20 points on the revised wetland rating system. Category IV wetlands generally provide low levels of function and score less than 16 points on the revised wetland rating system (Hruby, 2014). Wetlands A, B, D, and E are Category IV wetlands. Wetland C is a Category III wetland, and Wetland F is a Category II wetland. Under MMC 22E.010.100.4 the standard buffers for Category II wetlands are 100 feet, the standard buffers for Category III wetlands are 75 feet, and the standard buffers for Category IV wetlands are 35 feet. Per MMC 22E.010.380, an additional 15-foot building and structure setback is required from the outer edge of all critical area buffers.

Per MMC 22E.010.210(1), streams shall be classified according to the water type system as provided by WAC 222-16-030 as amended. Per MMC 22E.010.210(1)(b) a Type F stream is a stream segment that is not a Type S (shoreline) and is presumed to be used by salmonid fish. Hayho Creek is considered a Type F stream due to documented salmonid use. Per MMC 22E.010.220(1)(a), Type F streams are subject to a standard 150-foot buffer. Per MMC 22E.010.380, an additional 15-foot building and structure setback is required from the outer edge of all critical area buffers.

### 1.1.2 Mitigation Sequencing

Per MMC 22E.010.110(1) and MMC 22E.010.230(1), all adverse impacts to stream and wetland functions and values shall be mitigated using the following sequence:

- a) *Avoiding the impact altogether by not taking a certain action or parts of actions;*

The Applicant proposes industrial development of the subject property to include four warehouses, car and truck parking, new public access roads and internal site access, and associated infrastructure including stormwater management and utilities. The proposed project has been carefully designed to avoid and minimize impacts to the identified critical areas to the greatest extent feasible by utilizing all upland areas onsite and avoiding direct impacts to Hayho Creek and Wetland F, the highest functioning critical areas onsite. However, avoidance of the aquatic features is not possible due to the scattered distribution of wetlands and ditches throughout the subject property, the large spatial footprints required for industrial buildings and associated utilities, the required alignment for the new public roadways, and the presence of a natural gas line through the site which inhibits building construction.

Further reductions in building size, constructing fewer buildings, or only developing on the northern parcel would not support the industrial purpose of the project; these options would reduce the total building floor space below the minimum threshold needed for industrial operations to remain economically feasible and support the City of Marysville development goals. In addition, other properties in the surrounding area currently zoned as Light Industrial were considered for development. However, potential properties were either under contract with another buyer and unavailable at the time of the planning phase of this project or were similarly or more highly encumbered by critical areas. The current subject property is located within the Smokey Point Master Plan Light Industrial area according to the 2015 Comprehensive Plan (City of Marysville, 2015). According to the master plan, “the 675-acre...area constitutes the largest developable concentration of commercial and light industrial zoned property along I-5 from U.S.–Canadian border to south of Seattle–Tacoma. Its proximity to Arlington Municipal Airport and the City’s Airport Business Park expansion plans makes the area an economic development oasis.” The area has the potential to create upwards of 10,000 new jobs to support economic development of the area. The proposed industrial development will fulfill this need, but requires the necessary and unavoidable fill of five low-functioning Category III and Category IV wetlands (Wetlands A through E) on the subject property.

- b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;*

As described above, the complete fill of five low-functioning Category III and IV wetlands (Wetlands A through E) on the subject property is necessary and unavoidable for the industrial development to remain economically feasible and to help meet the City of Marysville development goals. The proposed project has undergone several design revisions to minimize impacts to the identified critical areas, including locating stormwater infrastructure belowground to maximize developable uplands onsite and reorienting the warehouse adjacent to Wetland F and Hayho Creek in an east-west alignment which positions the high activity areas associated with truck courts and loading docks away from the critical areas.

In addition, all appropriate best management practices (BMPs) and temporary erosion and sediment control (TESC) measures will also be implemented throughout the course of construction to minimize impacts to Wetlands F and Hayho Creek. Such measures will include construction and mitigation actions during the summer months when low flows are present within the creek to reduce potential turbidity impacts. Additionally, stormwater detention ponds with enhanced stormwater treatment are proposed to minimize impacts to Wetland F and Hayho Creek from increased runoff from impervious surfaces from the proposed development.

- c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;*

Compensatory mitigation for direct impacts to Wetlands A through E will be provided by onsite, in-kind wetland creation, rehabilitation, and enhancement utilizing the combination compensation ratios as outlined under MMC 22E.010.120(3) and in accordance with the interagency mitigation guidance (WSDOE et. al, 2021), and additional buffer enhancement actions. The mitigation areas will be contiguous with Wetland F and Hayho Creek onsite and will provide an overall ecological lift when compared to the existing degraded wetlands proposed to be impacted, which currently consist primarily of agricultural areas that provide limited water quality, hydrologic, and habitat functions. Overall, these actions will result in a net increase in ecological functions both onsite and within the



Snohomish River watershed when compared to the existing, degraded conditions of Wetlands A through E onsite.

*d) Reducing or eliminating the impact over time by preservation and maintenance operations;*

The proposed mitigation areas will be protected through placement in a separate tract as required under MMC 22E.010.350(2). The location and limitations associated with this protection will be shown on the face of the deed applicable to the property and shall be recorded with Snohomish County's recording department. Critical areas signage will be installed around the mitigation corridor. Maintenance and monitoring actions will be provided as outlined in Chapter 2 of this report.

*e) Compensating for the impact by replacing or providing substitute resources or environments;*

See response to criterion (c) above. Compensatory mitigation for the unavoidable direct wetland impacts will be rectified through onsite, in-kind wetland creation, rehabilitation, and enhancement utilizing the combination compensation ratios as outlined under MMC 22E.010.120(3) and in accordance with the interagency mitigation guidance (WSDOE et. al, 2021), and additional buffer restoration/enhancement actions. Overall, these actions will result in a net increase in ecological functions both onsite and within the Snohomish River watershed when compared to the existing, degraded conditions of Wetlands A through E onsite.

*f) Monitoring the impact and taking appropriate corrective measures.*

The wetland mitigation areas will be monitored for a period of 10 years. Monitoring and contingency plans are provided in Chapter 2 of this report.

### **1.1.3 Wetland and Stream Alteration Requirements**

In addition to mitigation sequencing, the following criteria under MMC 22E.010.110(c) must be demonstrated when impacts to Category III or IV wetlands are proposed:

*i. The proposed mitigation complies with the requirements of this section and MMC 22E.010.140 through 22E.010.160*

A mitigation plan consistent with the requirements of MMC 22E.010.140 through 22E.010.160 is provided in Chapter 2 of this report.

*ii. Where enhancement is proposed, replacement ratios comply with the requirements of MMC 22E.010.120(3).*

The Applicant proposes a combination of wetland creation, rehabilitation, and enhancement actions, consistent with the combination replacement ratios outlined under MMC 22E.010.120(3) and in accordance with the interagency mitigation guidance (WSDOE et. al, 2021).

Per MMC 22E.010.230(3), the following must be demonstrated when alterations to a stream or associated buffer are proposed:

- b. *Alterations of Type F, Np and Ns streams may be permitted; provided, that the applicant mitigates adverse impacts consistent with the performance standards and other requirements of this chapter; and provided, that no overall net loss will occur in stream functions and fish habitat.*

The proposed mitigation plan is consistent with the mitigation requirements outlined under MMC 22E.010.240 through MMC 22E.010.260. The project proposes to reslope the areas adjacent to the stream above the OHW to create riverine wetland areas, flood refugia for salmonids, and improved riparian habitat with the increase in vertical and horizontal plant structure and installation of habitat features. The proposed mitigation actions adjacent to Hayho Creek will provide improved water quality and hydrologic functions for water leaving the site, and will provide increased habitat suitability and complexity. Overall, the proposed mitigation plan will result in a net increase in ecological functions onsite and within the greater Snohomish watershed when compared to the existing, degraded stream buffer areas which consist of actively maintained agricultural areas with de minimis ecological functions.

#### 1.1.4 Wetland Mitigation Requirements

MMC 22E.010.120(1) provides the following standards regarding the location and timing of wetland mitigation:

- a) *Restoration, creation, or enhancement actions should be undertaken on or adjacent to the site, or where restoration or enhancement of a former wetland is proposed, within the same watershed. Replacement in-kind of the impacted wetland is preferred for creation, restoration, or enhancement actions. The city may accept or recommend restoration, creation, or enhancement which is off-site and/or out-of-kind, if the applicant can demonstrate that on-site or in-kind restoration, creation, or enhancement is infeasible due to constraints such as parcel size or wetland type or that a wetland of a different type or location is justified based on regional needs or functions;*

Onsite, in-kind, permittee-responsible compensatory mitigation will be provided according to the mitigation ratios established by MMC 22E.010.120(3) and in accordance with the interagency mitigation guidance (WSDOE et. al, 2021).

- b) *Whether occurring on-site or off-site, the mitigation project shall occur near an adequate water supply with a hydrologic connection to the wetland to ensure a successful wetlands development or restoration;*

The proposed wetland mitigation areas will occur within/adjacent to Wetland F and Hayho Creek onsite and will be excavated to tie into high groundwater levels in the area to provide adequate hydrology to ensure successful mitigation actions.

- c) *Any agreed-upon proposal shall be completed before initiation of other permitted activities, unless a phased or concurrent schedule has been approved by the community development department;*

Timing of mitigation activities will occur according to the standards and conditions of the development agreement. Construction of the mitigation site is anticipated to commence once appropriate authorizations are obtained.

- d) *Wetland acreage replacement ratios shall be as specified in subsection (3) of this section.*

The proposed compensatory wetland mitigation actions will occur according to the combination mitigation ratios established by MMC 22E.010.120(3) and in accordance with the interagency mitigation guidance (WSDOE et. al, 2021).

Additionally, MMC 22E.010.120(2) states that proposals which include compensatory mitigation shall demonstrate the following:

*a) All feasible and reasonable measures will be taken to reduce impacts and losses to the original wetland;*

Please see the response under Section 1.1.3 (Mitigation Sequencing), criterion “a” above for a full discussion of how the proposed project has taken avoidance and minimization measures to reduce impacts and losses to the original wetlands. In order to accommodate the purpose and need for the industrial site development, the project requires the necessary and unavoidable fill of five low-functioning Category III and Category IV wetlands (Wetlands A-E) on the subject property. All wetlands proposed to be filled were determined to be isolated in the landscape and are much lower functioning than the Category II wetland and associated stream on the northwestern portion of the site, which will be avoided entirely. All appropriate BMPs and TESC measures will also be implemented throughout the course of construction to minimize impacts to Wetlands F and Hayho Creek.

*b) No overall net loss will occur in wetland functions, values and acreage; and*

Wetland creation, rehabilitation, and enhancement areas are proposed according to the mitigation ratios established by MMC 22E.010.120(3) and in accordance with the interagency mitigation guidance (WSDOE et. al, 2021). All wetlands proposed to be filled were determined to be isolated in the landscape and are very low functioning considering their positions primarily within managed agricultural fields planted with row crops. The wetland mitigation areas will occur within and adjacent to the higher functioning Wetland F (Category II wetland) and Hayho Creek. The Category II depressional wetland will be expanded, rehabilitated, and enhanced, and Category III riverine wetland area will be established adjacent to Hayho Creek to increase ecological functions. Habitat suitability will be increased through vertical and horizontal complexity and placement of habitat features including large woody debris and/or standing snags that will create nesting and foraging areas for terrestrial wildlife and shade and cover from predators for aquatic wildlife; the dense plantings will also create increased screening to filter noise and light pollution from the proposed development. Additional hydrologic functions will be provided through the establishment of depressions to hold surface water; such wetland terraces next to the stream will provide flood refugia for salmonids and attenuate flood waters from the stream following storm events. Water quality functions will be increased through the installation of thousands of woody trees and shrubs to filter sediments and pollutants and slow surface runoff from the dense stems within the buffer. Therefore, the wetland mitigation actions will result in no net loss of ecological functions and is anticipated to provide a net lift in comparison to the existing degraded conditions of the wetland areas onsite.

*c) The restored, created or enhanced wetland will be as persistent and sustainable as the wetland it replaces.*

The wetland mitigation areas will be as persistent and sustainable as the wetlands replaced. The mitigation areas will be located adjacent to Hayho Creek and Wetland F, with existing hydrology provided by a high groundwater table, Hayho Creek, surface runoff, and direct precipitation. In

addition, the areas proposed for mitigation are relatively flat due to the geographic location in a valley bottom, which are more conducive to wetland mitigation actions. The mitigation area will be protected by a separate tract or easement from future development to ensure its sustainability.

## **1.2 State and Federal Considerations**

### **1.2.1 State Requirements**

All identified onsite wetlands and Hayho Creek are likely to be regulated as waters of the state of Washington under the RCW 90.48 and WAC 173-201A. Any direct impacts to the wetlands or stream would be regulated by WSDOE under RCW 90.48 and require the seeking of an Administrative Order (AO) from WSDOE. The onsite ditches are artificially excavated features that are not likely to be regulated as wetlands. Due to surface water connections between the two onsite ditches (Ditches Z and Y) and a natural tributary (Hayho Creek), these ditches may be considered waters of the state. The drainage ditches on the western portion of the southern parcel flows into Wetland C and does not connect to any downgradient natural tributaries. This drainage ditch is not likely considered waters of the state.

### **1.2.2 Federal Requirements**

The Federal Register published “The Navigable Waters Protection Rule: Definition of “Waters of the United States” on April 21, 2020. The Navigable Waters Protection Rule was the second step in reviewing and revising the definition of WOTUS as intended by the Executive Order “Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the ‘Waters of the United States Rule.’” The Navigable Waters Protection Rule became effective June 22, 2020 and was in place at the time of the Approved Jurisdictional Determination.

The Navigable Waters Protection Rule effectively replaced the “Definition of Waters of the United States – Recodification of Pre-Existing Rules” rule published on October 22, 2019 (repealing the Clean Water Rule) and the 2008 joint guidance memorandum from USACE and EPA. The following describes potential regulatory classifications for the onsite stream, wetlands, and ditches under the Navigable Waters Protection Rule.

Under the final Navigable Waters Protection Rule, the agencies interpret the term WOTUS to encompass: 1) the territorial seas and traditional navigable waters; 2) perennial and intermittent tributaries that contribute surface water flow to such waters; 3) certain lakes, ponds, and impoundments of jurisdictional waters; and 4) wetlands adjacent to other jurisdictional waters.

Under the final Navigable Waters Protection Rule, adjacent wetlands are subject to a different jurisdictional test than tributaries, lakes, ponds, and impoundments of jurisdictional wetlands. “Adjacent wetlands” are wetlands that: 1) abut a territorial seas or traditional navigable water, tributary, or a lake, pond, or impoundment of jurisdictional water; 2) are inundated from flooding from a territorial sea or traditional navigable water, or tributary, or from another jurisdictional lake, pond, or impoundment in a typical year; 3) are physically separated from a territorial seas, traditional navigable water, tributary, or a lake, pond, or impoundment of jurisdictional water only by a berm, bank, dune, or similar natural feature; or 4) are physically separated from a territorial sea or traditional navigable water, a tributary, or a lake, pond or impoundment of a jurisdictional water only by an artificial dike, barrier, or similar artificial structure so long as that structure allows for a direct hydrological surface

connection to the territorial seas or traditional navigable water, tributary, or lake, pond, or impoundment of a jurisdictional water in a typical year.

The Navigable Waters Protection Rule specifies that WOTUS do not include: a) groundwater, including groundwater drained through subsurface drainage systems; b) ephemeral features that flow only in direct response to precipitation, including ephemeral streams, swales, gullies, rills, and pools; c) diffuse stormwater runoff and directional sheet flow over upland; d) ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to certain limitations; e) prior converted cropland; f) artificially irrigated areas that would revert to upland if artificial irrigation ceases; g) artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters; h) water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel; i) stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater runoff; j) groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and k) waste treatment systems.

The onsite wetlands nor Hayho Creek are considered jurisdictional WOTUS as confirmed in the approved jurisdictional determinations (AJD) dated February 24, 2021 and July 13, 2021 (USACE, 2021a; USACE, 2021b) (Appendix B). Hayho Creek is not regulated as a WOTUS, as the creek is an artificial channel that did not relocate an existing tributary and was not constructed within a wetland. The onsite agricultural ditches and the offsite 51<sup>st</sup> Avenue West Ditch are artificially excavated ditches constructed for agricultural or roadside drainage purposes; these ditches are not constructed within tributaries, nor do they relocate a tributary. These ditches are not regulated as WOTUS. The remaining onsite wetlands (Wetlands A through F) are not regulated as WOTUS because they are not abutting a potentially regulated tributary and do not contribute surface water to a potentially regulated tributary. Wetlands A and B are separated from the 51<sup>st</sup> Avenue West Ditch by a berm that prevents a direct hydrologic surface connection between the wetlands and the ditch. In addition, Wetlands A and B are seasonally saturated, temporarily flooded depressional wetlands located near the 51<sup>st</sup> Avenue West Ditch near the eastern boundary of the south parcel. Wetland E is similarly separated from an adjacent onsite ditch by an upland berm that prevents a direct hydrologic surface connection to potentially jurisdictional waters. Wetlands C and D are a closed depression that lack an outlet and direct surface water connection to potentially jurisdictional waters. Wetland F is connected to Hayho Creek, which is not regulated as a WOTUS, and as such Wetland F is not considered an adjacent wetland.

## Chapter 2. Conceptual Mitigation Plan

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The proposed mitigation actions for the project attempt to strike a balance between achieving project goals as well as a positive result in terms of ecological lift. In general, joint USACE and EPA rules have been established that require more careful mitigation planning efforts utilizing a watershed approach in site selection, establishment of enforceable performance standards, and preference for use of mitigation banks or ILF's wherever most ecologically feasible (USACE & EPA, 2008). The proposed impacts and mitigation actions attempt to closely adhere to these rules and to the local critical areas regulations specified in MMC Chapter 22E.010 while also utilizing the best available science (Granger et al., 2005; Hruby et al., 2009; Sheldon et al., 2005; WSDOE et al., 2006; WSDOE et al., 2021). This chapter presents the overall mitigation details for the proposed 51<sup>st</sup> Avenue Northeast project.

### 2.1 Purpose and Need

The purpose of the proposed project is to provide industrial development and associated infrastructure within the City of Marysville to expand the local economy by providing new jobs and new services to the area. The current subject property is located within the Smokey Point Master Plan Light Industrial area according to the 2015 Comprehensive Plan (City of Marysville, 2015). According to the master plan, “the 675-acre...area constitutes the largest developable concentration of commercial and light industrial zoned property along I-5 from U.S.–Canadian border to south of Seattle–Tacoma. Its proximity to Arlington Municipal Airport and the City’s Airport Business Park expansion plans makes the area an economic development oasis.” The area has the potential to create upwards of 10,000 new jobs to support economic development of the area. The proposed industrial development will fulfill this need, but requires the necessary and unavoidable fill of five low-functioning Category III and Category IV wetlands (Wetlands A through E) on the subject property.

### 2.2 Description of Impacts

The Applicant proposes industrial development of the subject property to include four warehouses, car and truck parking, new public access roads and internal site access, and associated infrastructure including stormwater management and utilities. The proposed project has been carefully designed to avoid and minimize impacts to the identified critical areas to the greatest extent feasible by utilizing all upland areas onsite and avoiding direct impacts to Hayho Creek and Wetland F, the highest functioning critical areas onsite. Minimization measures include locating stormwater infrastructure belowground to maximize developable uplands onsite and reorienting the warehouse adjacent to Wetland F and Hayho Creek in an east-west alignment which positions the high activity areas associated with truck courts and loading docks away from the critical areas. However, complete avoidance of aquatic features is not possible due to the scattered distribution of wetlands and ditches throughout the subject property, the large spatial footprints required for industrial buildings and associated utilities, the required alignment for the new public roadways, and the presence of a natural gas line through the site which inhibits building construction. In order to accommodate the purpose and need for the industrial site development, the project requires the necessary and unavoidable fill of five low-functioning Category III and Category IV wetlands (Wetlands A- E) on the subject property.

A summary of wetland impacts is provided in Table 1 and a wetland function impact analysis is outlined below.

**Table 1. Wetland Impact Summary**

| Wetland | Onsite Area | HGM <sup>1</sup> | Cowardin Class <sup>2</sup> | WSDOE Rating <sup>3</sup> | Impact Type | Impact Area |
|---------|-------------|------------------|-----------------------------|---------------------------|-------------|-------------|
| A       | 87,149 SF   | Depressional     | PEMAB                       | IV                        | Direct      | 87,149 SF   |
| B       | 18,005 SF   | Depressional     | PEMAB                       | IV                        | Direct      | 18,005 SF   |
| C       | 56,433 SF   | Depressional     | PFO/EMBC                    | III                       | Direct      | 56,433 SF   |
| D       | 5,347 SF    | Depressional     | PEMB                        | IV                        | Direct      | 5,347 SF    |
| E       | 7,049 SF    | Depressional     | PEMAB                       | IV                        | Direct      | 7,049 SF    |

Notes:

1. Brinson, M. M. (1993).
2. WSDOE rating according to Washington State wetland rating system for Western Washington – Revised (Hruby, 2014).
3. Cowardin et al. (1979); Federal Geographic Data Committee (2013); class based on vegetation: PFO = Palustrine Forested, PEM = Palustrine Emergent. Modifiers for Water Regime: A = Temporarily Flooded, B = Seasonally Saturated, C = Seasonally Flooded.

- **Water Quality:** Wetland A, B, D, and E are Category IV depressional wetlands that exhibit primarily seasonal saturation with some areas of temporary flooding in Wetlands A, B, and E. Wetland C is a Category III depressional wetland that primarily exhibits seasonal saturation with areas of seasonal ponding. These wetlands have moderate potential to provide water quality functions due to the presence of slightly constricted, permanently flowing outlets and land use that generates pollutants in proximity of the wetlands. Additionally, the value of water quality functions provided by these wetlands is increased as water quality is an issue in the sub-basin. However, all four wetlands lack persistent ungrazed vegetation and seasonal ponding in a majority of their area, so they have limited potential to adequately filter pollutants for water leaving the site.

Overall, water quality functions associated with Wetlands A through E will be improved via onsite wetland mitigation actions adjacent to Wetland F and Hayho Creek onsite which will provide increased plant structure and greater areas of seasonal ponding to improve filtration. Additionally, the installation of stormwater infrastructure will treat and infiltrate water, further improving water quality as no stormwater infrastructure currently exists onsite. Overall, these actions will result in a net increase in water quality functions in the Snohomish watershed.

- **Hydrologic:** Hydrology for Wetlands A through E is provided by direct precipitation, surface sheet flow, and a seasonally high groundwater table. These wetlands have some opportunity to provide hydrologic functions due to the presence of slightly constricted outlets, land use that generates excess runoff in proximity to the wetlands, and surface flooding issues in a sub-basin further down gradient. However, these functions are limited due to the shallow storage depths and small sizes of the wetlands relative to their contributing basins which limit how much water the wetlands can retain during flooding. Overall, hydrologic functions associated with Wetlands A-E will be improved and replaced via onsite wetland mitigation adjacent to Wetland F and Hayho Creek onsite which will provide increased storage depth by providing increased areas of seasonal ponding and improving flood attenuation. Overall, these actions will result in a net increase in hydrologic functions within the Snohomish watershed.

- **Habitat:** Wetlands A through E provide minimal habitat functions due to their location in an agricultural setting and surrounding development which impedes habitat accessibility. Wetlands A, B, D, and E also lack multiple plant structures which limits habitat suitability for a variety of species. Additionally, all five wetlands have low habitat interspersion and species richness and limited special habitat features. Due to the low-functioning habitat conditions, the proposed wetland fill will result in limited habitat removal. Wetland habitat functions will be replaced and increased via the proposed onsite wetland mitigation actions adjacent to Wetland F and Hayho Creek onsite, which will provide increased plant structure and diversity and provide increased habitat complexity which will provide browse, cover, and forage for small mammals and in turn provide prey for raptors and other larger mammals. Overall, these actions will result in a net increase in habitat functions in the Snohomish watershed.

## 2.3 Mitigation Strategy

Compensatory mitigation for direct impacts to Wetlands A through E onsite will be provided by onsite, in-kind wetland creation, rehabilitation, and enhancement utilizing the combination compensation ratios as outlined under MMC 22E.010.120(3) and in accordance with the interagency mitigation guidance (WSDOE et al, 2021). According to WSDOE et al. (2021), wetland rehabilitation is allowed at a 2:1 ratio (Category III) and 1:1 (Category IV) when provided with wetland creation. However, MMC 22E.010.120(3) only specifies combined mitigation for wetland creation (1:1) with enhancement (2:1), and wetland rehabilitation listed separately as high as a 4:1 ratio for Category III wetlands. Given that rehabilitation is preferred over enhancement and is generally required at a lower ratio as discussed in WSDOE et al. (2021), the project will utilize the 2:1 ratio for wetland rehabilitation along with wetland creation to meet mitigation needs prior to utilizing wetland enhancement. Additional wetland and stream buffer restoration actions will also occur to create new functioning buffer areas between the mitigation areas and proposed development. The proposed onsite, in-kind mitigation actions have been designed utilizing interagency guidance to ensure no net loss of ecological functions onsite or within the greater Snohomish watershed (WRIA 7) in accordance with MMC 22E.010.120(2). Refer to Appendix A for a detailed mitigation and planting plan. A summary of proposed mitigation is provided in Table 2. In general, the proposed mitigation actions will include, but may not be limited to, the following recommendations:

- Pre-treat invasive plants with a Washington Department of Agriculture approved herbicide. After pre-treatment, grub to remove the invasive plants and replant all cleared areas with native trees, shrubs, and ground covers listed in Appendix C; Pre-treatment of the invasive plants should occur a minimum of two weeks prior to removal;
- Excavate an area continuous with Wetland F and Hayho Creek for wetland creation that will hold sufficient wetland hydrology;
- Replant all mitigation areas with native trees, shrubs, and groundcovers listed in Appendix C, or substitutes approved by the responsible Project Scientist to help retain soils, filter stormwater, and increase biodiversity;
- Install special habitat features, such as large woody debris (LWD) and snags, to provide increased habitat structures for wildlife;
- An approved native seed mix will be used to seed any disturbed areas after planting;



- Maintain and control invasive plants annually, at a minimum, or more frequently if necessary. Maintenance to reduce the growth and spread of invasive plants is not restricted to chemical applications but may include hand removal, if warranted;
- Provide dry-season irrigation as necessary to ensure native plant survival;
- Direct exterior lights away from the wetlands and stream wherever possible; and
- Place all activities that generate excessive noise (e.g., generators and air conditioning equipment) away from the remaining critical areas and mitigation areas where feasible.

**Table 2. Summary of Proposed Mitigation**

| Mitigation Type                         | Mitigation Ratio                        | Mitigation Area Provided |
|---|---|--------------------------|
| Wetland Creation                        | 1:1                                     | 220,900 SF; 5.07 AC      |
| Wetland Rehabilitation                  | 2:1 (Category III)<br>1:1 (Category IV) | 144,471 SF; 3.32 AC      |
| Wetland Enhancement                     | 2:1 (Category IV)                       | 230,391 SF; 5.29 AC      |
| Non-Compensatory Wetland Creation       | No credit                               | 16,698 SF; 0.38 AC       |
| Non-Compensatory Wetland Rehabilitation | No credit                               | 23,072 SF; 0.53 AC       |
| Non-Compensatory Buffer Restoration     | No credit                               | 266,937 SF; 6.13 AC      |

### 2.3.1 Wetland Creation

Wetland creation actions are proposed adjacent to Wetland F and Hayho Creek. A combined mitigation ratio of 1:1 is required when rehabilitation and/or enhancement is also proposed. The proposed project will provide a 1.27:1 ratio for wetland creation, thus resulting in a net gain in wetland area onsite. Riverine wetland areas will be created along Hayho Creek to compensate for the Category III wetland impacts, and depressional wetland areas will be created contiguous with Wetland F to compensate for the Category IV wetland impacts. These areas are conducive to wetland creation given that they are at similar elevation and located in the valley floor. Soils will be excavated to provide necessary depressions to hold sufficient hydrology to generate wetland conditions, and areas will be excavated to the existing groundwater table if possible. Organic topsoil, likely from an offsite supplier but potentially sourced onsite, will then be placed to provide suitable substrate for the proposed native plantings. Native plantings will increase a diverse community of native trees, shrubs, and groundcover to provide increase plant structure and diversity when compared to the existing, primarily emergent wetlands to be filled. In addition to the native plantings, special habitat features including LWD and snags will be installed to increase habitat complexity. Wetland creation actions for the compensatory riverine wetland will include pulled back stream banks above the OHW and created wetland benches for potential flood refugia, upland hummocks, and habitat features including small and large woody debris and standing snags. Once established, the riparian habitat corridor will provide immediate and long-term benefits for salmonids and other fish including cool, clean, and clear water from the dense native plantings which will provide stream shading, stormwater filtration, and wood recruitment as well as decreased streambank erosion; and a more complex system with natural channel sinuosity, pool and riffle structure, and large woody debris features that provide cover for fish. Overall, these actions will improve water quality, hydrology, and habitat functions onsite by providing increased areas of seasonal ponding and improved plant structure to slow floods and filter pollutants, and by providing

a diverse native plant community and increased habitat structures which will provide browse, nesting, and forage for small mammals which will in turn provide prey for raptors and other mammals.

By following the site preparation specifications outlined herein (e.g., excavation, topsoil installation, and plantings) the wetland creation area will maintain wetland hydrology during the growing season in most years to match the existing, functional, seasonally flooded/saturated wetland. The proposed native species have been carefully selected to ensure the plants take root and thrive in the newly created wetland environments: selection criteria included indicator status and those species that are currently thriving onsite in wetland areas.

### **2.3.2 Wetland Rehabilitation and Enhancement**

Wetland rehabilitation and enhancement actions are proposed within Wetland F onsite to compensate for the wetland impacts along with onsite wetland creation. Wetland F currently contains three Cowardin classes: Forested, Scrub-Shrub, and Emergent. The existing emergent areas have been subject to active agricultural activities and regular mowing for several decades based on review of historical aerial imagery as well as the known sod farming onsite. Non-native invasive reed canarygrass is also prevalent in these areas. Therefore, these areas will be rehabilitated from their current degraded condition by removing non-native invasive species, decompacting the soil, providing soil amendments as needed, and replanting with a suite of native trees, shrubs, and groundcovers. The existing shrub areas will also be selectively enhanced by removing non-native invasive species and installing several tree species to increase vertical structure and habitat suitability. These actions have the potential to improve water quality, hydrology, and habitat functions associated with Wetland F by increasing plant structure and diversity which will improve filtration and slow floods, and provide increased habitat for a variety of wildlife. Additionally, removing non-native invasive species from Wetland F will prevent encroachment into the wetland mitigation areas, further ensuring their success. In addition, large woody debris will be installed within the wetland for additional habitat suitability and complexity for a wide range of urban fauna.

#### **Perimeter Buffer Enhancement**

All compensatory mitigation areas will be protected by an established perimeter buffer as applicable. Per Table 6C-3 of the joint mitigation guidance (WSDOE et al., 2021), Category II wetlands with moderate habitat functions typically receive a 150-foot buffer for adjacent high land use intensity, 110-foot buffers for adjacent moderate land use intensity, and a 75-foot buffer for adjacent low land use intensity. Category III wetlands with low habitat functions should receive an 80-foot buffer for adjacent high land use intensity, 60-foot buffer for adjacent moderate land use intensity, and a 40-foot buffer for adjacent low land use intensity. The mitigation areas along the western portion of the site will receive the standard low intensity perimeter buffer widths of 75 feet (for Wetland F, Category II) and 40 feet (Category III wetland creation). The mitigation areas on the northern portion of the site will not receive any perimeter buffer due to the wetland extending offsite to the north, which will be protected in a critical areas tract associated with the north-adjacent industrial development proposal under the same Applicant. However, the project will implement additional measures to reduce the required perimeter buffers adjacent to the onsite development. Such measures will include planting a dense screen of native plantings along the development side to provide increased screening, filtration of sediments and pollutants, and slow surface runoff, as well as installing large woody debris for additional habitat suitability and complexity for a wide range of urban fauna. Therefore, the mitigation areas associated with Wetland F will receive a 110-foot perimeter buffer and the mitigation areas adjacent to Hayho Creek will receive a specialized 75-foot perimeter buffer on the development side. It is important to note that the modified 75-foot buffer is still higher than the standard 60-foot buffer

for moderate land use intensity for Category III wetlands and has been approved under a nearby development proposal.

The perimeter buffer areas are proposed to be restored. The existing areas consist of active agricultural areas that have been regularly mowed for several decades based on review of historical aerial imagery and the known sod farming onsite. These areas also contain some non-native invasive species. Restoration will include removal of non-native vegetation, decompacting soils, adding soil amendments, and replanting with a suite of native trees, shrubs, and groundcover. As mentioned above, the buffer areas will be densely planted as an extra measure to greatly improved sediment and pollutant filtration and slow surface runoff.

## **2.4 Approach and Mitigation Implementation**

The onsite mitigation actions will occur concurrently with the development of the project. A pre-construction meeting will be held between the Applicant, general contractor, and the consulting Scientist to discuss the project and limitations specifically related to protection of critical areas and implementation of mitigation actions.

Equipment used will be typical for land clearing, grading, and excavation activities and will be kept in good working conditions and free of leaks. Equipment to be used will likely include excavators, backhoes, bulldozers, dump trucks, graders, et cetera. All equipment staging and materials stockpiles will be kept out of the critical areas, and the area will be kept free of spills and/or hazardous materials. All clean fill material will be sourced from upland areas onsite or from approved suppliers and will be free of pollutants and hazardous materials.

All appropriate BMPs and TESC measures, including dedicated construction entrance(s), silt fencing, and brush barriers, will be installed prior to and maintained throughout construction in order to minimize potential temporary impacts to Wetland F and Hayho Creek. Additionally, work will be conducted during the dry season to minimize surface runoff to Wetland F and Hayho Creek during construction.

The project sequencing will be as follows:

- Pre-construction conferences and regulatory notifications;
- Pre-treatment of non-native invasive plant species;
- Install TESC measures;
- Remove debris and invasive plant material and decompact soil as necessary in the wetland creation and other mitigation areas;
- Rough grade the wetland creation areas according to the approved grading plan;
- Rough grade inspection;
- Finish grade and prepare grounds for planting in all mitigation areas;
- Install LWD and snags;
- Seed entire mitigation area;
- Monitor site hydrology if necessary;
- Plant inspections;
- Install plant materials;
- Post-construction inspection and as-built survey; and

## Post-construction maintenance, monitoring, and annual reporting.2.5 Goals, Objectives, and Performance Standards

The goals and objectives for the onsite wetland mitigation actions are based on replacing wetland functions lost by the proposed impacts to Wetlands A through E and providing additional functions and protection from the proposed development. These actions are capable of increasing existing water quality and hydrologic functions and providing a moderate level of habitat function for wetland-associated wildlife. The goals and objectives of the proposed mitigation actions are as follows:

**Goal 1** – Partially compensate for approximately 173,983 square feet (3.99 acres) of direct wetland impacts to Wetlands A through E by creating 154,962 square feet (3.56 acres) of depressional wetland area, 65,938 square feet (1.51 acres) of riverine wetland area, and 16,698 square feet (0.38-acre) of non-compensatory riverine wetland area.

**Objective 1.1** – Establish wetland hydrology in the wetland creation area associated with Wetland F and Hayho Creek by excavating depressional areas (approximately 12 to 18 inches of material) to tie into the existing groundwater elevation.

**Performance Standard 1.1.1** – The wetland creation areas will have seasonally saturated soils (or greater hydroperiod) within 12 inches of the surface over for a minimum of 14 consecutive days early in the growing season (March – May) in years with normal precipitation levels over the monitoring period.

**Performance Standard 1.1.2** – The total wetland creation areas will measure at least 154,962 square feet (3.56 acres) in size for depressional wetland area, 65,938 square feet (1.51 acres) for riverine wetland area, and 16,698 square feet (0.38-acre) of non-compensatory riverine wetland area as demonstrated by wetland delineation during the monitoring events conducted in Year 10 of the monitoring period.

**Objective 1.2** – Establish wetland habitat with diverse horizontal and vertical vegetation structure and species richness to provide habitat for wetland-associated wildlife over the wetland creation areas.

**Performance Standard 1.2.1** – By the end of Year 10, the wetland creation areas will have at least 2 native tree species and 4 native shrubs species; native volunteer species will be included in the count. To be considered, the native species must make up at least 5 percent of the vegetation class.

**Performance Standard 1.2.2** – State-listed, Class A noxious weeds must be completely eliminated from the mitigation areas in all monitoring years and invasive species that are not considered state-listed, Class-A noxious weeds shall not exceed 20 percent aerial cover in the mitigation areas in all monitoring years.

**Performance Standard 1.2.3** - Minimum plant survivorship within the mitigation area will be 100 percent of installed trees and shrubs at the end of Year 1 (replacement of lost plants allowed), 85 percent at the end of Year 2, and 80 percent in all remaining years within the 10-year monitoring period.

**Performance Standard 1.2.4** – Minimum native woody species total areal cover within the wetland creation areas will be at 20 percent total cover by the end of Year 2, 30 percent at the end of Year 3, 40 percent at the end of Year 4, 45 percent at the end of Year 5, 50 percent at the end of Year 7, and 55 percent at the end of Year 10.

**Goal 2** – Partially compensate for approximately 173,983 square feet (3.99 acres) of direct wetland impacts to Wetlands A through E by rehabilitating 144,471 square feet (3.32 acres) of degraded, emergent area in Wetland F and selectively enhancing 230,391 square feet (5.29 acres) of existing scrub-shrub area in Wetland F.

**Objective 2.1** – Rehabilitate a total of 144,471 square feet (3.32 acres) of emergent wetland area and enhance a total of 230,391 square feet (5.29 acres) of existing scrub-shrub area in Wetland F with a suite of native trees and shrubs to create diverse horizontal and vertical vegetation structure and additional wildlife habitat.

**Performance Standard 2.1.1** – By the end of Year 5, the wetland mitigation areas will have at least 2 species of native trees and 3 species of native shrubs; native volunteer species will be included in the count. To be considered, the native species must make up at least 5 percent of the vegetation class.

**Performance Standard 2.1.2** – Minimum plant survivorship within the mitigation area will be 100 percent of installed trees and shrubs at the end of Year 1 (replacement of lost plants allowed), 85 percent at the end of Year 2, and 80 percent in all remaining years within the 10-year monitoring period.

**Performance Standard 2.1.3** – State-listed, Class A noxious weeds must be completely eliminated from the mitigation areas in all monitoring years and invasive species that are not considered state-listed, Class-A noxious weeds shall not exceed 20 percent aerial cover in the mitigation areas in all monitoring years.

**Performance Standard 2.1.4** – Minimum native woody species total areal cover within the wetland mitigation areas will be at 20 percent total cover by the end of Year 2, 30 percent at the end of Year 3, 40 percent at the end of Year 4, 45 percent at the end of Year 5, 50 percent at the end of Year 7, and 55 percent at the end of Year 10.

**Goal 3** – Improve and protect buffer functions by restoring the onsite buffer areas.

**Objective 3.1** – Enhance a total of 266,937 square feet (6.13 acre) of onsite buffer area with a suite of native trees, shrubs, and emergent plants to create diverse horizontal and vertical vegetation structure and additional wildlife habitat.

**Performance Standard 3.1.1** – By the end of Year 10, the buffer areas will have at least 2 species of native trees and 4 species of native shrubs; native volunteer species will be included in the count. To be considered, the native species must make up at least 5 percent of the vegetation class.

**Performance Standard 3.1.2** – Minimum plant survivorship within the buffer areas will be 100 percent of installed trees and shrubs at the end of Year 1 (replacement of

lost plants allowed), 85 percent at the end of Year 2, and 80 percent in all remaining years within the 10-year monitoring period.

**Performance Standard 3.1.3** – State-listed, Class A noxious weeds must be completely eliminated from the buffer areas in all monitoring years and invasive species that are not considered state-listed, Class-A noxious weeds shall not exceed 20 percent aerial cover in the buffer areas in all monitoring years.

**Performance Standard 3.1.4** – Minimum native woody species total areal cover within the wetland mitigation areas will be at 20 percent total cover by the end of Year 2, 30 percent at the end of Year 3, 40 percent at the end of Year 4, 45 percent at the end of Year 5, 50 percent at the end of Year 7, and 55 percent at the end of Year 10.

## 2.6 Plant Materials and Installation

### 2.6.1 Plant Materials

All plant materials to be used for mitigation actions will be nursery grown stock from a reputable, local source. Only native species are to be used; no hybrids or cultivars will be allowed. Plant material provided will be typical of their species or variety; if not cuttings they will exhibit normal, densely developed branches and vigorous, fibrous root systems. Plants will be sound, healthy, vigorous plants free from defects, and all forms of disease and infestation.

Container stock shall have been grown in its delivery container for not less than six months but not more than two years. Plants shall not exhibit rootbound conditions. Under no circumstances shall container stock be handled by their trunks, stems, or tops. Seed mixture used for hand or hydroseeding shall contain fresh, clean, and new crop seed mixed by an approved method. The mixture is specified in the plan set.

All plant material shall be inspected by the Project Scientist upon delivery. Plant material not conforming to the specifications below will be rejected and replaced by the planting contractor. Rejected plant materials shall be immediately removed from the site.

Fertilizer will be in the form of Agroform plant tabs or an approved like form. Mulch will consist of sterile wheat straw for seeded areas (if necessary) and clean recycled wood chips approximately ½-inch to 1-inch in size and ½-inch thick for woody plants. The mulch material may be sourced from non-invasive woody materials sourced from the land clearing activities.

### 2.6.2 Plant Scheduling, Species, Size, and Spacing

Plant installation should occur as close to conclusion of the construction activities as possible to limit erosion and limit the temporal loss of function provided by the critical areas. All planting should occur between September 1 and May 1 to ensure plants do not dry out after installation, or temporary irrigation measures may be necessary.

### 2.6.3 Quality Control for Planting Plan

All plant material shall be inspected by the qualified Project Scientist upon delivery. Plant material not conforming to the specifications above will be rejected and replaced by the planting contractor. Rejected plant materials shall be immediately removed from the site. Under no circumstances shall container stock be handled by their trunks, stems, or tops.

The landscape contractor shall provide the responsible Project Scientist with documentation of plant material that includes the supplying nursery contact information, plant species, plant quantities, and plant sizes.

#### **2.6.4 Product Handling, Delivery, and Storage**

All seed and fertilizer should be delivered in original, unopened, and undamaged containers showing weight, analysis, and name of manufacturer. This material should be stored in a manner to prevent wetting and deterioration. All precautions customary in good trade practice shall be taken in preparing plants for moving. Workmanship that fails to meet industry standards will be rejected. Plants will be packed, transported, and handled with care to ensure protection against injury and from drying out. If plants cannot be planted immediately upon delivery they should be protected with soil, wet peat moss, or in a manner acceptable to the responsible Project Scientist. Plants, fertilizer, and mulch not installed immediately upon delivery shall be secured on the site to prevent theft or tampering. No plant shall be bound with rope or wire in a manner that could damage or break the branches. Plants transported on open vehicles should be secured with a protective covering to prevent windburn.

#### **2.6.5 Preparation and Installation of Plant Materials**

The planting contractor shall verify the location of all elements of the mitigation plan with the responsible Project Scientist prior to installation. The responsible Project Scientist reserves the right to adjust the locations of landscape elements during the installation period as appropriate. If obstructions are encountered that are not shown on the drawings, planting operations will cease until alternate plant locations have been selected by and/or approved by the Project Scientist.

Circular plant pits with vertical sides will be excavated for all container stock. The pits should be at least 1.5 times the width of the rootball, and the depth of the pit should accommodate the entire root system.

Broken roots should be pruned with a sharp instrument and rootballs should be thoroughly soaked prior to installation. Set plant material upright in the planting pit to proper grade and alignment. Water plants thoroughly midway through backfilling and add Agroform tablets. Water pits again upon completion of backfilling. No filling should occur around trunks or stems. Do not use frozen or muddy mixtures for backfilling. Form a ring of soil around the edge of each planting pit to retain water and install a 4- to 6-inch layer of mulch around the base of each container plant, using care not to cover the base/stem of the plant itself.

#### **2.6.6 Temporary Irrigation Specifications**

While the native species selected for mitigation actions are hardy and typically thrive in northwest conditions and the proposed actions are planned in areas with sufficient hydroperiods for the species selected, some individual plants might perish due to dry conditions. Therefore, irrigation or regular watering may be provided as necessary for the duration of the first two growing seasons, two times per week while the native plantings become established. If used, irrigation will be discontinued after two growing seasons. Frequency and amount of irrigation will be dependent upon climatic conditions and may require more or less frequent watering than two times per week.

#### **2.6.7 Invasive Plant Control and Removal**

Invasive species to be removed include Himalayan blackberry, reed canarygrass, and all listed noxious weeds that may potentially be present within the mitigation areas; such non-native invasive species will require an effective control strategy. To ensure non-native invasive species do not expand

following the mitigation actions, non-native invasive plants within the entire mitigation area will be pretreated with a root-killing herbicide approved for use in aquatic sites (i.e. Rodeo) a minimum of two weeks prior to being cleared and grubbed from the mitigation area. A second application is strongly recommended. The pre-treatment with herbicide should occur prior to all planned mitigation actions, and spot treatment of surviving non-native invasive vegetation should be performed again each fall prior to senescence for a minimum of three years.

## **2.7 Maintenance & Monitoring Plan**

Conceptual Maintenance and Monitoring Plans are described below in accordance with MMC 22E.010.160. The Applicant is committed to compliance with the mitigation plan and overall success of the project. As such, the Applicant will continue to maintain the mitigation areas, keeping the site free from of non-native invasive vegetation, trash, and yard waste.

The wetland mitigation actions will require continued monitoring and maintenance to ensure the mitigation actions are successful. Therefore, the wetland enhancement area will be monitored for a period of five years, with formal inspections by a qualified Project Scientist. Monitoring events will be scheduled at the time of construction, 30 days after planting, and minimally on an annual basis during all five years of the monitoring period. Closeout assessment will also be conducted in Year 5 for the mitigation areas to ensure the success of the mitigation actions.

Monitoring will consist of percent cover measurements at permanent monitoring stations, walk-through surveys to identify invasive species presence and dead or dying mitigation plantings, photographs taken at fixed photo points, wildlife observations, and general qualitative habitat and wetland function observations.

To determine percent cover, observed vegetation will be identified and recorded by species and an estimate of areal cover of dominant species within each sampling plots. Circular sample plots, approximately 30 feet in diameter (706 square feet), are centered at each monitoring station. The sample plots encompass the specified wetland areas and terminate at the observed wetland boundary. Trees and shrubs within each 30-foot diameter monitoring plot are then recorded to species and areal cover. Herbaceous vegetation is sampled from a 10-foot diameter (78.5 square feet) within each monitoring plot, established at the same location as the center of each tree and shrub sample plot. Herbaceous vegetation within each monitoring plot is then recorded to species and includes an estimate of percent areal cover. A list of observed tree, shrub, and herbaceous species including percent areal cover of each species and wetland status is included within the monitoring report.

## **2.8 Reporting**

Within 30 days of completion of the mitigation actions, an As-Built monitoring event will be conducted and documented in an As-Built Report for the City of Marysville and WSDOE and submitted prior to the Year 1 monitoring event. A combined As-Built/Year 1 Monitoring Report may be completed based on the timing of completion of the mitigation elements. Following each monitoring event, a brief monitoring report detailing the current ecological status of the mitigation actions, measurement of performance standards, and management recommendations will be prepared and submitted to the City of Marysville and WSDOE within 90 days of each monitoring event to ensure full compliance with the mitigation plan.



## 2.9 Contingency Plan

If monitoring results indicate that performance standards are not being met, it may be necessary to implement all or part of the contingency plan. Careful attention to maintenance is essential in ensuring that problems do not arise. Should any portions of the mitigation areas fail to meet the success criteria, a contingency plan will be developed and implemented with City and WSDOE approval. Such plans are adaptive and should be prepared on a case-by-case basis to reflect the failed mitigation characteristics. Contingency plans can include additional plant installation, erosion control, and plant substitutions including type, size, and location. The Contingency measures outlined below can also be utilized in perpetuity to maintain the critical areas associated with the proposed project site.

Contingency/maintenance activities may include, but are not limited to:

1. Using plugs instead of seed for emergent vegetation coverage where seeded material does not become well-established;
2. Replacing plants lost to vandalism, drought, or disease, as necessary;
3. Replacing any plant species with a 20 percent or greater mortality rate after two growing seasons with the same species or native species of similar form and function;
4. Irrigating the mitigation areas only as necessary during dry weather if plants appear to be too dry, with a minimal quantity of water;
5. Reseeding and/or repair of wetland areas as necessary if erosion or sedimentation occurs;
6. Spot treat non-native invasive plant species; and
7. Removing all trash or undesirable debris from the wetland and buffer areas as necessary.

## 2.10 Conservation Easement

Long-term protection of the mitigation site and remaining critical areas onsite shall be provided by placement in a separate tract in which development is prohibited or by execution of an easement dedicated to the City of Marysville, a conservation organization, land trust, or similarly preserved through a permanent protective mechanism acceptable to the city. Two-rail fencing will be provided at the edge of the tract and signs designating the presence of an environmentally sensitive area will be posted every 100 feet in accordance with MMC 22E.010.370. The location and limitations associated with the mitigation area shall be shown on the face of the deed or plat applicable to the property and shall be recorded with the Snohomish County recording department.

## 2.11 Financial Assurances

Under MMC 22E.010.140(2)(e), a guarantee, in the form of a bond or other security device in a form acceptable to the city attorney, is required to assure that all actions approved under this Mitigation Plan are satisfactorily completed in accordance with the mitigation plan, performance standards, and regulatory conditions of approval. Prior to final inspection, a maintenance and warranty security (bond) shall be obtained in an amount equal to 125 percent of the total fair market cost of construction/installation labor and materials.

## Chapter 3. References

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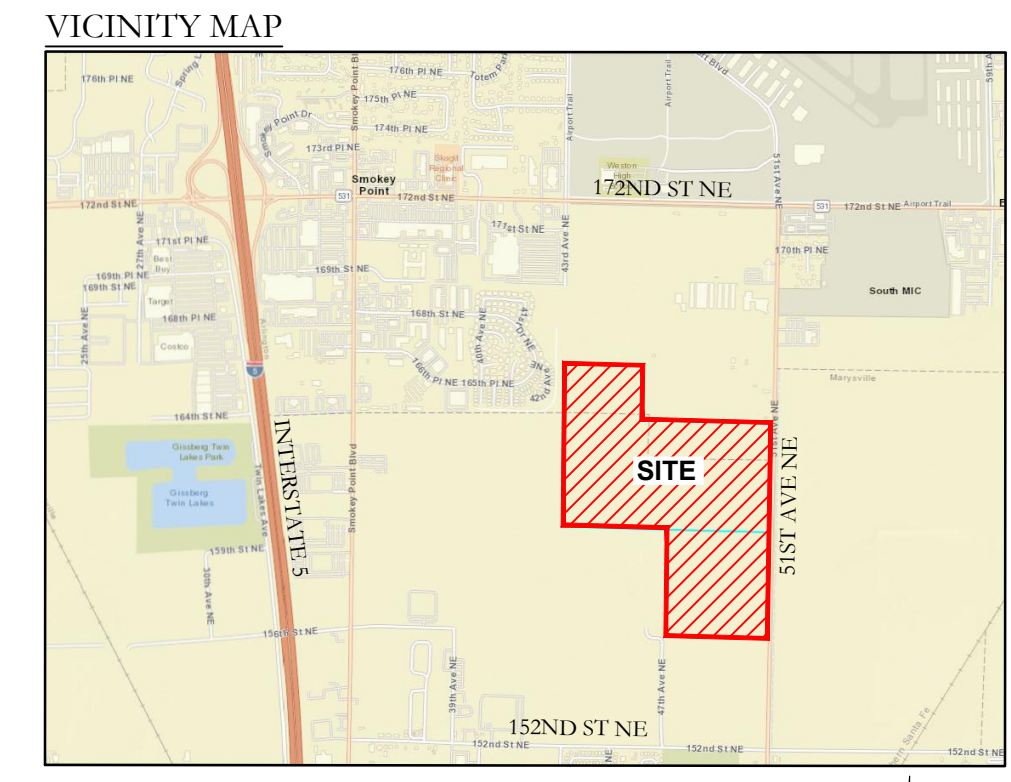
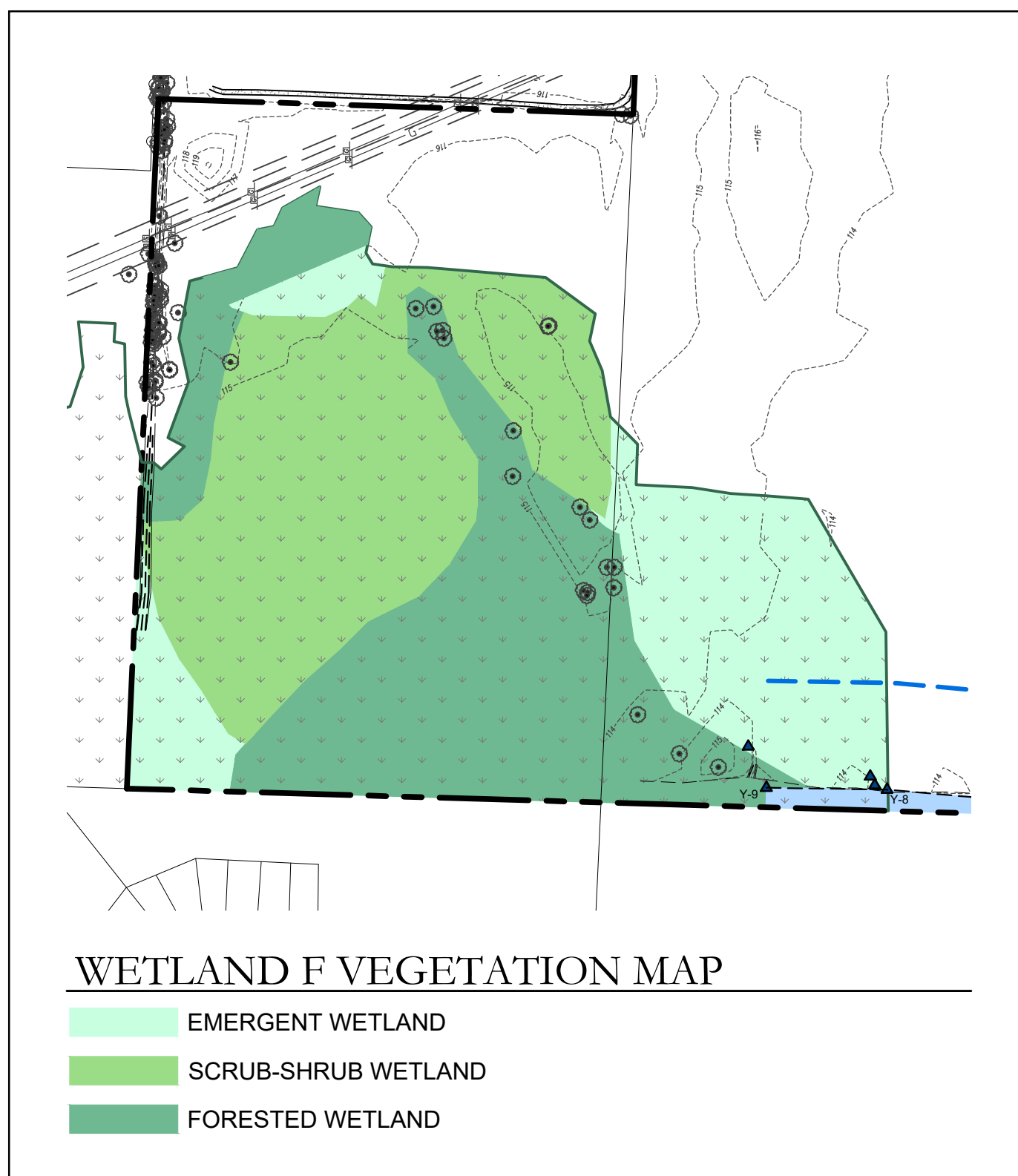
# Appendix A — Existing Conditions and Proposed Exhibits

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**PLAN LEGEND**

|  |  |
|--|--|
|  | PROPERTY LINE                                  |
|  | EXISTING WETLAND BOUNDARY                      |
|  | WETLAND BUFFER                                 |
|  | WETLAND FLAG LOCATION                          |
|  | DATA PLOT LOCATION                             |
|  | STREAM ORDINARY HIGH WATER LINE (OHW)          |
|  | STREAM BUFFER                                  |
|  | STREAM OHW (ORDINARY HIGH WATER) FLAG LOCATION |
|  | EXISTING CONTOUR                               |



VICINITY MAP  
SOURCE: ESRI (ACCESSED 3/7/2022)

**LOCATION**  
THE SE 1/4 OF SECTION 28,  
TOWNSHIP 31, RANGE 05N, WM

**APPLICANT/OWNER**  
NAME: WILLIAMS INVESTMENTS  
ADDRESS: 2517 COLBY AVENUE  
EVERETT, WASHINGTON 98201  
CONTACT: RYAN KIRBY  
PHONE: (425) 750-7926  
E-MAIL: RYAN@WILLIAMSINVEST.COM

**ENVIRONMENTAL CONSULTANT**  
SOUNDVIEW CONSULTANTS LLC  
2907 HARBORVIEW DRIVE,  
GIG HARBOR, WA 98355  
(253) 514-8952

**SHEET INDEX**

| SHEET NUMBER | SHEET TITLE                              |
|--------------|--|
| 1            | EXISTING CONDITIONS                      |
| 2            | PROPOSED SITE PLAN, IMPACTS & MITIGATION |
| 3            | PLANTING TYPICALS                        |
| 4            | PLANT SCHEDULE & DETAILS                 |

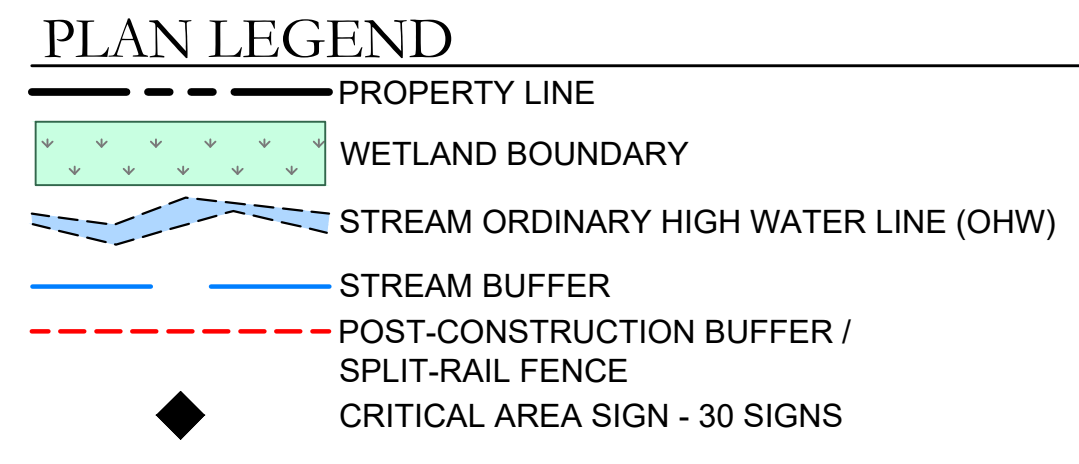
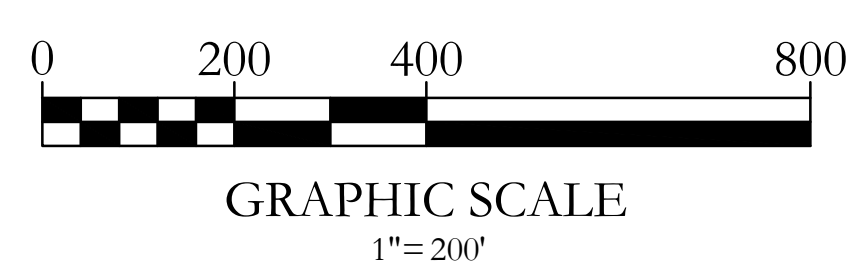
SOURCE:

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MARYSVILLE, WASHINGTON 98271-7506  
16430 51ST AVENUE NE,  
ARLINGTON, WASHINGTON 98223-6424  
SNOHOMISH COUNTY PARCEL NUMBERS:  
31052800400100, 31052800400400, &  
31052800100700

|                 |
|-----------------|
| DATE: 3/21/2022 |
| JOB: 1778.0003  |
| BY: MW          |
| SCALE: AS SHOWN |
| SHEET: 1        |

SOUNDVIEW CONSULTANTS LLC 1778.0003 51st Ave NE\Graphics & Maps\CAD\A - CURRENT SVC DRAWING\A -  
CURRENT SVC DRAWING\A - CURRENT SVC DRAWING\A - CURRENT SVC DRAWING\A -  
Created: 3/21/2022 10:03:03 AM  
Plotted: March 21, 2022



**IMPACTS LEGEND**

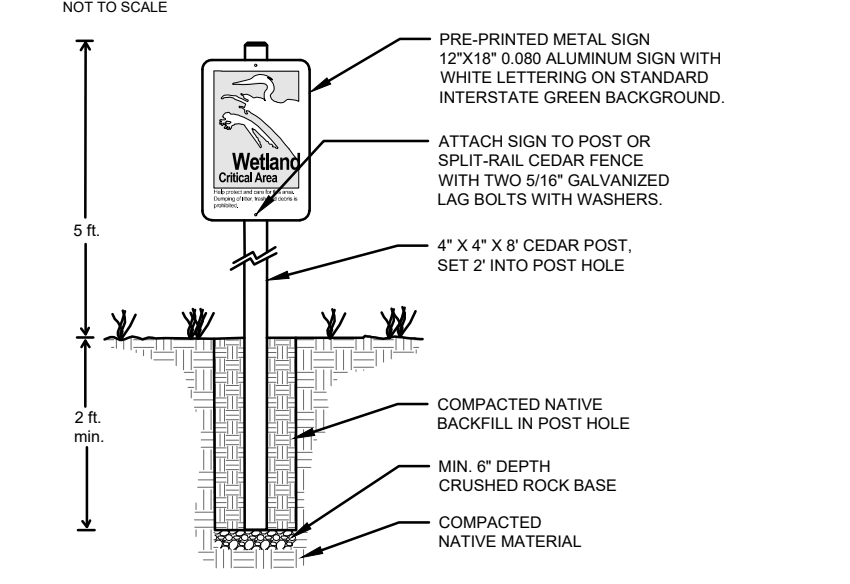
|                            |                   |
|----------------------------|-------------------|
| WETLAND A FILL             | 87,149 SF         |
| WETLAND B FILL             | 18,005 SF         |
| WETLAND C FILL             | 56,433 SF         |
| WETLAND D FILL             | 5,347 SF          |
| WETLAND E FILL             | 7,049 SF          |
| <b>TOTAL WETLAND FILL:</b> | <b>173,983 SF</b> |

**MITIGATION LEGEND**

|  |                                 |
|--|---------------------------------|
| NON-COMPENSATORY WETLAND CREATION (RIVERINE)<br>(40-FT LOW INTENSITY PERIMETER BUFFER) | 16,698 SF<br>(0.38 AC)          |
| COMPENSATORY WETLAND CREATION (RIVERINE)   | 65,938 SF                       |
| COMPENSATORY WETLAND CREATION (DEPRESSIONAL)   | 154,962 SF                      |
| <b>TOTAL COMPENSATORY WETLAND CREATION:</b>  | <b>220,900 SF<br/>(5.07 AC)</b> |
| NON-COMPENSATORY EMERGENT WETLAND ENHANCEMENT  | 23,072 SF<br>(0.53 AC)          |
| EMERGENT WETLAND REHABILITATION  | 144,471 SF<br>(3.32 AC)         |
| SCRUB-SHRUB WETLAND ENHANCEMENT  | 230,391 SF<br>(5.29 AC)         |
| WETLAND BUFFER RESTORATION / ENHANCEMENT   | 266,937 SF<br>(6.13 AC)         |

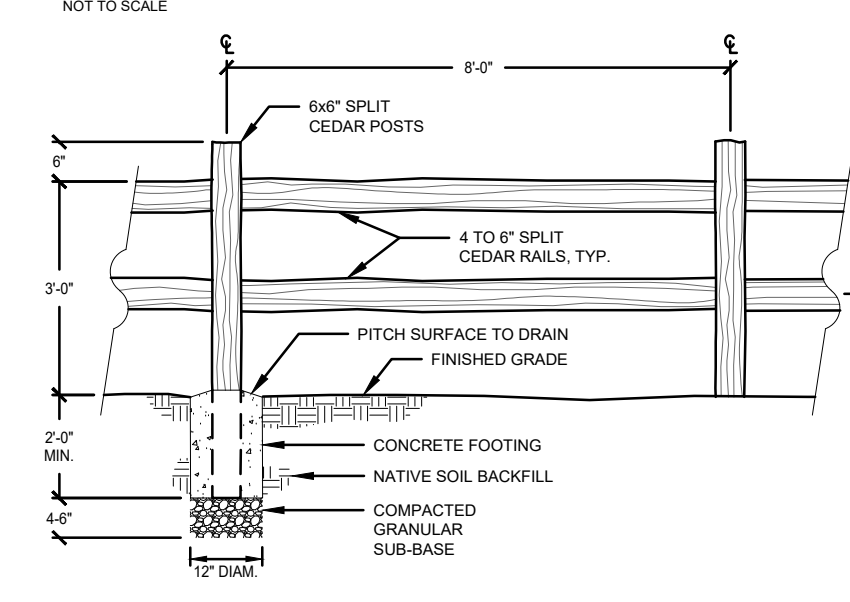
NOTE: SEE MITIGATION PLANTING TYPICALS ON SHEETS 7 & 8

**CRITICAL AREA SIGN DETAIL**



- CRITICAL AREA BOUNDARY SIGN NOTES:**
- TWO-RAIL FENCING SHALL BE CONSTRUCTED WITH PRESSURE TREATED POSTS AND RAILS AND CEMENTED INTO THE GROUND WITH EITHER CEDAR OR TREATED RAILS. ALTERNATIVE MATERIALS MAY BE USED SUBJECT TO APPROVAL BY THE CITY.
  - SIGNS DESIGNATING THE PRESENCE OF AN ENVIRONMENTALLY SENSITIVE AREA SHALL BE POSTED ALONG THE BUFFER BOUNDARY. THE SIGNS SHALL BE POSTED AT A MINIMUM RATE OF ONE EVERY 100 LINEAL FEET.
  - PRE-PRINTED METAL SIGN AVAILABLE THROUGH SIGN, AVAILABLE THROUGH:  
ZUMAR INDUSTRIES  
PHONE: 1-800-426-7987  
WEBSITE: WWW.ZUMAR.COM

**SPLIT RAIL FENCE DETAIL**



- NOTES:**
- POSTS AND RAILINGS PRE-CUT FOR ASSEMBLY.
  - 3-RAIL DESIGN IS PERMITTED.
  - FENCE SHALL BE PLACED AT APPROVED BUFFER EDGE.

SOURCE:

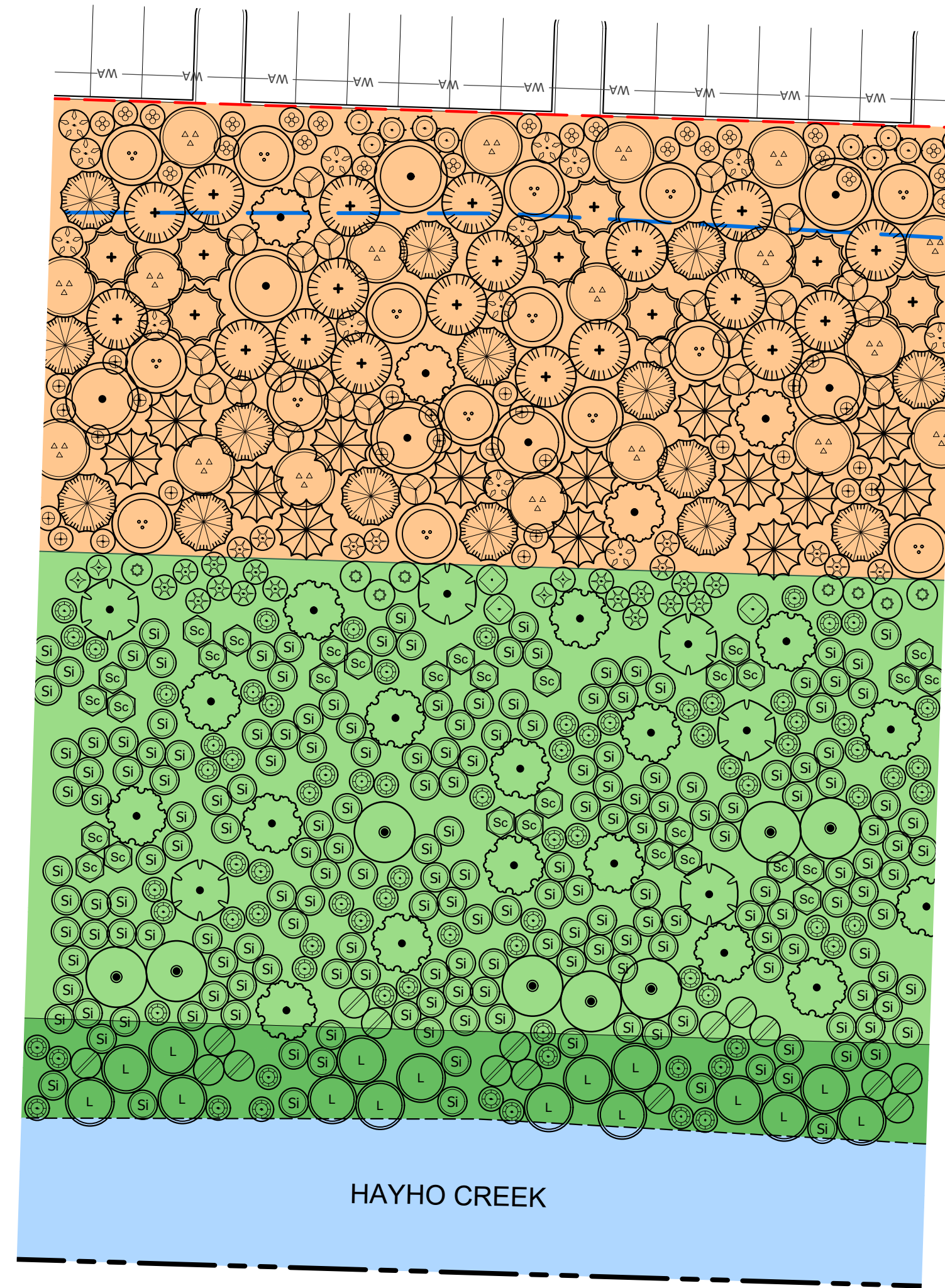
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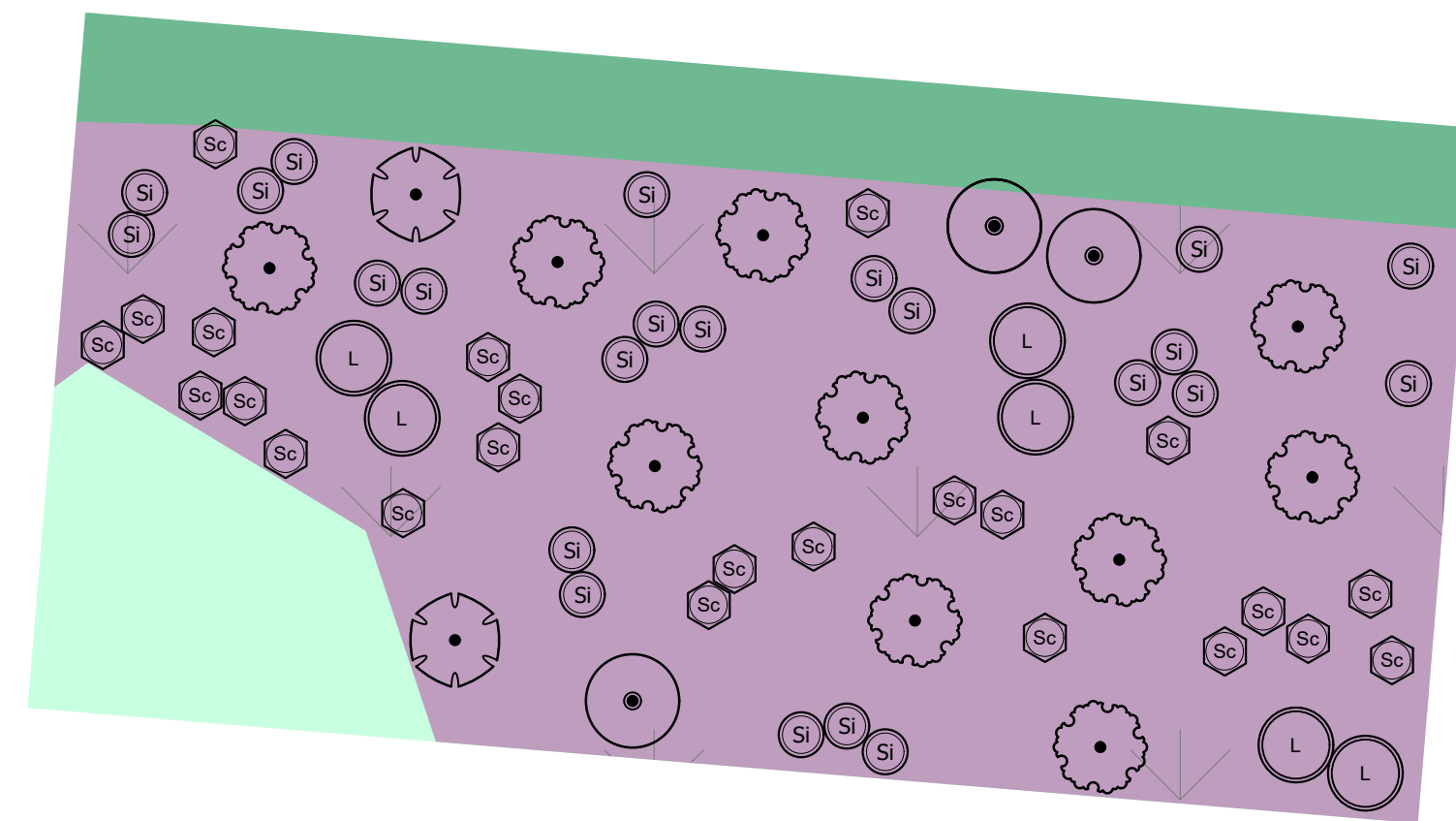
DATE: 3/21/2022  
 JOB: 1778.0003  
 BY: MW  
 SCALE: AS SHOWN  
 SHEET: 2

PLANT LIST

| Scientific Name                             | Common Name             |
|---|-------------------------|
| <b>TREES</b>                                |                         |
| <i>Abies grandis</i>                        | grand fir               |
| <i>Acer macrophyllum</i>                    | bigleaf maple           |
| <i>Alnus rubra</i>                          | red alder               |
| <i>Fraxinus purshiana (Rhamnus p.)</i>      | cascara                 |
| <i>Populus trichocarpa</i>                  | black cottonwood        |
| <i>Pseudotsuga menziesii</i>                | Douglas fir             |
| <i>Salix lasianдра</i>                      | Pacific willow          |
| <i>Salix scouleriana</i>                    | Scouler's willow        |
| <i>Thuja plicata</i>                        | western redcedar        |
| <i>Tsuga heterophylla</i>                   | western hemlock         |
| <b>SHRUBS</b>                               |                         |
| <i>Acer circinatum</i>                      | vine maple              |
| <i>Cornus stolonifera</i>                   | red-osier dogwood       |
| <i>Corylus cornuta var. californica</i>     | western hazelnut        |
| <i>Crataegus douglasii</i>                  | Douglas hawthorn        |
| <i>Gaultheria shallon</i>                   | salal                   |
| <i>Mahonia nervosa</i>                      | low Oregon grape        |
| <i>Oemleria cerasiformis</i>                | Indian plum             |
| <i>Physocarpus opulifolius</i>              | Pacific ninebark        |
| <i>Polystichum manitum</i>                  | western swordfern       |
| <i>Ribes bracteosum</i>                     | stink currant           |
| <i>Ribes lacustre</i>                       | swamp gooseberry        |
| <i>Rosa gymnocarpa</i>                      | bald hip rose           |
| <i>Rosa pisocarpa</i>                       | clustered wild rose     |
| <i>Rubus parviflorus</i>                    | thimbleberry            |
| <i>Rubus spectabilis var. spectabilis</i>   | salmonberry             |
| <i>Salix sitchensis</i>                     | Sitka willow            |
| <i>Sambucus racemosa var. racemosa</i>      | red elderberry          |
| <i>Symphoricarpos albus var. laevigatus</i> | common snowberry        |
| <b>GRASSES</b>                              |                         |
| <b>SEED MIXES (www.riverrefugeseed.com)</b> |                         |
| <b>Native Upland Grass Mix #9</b>           | <b>20 lbs/acre</b>      |
| <i>Elymus glaucus</i>                       | Blue wildrye            |
| <i>Bromus carinatus</i>                     | California brome        |
| <i>Hordeum brachyantherum</i>               | Meadow barley           |
| <i>Festuca roemerii</i>                     | Roemer's fescue         |
| <i>Deschampsia elongata</i>                 | Slender hairgrass       |
| <i>Agrostis exarata</i>                     | Spike bentgrass         |
| <i>Deschampsia cespitosa</i>                | Tufted hairgrass        |
| <i>Festuca rubra var. rubra</i>             | Red fescue              |
| <b>Moist Soil Sedge &amp; Rush Mix #11</b>  | <b>20 lbs/acre</b>      |
| <i>Carex unilateralis</i>                   | One-sided sedge         |
| <i>Carex densa</i>                          | Dense sedge             |
| <i>Juncus effusus</i>                       | Common rush             |
| <i>Juncus tenuis</i>                        | Slender rush            |
| <i>Juncus balfourii</i>                     | Toad rush               |
| <i>Carex stipata</i>                        | Awl fruited sedge       |
| <i>Carex obtusata</i>                       | Slough sedge            |
| <b>Native Moist Soil Mgmt Mix #12</b>       | <b>20 lbs/acre</b>      |
| <i>Glyceria occidentalis</i>                | Western manna grass     |
| <i>Allisma subcordatum</i>                  | American water plantain |
| <i>Polygonum pennsylvanicum</i>             | Pennsylvania smartweed  |
| <i>Breckmannia syzigachne</i>               | American sloughgrass    |
| <i>Allopecurus aequalis</i>                 | Short-tawn foxtail      |
| <i>Elyocharis palustris</i>                 | Creeping spikerush      |
| <i>Hordeum brachyantherum</i>               | Meadow barley           |
| <i>Elyocharis ovata</i>                     | Ovate spikerush         |
| <i>Leersia oryzoides</i>                    | Rice cutgrass           |
| <i>Scirpus tuberosus</i>                    | Softstem bulrush        |

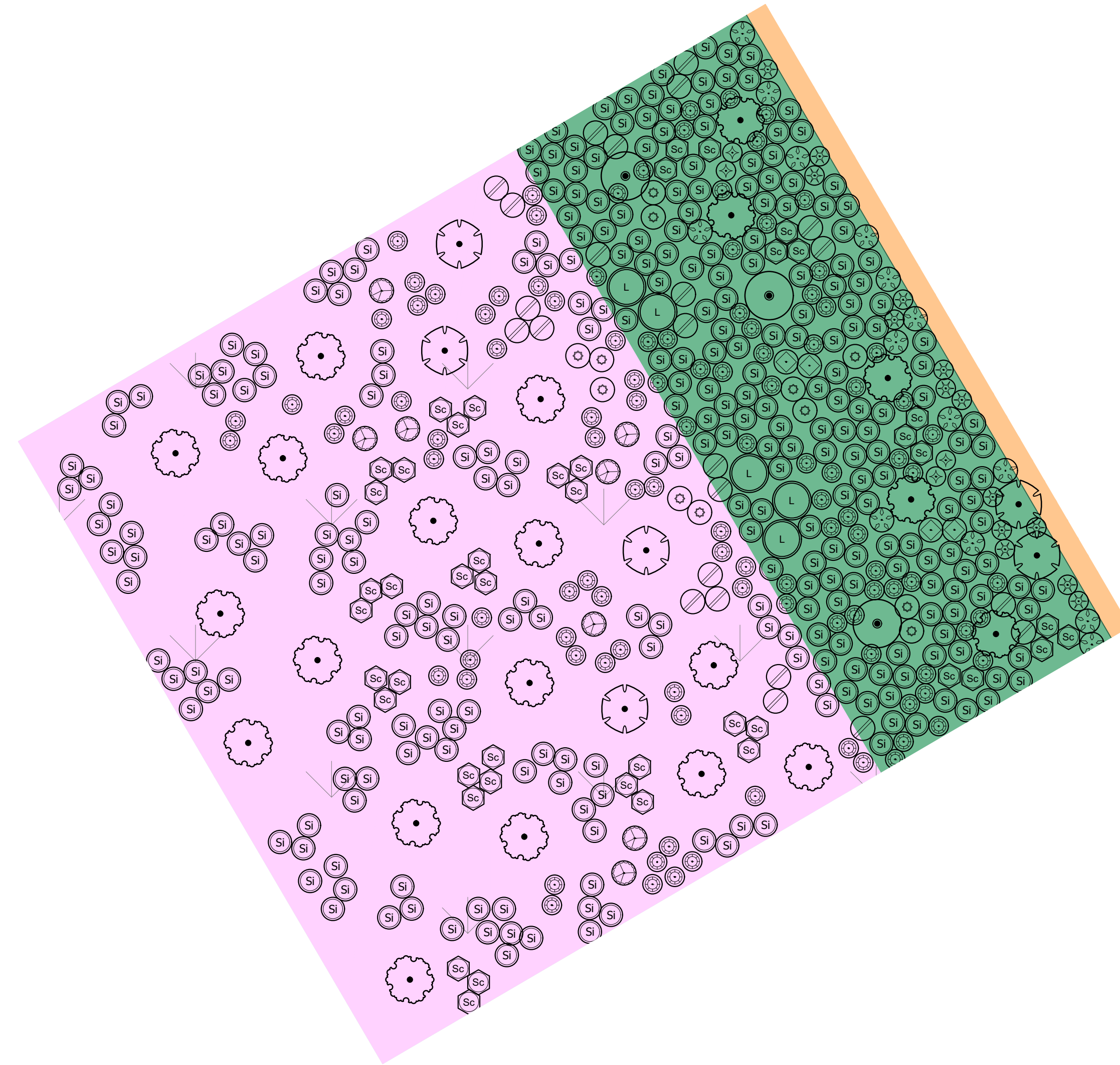


PLANTING TYPICAL 1



PLANTING TYPICAL 3

SCALE: 1"=20'



PLANTING TYPICAL 2

SCALE: 1"=20'

SOURCE:

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 31052800100700

DATE: 3/21/2022

JOB: 1778.0003

BY: MW

SCALE: AS SHOWN

SHEET: 3

PLANT SCHEDULE

| Scientific Name                             | Common Name             | WL Status | Area (sf):  |                             |                                 |                                   |                                   | Buffer Creation/Restoration | TOTAL      | Spacing (min.) | Height (min.) | Size (min.)            | Planting Area |
|---|-------------------------|-----------|-------------|-----------------------------|---------------------------------|-----------------------------------|-----------------------------------|-----------------------------|------------|----------------|---------------|------------------------|---------------|
|   |                         |           | 82,636      | 154,962                     | 167,543                         | 230,391                           | 266,937                           |                             |            |                |               |                        |               |
| <b>TREES</b>                                |                         |           |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Abies grandis</i>                        | grand fir               | FACU      | -           | -                           | -                               | -                                 | 130                               | 130                         | 10 ft      | 3 ft           | 2 gal         | Dry                    |               |
| <i>Acer macrophyllum</i>                    | bigleaf maple           | FACU      | -           | -                           | -                               | -                                 | 183                               | 183                         | 10 ft      | 3 ft           | 2 gal         | Dry                    |               |
| <i>Alnus rubra</i>                          | red alder               | FAC       | 103         | 90                          | 155                             | 400                               | 95                                | 843                         | 10 ft      | 3 ft           | 1 gal         | Dry/Moist - on hummock |               |
| <i>Frangula purshiana (Rhamnus p.)</i>      | cascara                 | FAC       | 38          | 35                          | 39                              | 100                               | -                                 | 212                         | 10 ft      | 3 ft           | 1 gal         | Dry                    |               |
| <i>Populus trichocarpa</i>                  | black cottonwood        | FAC       | 50          | 57                          | -                               | -                                 | -                                 | 107                         | 10 ft      | 3 ft           | 1 gal         | Moist/Wet - on hummock |               |
| <i>Pseudotsuga menziesii</i>                | Douglas fir             | FACU      | -           | -                           | -                               | -                                 | 450                               | 450                         | 10 ft      | 3 ft           | 2 gal         | Dry                    |               |
| <i>Salix lasiantha</i>                      | Pacific willow          | FACW      | 96          | -                           | -                               | -                                 | -                                 | 96                          | 10 ft      | 4 ft           | Stakes        | Wet                    |               |
| <i>Salix scouleriana</i>                    | Scouler's willow        | FAC       | 190         | 265                         | 290                             | 500                               | -                                 | 1245                        | 5 ft       | 4 ft           | Stakes        | Dry                    |               |
| <i>Thuja plicata</i>                        | western redcedar        | FAC       | -           | -                           | -                               | -                                 | 329                               | 329                         | 10 ft      | 3 ft           | 2 gal         | Moist - on hummock     |               |
| <i>Tsuga heterophylla</i>                   | western hemlock         | FACU      | -           | -                           | -                               | -                                 | 354                               | 354                         | 10 ft      | 3 ft           | 2 gal         | Moist - on hummock     |               |
| <b>Total:</b>                               |                         |           | <b>477</b>  | <b>447</b>                  | <b>484</b>                      | <b>1000</b>                       | <b>1541</b>                       | <b>3949</b>                 |            |                |               |                        |               |
| <b>SHRUBS</b>                               |                         |           |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Acer circinatum</i>                      | vine maple              | FAC       | -           | -                           | -                               | -                                 | 350                               | 350                         | 10 ft      | 4 ft           | 2 gal         | Dry/Moist              |               |
| <i>Cornus stolonifera</i>                   | red-osier dogwood       | FACW      | 95          | 270                         | 97                              | -                                 | 0                                 | 462                         | 4 ft       | 3 ft           | 1 gal         | Moist/Wet              |               |
| <i>Corylus cornuta var. californica</i>     | western hazelnut        | FACU      | -           | -                           | -                               | -                                 | 425                               | 425                         | 10 ft      | 2 ft           | 2 gal         | Moist                  |               |
| <i>Crataegus douglasii</i>                  | Douglas hawthorn        | FAC       | -           | -                           | 97                              | -                                 | -                                 | 97                          | 5 ft       | 3 ft           | 2 gal         | Moist                  |               |
| <i>Gaultheria shallon</i>                   | salal                   | FACU      | -           | -                           | -                               | -                                 | 800                               | 800                         | 4 - 5 ft   | 1 ft           | 1 gal         | Dry                    |               |
| <i>Mahonia nervosa</i>                      | low Oregon grape        | FACU      | -           | -                           | -                               | -                                 | 530                               | 530                         | 4 - 5 ft   | 1 ft           | 1 gal         | Dry/Moist              |               |
| <i>Oemleria cerasiformis</i>                | Indian plum             | FACU      | -           | -                           | -                               | -                                 | 530                               | 530                         | 5 ft       | 2 ft           | 2 gal         | Dry                    |               |
| <i>Physocarpus opulifolius</i>              | Pacific ninebark        | FACW      | 48          | 134                         | 50                              | -                                 | -                                 | 232                         | 5 ft       | 2 ft           | 1 gal         | Moist/Wet              |               |
| <i>Polystichum munitum</i>                  | western swordfern       | FACU      | -           | -                           | -                               | -                                 | 800                               | 800                         | 4 - 5 ft   | 1 ft           | 1 gal         | Dry/Moist              |               |
| <i>Ribes bracteosum</i>                     | stink currant           | FAC       | 24          | 67                          | -                               | -                                 | -                                 | 91                          | 4 ft       | 2 ft           | 1 gal         | Moist/Wet              |               |
| <i>Ribes lacustre</i>                       | swamp gooseberry        | FAC       | 24          | 67                          | -                               | -                                 | -                                 | 91                          | 4 ft       | 2 ft           | 1 gal         | Moist/Wet              |               |
| <i>Rosa gymnocarpa</i>                      | bald hip rose           | FACU      | -           | -                           | -                               | -                                 | 215                               | 215                         | 4 ft       | 2 ft           | 1 gal         | Dry/Moist              |               |
| <i>Rosa pisocarpa</i>                       | clustered wild rose     | FAC       | 95          | 270                         | -                               | -                                 | -                                 | 215                         | 580        | 4 ft           | 2 ft          | 1 gal                  | Wet           |
| <i>Rubus parviflorus</i>                    | thimbleberry            | FACU      | -           | -                           | -                               | -                                 | 640                               | 640                         | 4 ft       | 2 ft           | 1 gal         | Moist                  |               |
| <i>Rubus spectabilis var. spectabilis</i>   | salmonberry             | FAC       | 478         | 1075                        | 532                             | -                                 | -                                 | 2085                        | 4 ft       | 2 ft           | 1 gal         | Moist                  |               |
| <i>Salix sitchensis</i>                     | Sitka willow            | FACW      | 1144        | 3215                        | 1160                            | 330                               | -                                 | 5849                        | 10 ft      | 4 ft           | Stakes        | Moist/Wet              |               |
| <i>Sambucus racemosa var. racemosa</i>      | red elderberry          | FACU      | -           | 270                         | -                               | -                                 | 325                               | 595                         | 5 ft       | 2 ft           | 2 gal         | Dry/on hummock         |               |
| <i>Symphoricarpos albus var. laevigatus</i> | common snowberry        | FACU      | -           | -                           | -                               | -                                 | 585                               | 585                         | 4 ft       | 2 ft           | 1 gal         | Dry                    |               |
| <b>Total:</b>                               |                         |           | <b>1908</b> | <b>5368</b>                 | <b>1936</b>                     | <b>330</b>                        | <b>6165</b>                       | <b>14957</b>                |            |                |               |                        |               |
| <b>GRASSES</b>                              |                         |           |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| SEED MIXES (www.riverrefugeseed.com)        |                         |           | WL Status   | Wetland Creation (Riverine) | Wetland Creation (Depressional) | Wetland Rehabilitation (Emergent) | Wetland Enhancement (Scrub-Shrub) | Buffer Creation/Restoration | TOTAL      |                |               |                        |               |
| Native Upland Grass Mix #9                  |                         |           | 20 lbs/acre |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Elymus glaucus</i>                       | Blue wildrye            | 30%       |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Bromus carinatus</i>                     | California brome        | 25%       |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Hivoleum brocchyantherum</i>             | Meadow barley           | 10%       |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Festuca roemerii</i>                     | Roemer's fescue         | 10%       |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Deschampsia elongata</i>                 | Slender hairgrass       | 10%       |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Agrostis exarata</i>                     | Spike bentgrass         | 5%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Deschampsia cespitosa</i>                | Turfed hairgrass        | 5%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Festuca rubra var. rubra</i>             | Red fescue              | 5%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <b>Total (lbs):</b>                         |                         |           | <b>-</b>    | <b>-</b>                    | <b>-</b>                        | <b>-</b>                          | <b>-</b>                          | <b>123</b>                  | <b>123</b> |                |               |                        |               |
| Moist Soil Sedge & Rush Mix #11             |                         |           | 20 lbs/acre |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Carex nultaralis</i>                     | One-sided sedge         | 70%       |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Carex densa</i>                          | Dense sedge             | 12%       |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Juncus effusus</i>                       | Common rush             | 5%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Juncus tenuis</i>                        | Slender rush            | 5%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Juncus bufonius</i>                      | Toad rush               | 5%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Carex stipata</i>                        | Awl fruited sedge       | 2%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Carex obnupta</i>                        | Slough sedge            | 1%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <b>Total (lbs):</b>                         |                         |           | <b>15</b>   | <b>-</b>                    | <b>-</b>                        | <b>-</b>                          | <b>-</b>                          | <b>-</b>                    | <b>15</b>  |                |               |                        |               |
| Native Moist Soil Mgmt Mix #12              |                         |           | 20 lbs/acre |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Glyceria occidentalis</i>                | Western manna grass     | 35%       |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Ailona subcordatum</i>                   | American water plantain | 15%       |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Polygonum pennsylvanicum</i>             | Pennsylvania smartweed  | 15%       |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Beckmannia syzigachne</i>                | American sloughgrass    | 10%       |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Alopecurus nequalis</i>                  | Shortawn foxtail        | 5%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Elyocharis pelturis</i>                  | Creeeping spikerush     | 5%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Hivoleum brocchyantherum</i>             | Meadow barley           | 5%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Elyocharis ovata</i>                     | Ovate spikerush         | 4%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Leersia oryzoides</i>                    | Rice cutgrass           | 3%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <i>Scirpus tuberosomontani</i>              | Softstem bulrush        | 3%        |             |                             |                                 |                                   |                                   |                             |            |                |               |                        |               |
| <b>Total (lbs):</b>                         |                         |           | <b>23</b>   | <b>72</b>                   | <b>-</b>                        | <b>-</b>                          | <b>-</b>                          | <b>-</b>                    | <b>95</b>  |                |               |                        |               |

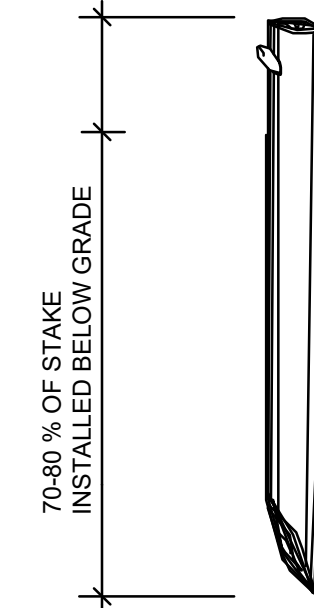
1 - Scientific names and species identification taken from Flora of the Pacific Northwest, 2nd Edition (Hitchcock and Cronquist, Ed. by Gilpin, Ledger, Zha, and Olmstead, 2018).  
 2 - Over-sized container plants are suitable for replacement pending Wetland Scientist approval.  
 3 - Native plant species may be substituted or added with Wetland Scientist approval.  
 4 - All disturbed and bare soil areas in the buffer to be seeded with a native grass seed mix.  
 5 - Tree calculations based upon 10-ft average spacing.  
 6 - Shrub calculations based upon 5-ft average spacing.  
 7 - *Gaultheria shallon*, *Mahonia nervosa*, & *Polystichum munitum* to be planted of groups of no less than 3 under large trees.

LIVE STAKE PLANTING DETAIL

NOT TO SCALE

NOTES:

- LIVE STAKES TO BE 1 TO 2 INCH DIAMETER 24 TO 32 INCHES LENGTH.
- USE 1/2 INCH DIAMETER REBAR OR ROCK BAR TO MAKE PILOT HOLE.
- INSTALL LIVE STAKES TAPER END DOWN WITH BUDS POINTED UP.
- MINIMUM TWO BUDS ABOVE GRADE.
- SET LIVE STAKES WITH DEAD-BLOW HAMMER.
- WATER IMMEDIATELY AFTER INSTALLATION.



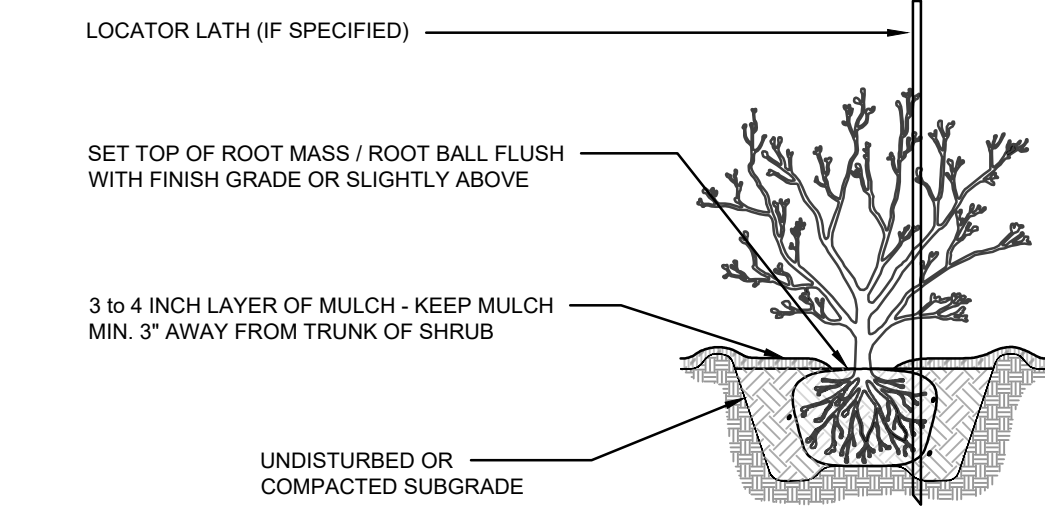
**STORAGE OF LIVE STAKES**  
 ALL WOODY PLANT CUTTINGS COLLECTED MORE THAN 12 HR PRIOR TO INSTALLATION, MUST BE CAREFULLY BOUND, SECURED, AND STORED OUT OF DIRECT SUNLIGHT AND SUBMERGED IN CLEAN FRESH WATER FOR A PERIOD OF UP TO TWO WEEKS.

OUTDOOR TEMPERATURES MUST BE LESS THAN 50 DEGREES F AND TEMPERATURE INDOORS AND IN STORAGE CONTAINERS MUST BE BETWEEN 34 AND 50 DEGREES F.

IF THE LIVE STAKES CANNOT BE INSTALLED DURING THE DORMANT SEASON, CUT DURING THE DORMANT SEASON AND HOLD IN COLD STORAGE AT TEMPERATURES BETWEEN 33 AND 39 DEGREES F FOR UP TO 2 MONTHS.

TREE AND SHRUB PLANTING DETAIL (TYPICAL)

NOT TO SCALE



- NOTES:**
- PLANT SHRUBS OF THE SAME SPECIES IN GROUPS OF 3 TO 9 AS APPROPRIATE, OR AS SHOWN ON PLAN. AVOID INSTALLING PLANTS IN STRAIGHT LINES TO ACHIEVE A NATURAL-LOOKING LAYOUT.
  - EXCAVATE PIT TO FULL DEPTH OF ROOT MASS AND 2 X ROOT MASS DIAMETER. SPREAD ROOTS TO FULL WIDTH OF CANOPY. SCARIFY SIDES OF PIT.
  - MIDWAY THROUGH PLANTING ADD AGROFORM TABLET AND WATER THOROUGHLY.
  - BACKFILL TO BE COMPACTED USING WATER ONLY.
  - WATER IMMEDIATELY AFTER INSTALLATION.

SOURCE:

**Soundview Consultants LLC**  
 Environmental Assessment • Planning • Land Use Solutions  
 P: 253.514.8952  
 F: 253.514.8954  
 2907 HARBORVIEW DRIVE  
 GIG HARBOR, WASHINGTON 98335  
 WWW.SOUNDVIEWCONSULTANTS.COM

51ST AVENUE NE  
 15808 & 16204 51ST AVENUE NE,  
 MARYSVILLE, WASHINGTON 98271-7506  
 16430 51ST AVENUE NE,  
 ARLINGTON, WASHINGTON 98223-6424  
 SNOHOMISH COUNTY PARCEL NUMBERS:  
 31052800400100, 31052800400400, &  
 31052800100700

DATE: 3/21/2022  
 JOB: 1778.0003  
 BY: MW  
 SCALE: AS SHOWN  
 SHEET: 4

# Appendix B — Approved Jurisdictional Determinations

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DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, SEATTLE DISTRICT  
P.O. BOX 3755  
SEATTLE, WASHINGTON 98124-3755

Regulatory Branch

July 13, 2021

Mr. Ryan Kilby  
Williams Investments  
2517 Colby Avenue  
Everett, Washington 98201

Reference: NWS-2021-130  
Williams Investments  
(AJD Request)

Dear Mr. Kilby:

Based on an availability of new information, the U.S. Army Corps of Engineers (Corps) has re-evaluated your request for verification of the jurisdictional limits of Wetland F, located at Marysville, Washington in the review area as shown on the enclosed drawings dated February 16, 2021. The Corps has determined that Wetland F is not a water of the U.S. because it is an excluded non-water of the U.S. per 33 CFR Part 328.3 (b). As such, work that would occur within this area does not require Department of the Army authorization under Section 404 of the Clean Water Act. This determination supersedes the previous determination by this office dated February 24, 2021. All other determinations contained in the original approved jurisdictional determination, dated February 24, 2021, remain unchanged.

Other state and local regulations may still apply to this wetland. For example, the Washington State Department of Ecology (Ecology) may regulate this wetland. For information on how to obtain State approval for your project, you should contact Ecology's Federal Permit Coordinator at [ecyrefedpermits@ecy.wa.gov](mailto:ecyrefedpermits@ecy.wa.gov) or at (360) 407-6068. Information regarding State permitting requirements can also be found at the following website: <https://ecology.wa.gov/Water-Shorelines/Wetlands/Regulations>. We are sending a copy of this letter to Ecology and to the Environmental Protection Agency's Aquatic Resources Unit.

This approved jurisdictional determination is valid for a period of five years from the date of this letter unless new information warrants revisions of the determination. A copy of this jurisdictional determination, dated June 16, 2021, is enclosed and can be found on our website at [www.nws.usace.army.mil](http://www.nws.usace.army.mil) select "Regulatory Branch, Permit Information" and then "Jurisdictional Determinations". If you object to this determination, you may request an administrative appeal under our regulations (33 Code of Federal Regulations, Part 331) as described in the enclosed *Notification of Administrative Appeal Options and Process and Request for Appeal* form.

A copy of this letter with drawings will be furnished to Mr. Jon Pickett at jon@soundviewconsultants.com. If you propose to do any work in the areas identified to be waters of the U.S., you should contact our office prior to commencing work to determine permit requirements. Please note that conducting certain activities in waters of the U.S. without Department of the Army authorization would violate Federal law. If you have any questions, please contact Ms. Amanda Nadjkovic at amanda.n.nadjkovic@usace.army.mil or at (206) 316-3156.

Sincerely,

A handwritten signature in black ink that reads "Amanda Nadjkovic". The signature is written in a cursive style with a large initial 'A'.

Amanda Nadjkovic, Project Manager  
Regulatory Branch

Enclosures

cc:

Washington State Department of Ecology (ecyrefedpermits@ecy.wa.gov)  
EPA, Region 10 (R10\_Wetlands\_and\_Oceans@epa.gov)

## Appendix C — Qualifications

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All determinations and supporting documentation, including this *Conceptual Mitigation Plan* prepared for the *Rex Development* project were prepared by, or under the direction of Jon Pickett of SVC. In addition, report preparation was completed by Morgan Kentch, and general project oversight and final quality assurance/quality control was completed by Kyla Caddey.

### Jon Pickett

Associate Principal

Professional Experience: 10+ years

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Jon Pickett is an Associate 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.

### Kyla Caddey, PWS, Certified Ecologist

Senior Environmental Scientist

Professional Experience: 7 years

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Kyla Caddey is a Senior Environmental Scientist with a diverse background in stream and wetland ecology, wildlife ecology and conservation, wildlife and natural resource assessments and monitoring, and riparian habitat restoration at various public and private entities. Kyla has field experience performing in-depth studies in both the Pacific Northwest and Central American ecosystems which included various environmental science research and statistical analysis. Kyla has advanced expertise in federal- and state-listed endangered, threatened, and sensitive species surveys and assessment of aquatic and terrestrial systems throughout the Puget Sound region. She has completed hundreds of wetland delineations and has extensive knowledge and interest in hydric soil identification. As the senior writer, she provides informed project oversight and performs final quality assurance / quality control on various types of scientific reports for agency submittal, including: Biological Assessments/Evaluations; Wetland, Shoreline, and Fish and Wildlife Habitat Assessments; Mitigation Plans, and Mitigation Monitoring Reports. She currently performs wetland, stream, and shoreline

delineations and fish and wildlife habitat assessments; prepares scientific reports; and provides environmental permitting and regulatory compliance assistance to support a wide range of commercial, industrial, and multi-family residential land use projects.

Kyla earned a Bachelor of Science degree in Environmental Science and Resource Management from the University of Washington, Seattle with a focus in Wildlife Conservation and a minor in Quantitative Science. She has also completed additional coursework in Comprehensive Bird Biology from Cornell University. Ms. Caddey is a Certified Professional Wetland Scientist (PWS #3479) through the Society of Wetland Scientists and Certified Ecologist through the Ecological Society of America. She has received 40-hour wetland delineation training (Western Mtns, Valleys, & Coast and Arid West Regional Supplement), is a Pierce County Qualified Wetland Specialist and Wildlife Biologist, and is a USFWS-approved Mazama pocket gopher survey biologist. Kyla has been formally trained through the Washington State Department of Ecology, Coastal Training Program, and the Washington Native Plant Society in winter twig and grass, sedge, and rush identification for Western WA; Using the Credit-Debit Method in Estimating Wetland Mitigation Needs; How to Determine the Ordinary High Water Mark; Using Field Indicators for Hydric Soils; How to Administer Development Permits in Washington Shorelines; Puget Sound Coastal Processes; and Forage Fish Survey Techniques. Additionally, she has received formal training in preparing WSDOT Biological Assessments.

## **Morgan Kentch**

Staff Scientist

Professional Experience: 3 years

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Morgan Kentch is a Staff Scientist with a background in marine biology and both marine and freshwater ecology in Washington State. Morgan earned her Bachelor of Science degree in Biology with marine emphasis from Western Washington University, Bellingham. There she received extensive, hands-on experience working in lab and field settings, and studying local marine and aquatic organisms and ecosystems. One of Morgan's more exceptional projects included monitoring a stream restoration project for the City of Bellingham by assessing stream habitat and biotic quality, collecting data, identifying local stream invertebrates, and writing a report outlining analyzed results. Morgan also participated in a study abroad program in La Paz, Baja California Sur, where she led an independent study on the effects of temperature on bioluminescent organisms in a local bay. Through this project, she demonstrated a strong understanding of collecting background research, following the scientific method, conducting scientific research, and writing a scientific paper formatted for journal submission.

Morgan currently assists in 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 has received wetland delineation training (Western Mtns, Valleys, & Coast and Arid West Regional Supplement), and has received formal training through the Washington State Department of Ecology and Coastal Training Program in Using the 2014 Wetland Rating System, How to Determine the Ordinary High Water Mark, and How to Conduct a Forage Fish Survey.