

CONCEPTUAL MITIGATION PLAN

GAGES CROSSING

JULY 2023



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

CONCEPTUAL MITIGATION PLAN

GAGES CROSSING

JULY 17, 2023

PROJECT LOCATION

900 SOUTH PINE STREET
BURLINGTON, WASHINGTON 98233

PREPARED FOR

GAGES CROSSING LLC
504 EAST FAIRHAVEN AVENUE
BURLINGTON, WASHINGTON 98223

PREPARED BY

SOUNDVIEW CONSULTANTS LLC
2907 HARBORVIEW DRIVE, SUITE D
GIG HARBOR, WASHINGTON 98335
(253) 514-8952



**Soundview
Consultants**

Environmental Assessment
Planning + Land Use Solutions

Executive Summary

Soundview Consultants LLC (SVC) has been assisting Gages Crossing LLC (Applicant) with a Conceptual Mitigation Plan for a proposed residential development of a 13.36-acre site located at 900 South Pine Street in the City of Burlington, Washington. The subject property consists of seven parcels situated in the Northwest ¼ of Section 5, Township 34 North, Range 4 East, W.M. (Skagit County Tax Parcel Numbers P62772, P72178, P72179, P72180, P72181, P133597 and P133596).

SVC investigated the subject property for the presence of potentially-regulated wetlands, waterbodies, fish and wildlife habitat, and/or priority species in March of 2022. Using current methodology, the site investigation identified one potentially-regulated wetland (Wetlands A) on the subject property, and one potentially regulated wetland (Wetland 1) offsite. Wetland A and Wetland 1 are classified as Category III wetlands and are subject to standard 150-foot buffers based on high land use intensity per Burlington Municipal Code (BMC) Table 14.15.185-1. In addition, one shoreline feature (Gages Slough) was identified on the south-central portion of the subject property. Gages Slough (Wetland A) is considered a Type S waterbody and is subject to regulation under BMC Title 18. Per the BMC 18., Gages Slough is considered an associated wetland of the Skagit River and as such, the Gages Slough is regulated under the SMP; however, no 200-foot setback is warranted. Per BMC 18.07.040.A.3.b, the shoreline designation of Gages Slough onsite is Urban Conservancy. No other potentially-regulated wetlands, waterbodies, fish and wildlife habitat, or priority species were identified within 300 feet of the subject property.

The Applicant proposes a residential development and associated infrastructure within the City of Burlington to alleviate the local demand for housing in the area. The Applicant proposes to develop 89 residential townhome lots, with parking, stormwater detention, and associated infrastructure. The project has been carefully designed to avoid all impacts to the identified critical areas with the use of buffer averaging on the north side of Gages Slough and buffer widening on the south side of Gages Slough; therefore, no impacts to critical areas or buffers are proposed. In addition to buffer averaging on the north side of Gages Slough, buffer restoration is proposed to restore buffer function. The Applicant proposes to restore 79,982 square feet of degraded buffer located between the proposed development and the wetland to ensure no net loss of ecological functions, as well as provide additional screening and protection. The southern buffer will be expanded, and all of the wetland and buffers will be placed in a Protected Critical Area tract and dedicated to the City of Burlington for protection in perpetuity.

The table below identifies the onsite critical area and summarizes the potential regulatory status by local, state, and federal agencies.

| Feature Name | Size Onsite | Category ¹ | Regulated Under BMC Chapter 14.15 | Regulated Under RCW 90.48 | Regulated Under Clean Water Act |
|--------------|---------------|-----------------------|-----------------------------------|---------------------------|---------------------------------|
| Wetland A | 66,707 SF | III | Yes | Yes | Likely |
| Wetland 1 | N/A - Offsite | III | Yes | Yes | Likely |

Note:

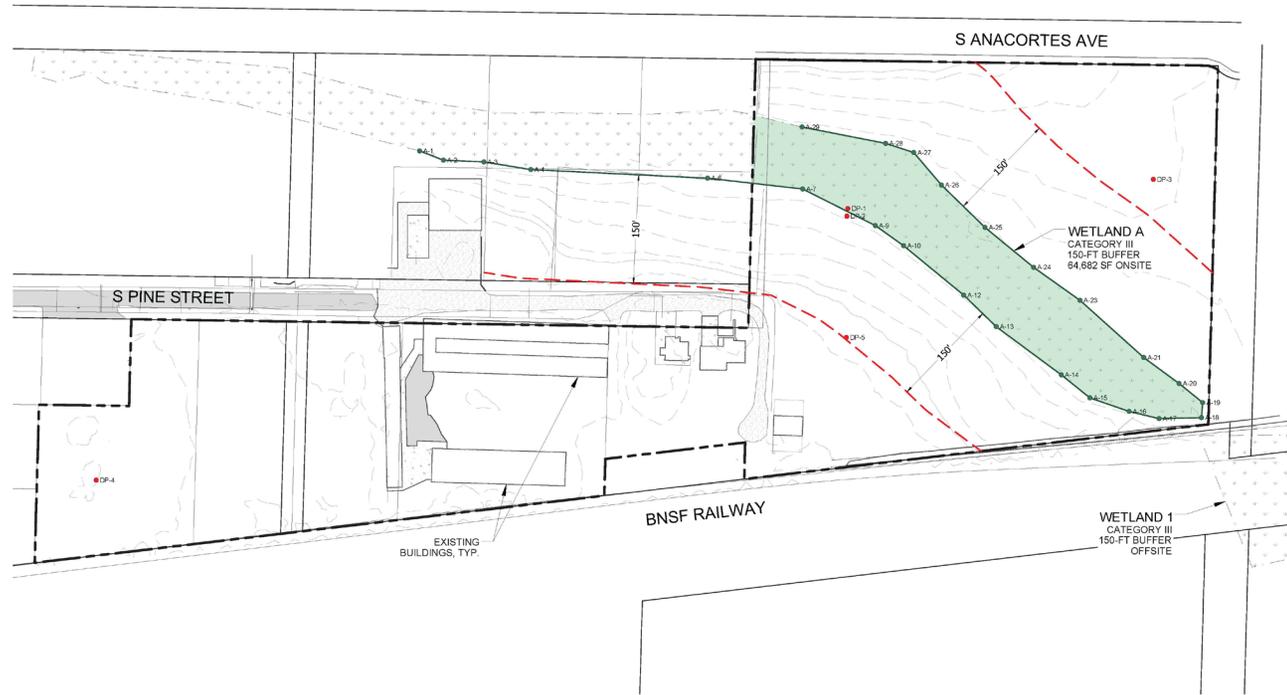
1. Current Washington State Department of Ecology (WSDOE) wetland rating system (Hruby, 2014) per BMC 14.15.180.B

The proposed project is located within designated FEMA 100-year floodplain. Per the Regional Guidance for Floodplain Habitat Assessment and Mitigation, FEMA Region X (2010), a determination of effects was completed for Bull Trout, Southern Resident Killer Whales, Puget Sound Chinook Salmon and Puget Sound Steelhead Trout. Determinations for the identified species and their critical habitats are provided in the table below.

Species Determination Summary.

| Species Name | Common Name | Federal Listing Status | Determination of Effect to Species¹ | Determination of Effect to Critical Habitat |
|---------------------------------|--------------------------------|-------------------------------|---|--|
| <i>Oncorhynchus mykiss</i> | Puget Sound Steelhead Trout | Threatened | No Effect | No Effect |
| <i>Oncorhynchus tshawytscha</i> | Puget Sound Chinook Salmon | Threatened | No Effect | No Effect |
| <i>Orcinus orca</i> | Southern Resident Killer Whale | Endangered | No Effect | No Effect |
| <i>Salvelinus confluentus</i> | Bull Trout | Threatened | No Effect | No Effect |

Site Map



SOURCE: ESRI (ACCESSED 06/14/2023)



LOCATION

THE NW ¼ OF SECTION 05,
TOWNSHIP 34N, RANGE 04E, WM

APPLICANT/OWNER

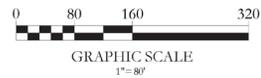
NAME: CORNER 9 PROPERTIES, LLC
ADDRESS: 504 E FAIRHAVEN AVENUE
BURLINGTON, WA 98223
CONTACT: ANNA NELSON
PHONE: (360) 755-9021
E-MAIL: ANNA@LANDEDGENTRY.COM

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 | BUFFER AVERAGING PLAN |
| 3 | PLANT SCHEDULE, NOTES, & DETAILS |



PLAN LEGEND

| | |
|--|--|
| | PROPERTY LINE |
| | EXISTING WETLAND BOUNDARY |
| | APPROXIMATED WETLAND BOUNDARY (NOT SURVEYED) |
| | WETLAND BUFFER |
| | WETLAND FLAG LOCATION |
| | DATA PLOT LOCATION |

Table of Contents

| | |
|---|----|
| Chapter 1. Regulatory Considerations | 1 |
| 1.1 Local Considerations | 1 |
| 1.2 State and Federal Considerations | 4 |
| Chapter 2. Buffer Modification Plan..... | 6 |
| 2.1 Purpose and Need | 6 |
| 2.2 Proposed Buffer Modification..... | 6 |
| 2.3 Approach and Best Management Practices | 7 |
| 2.4 Goals, Objectives, and Performance Standards..... | 7 |
| 2.5 Plant Materials and Installation | 8 |
| 2.6 Maintenance & Monitoring Plan..... | 9 |
| 2.7 Reporting | 10 |
| 2.8 Contingency Plan..... | 10 |
| 2.9 Critical Area Protective Measures | 11 |
| 2.10 Financial Assurances | 11 |
| Chapter 3. FEMA Habitat Assessment | 12 |
| 3.1 Background..... | 12 |
| 3.2 Proposed Project..... | 12 |
| 3.3 Action Area..... | 12 |
| 3.4 Proposed Project Effects to Habitat..... | 14 |
| 3.5 Proposed Project Effects to Species | 15 |
| Chapter 4. Closure | 18 |
| Chapter 5. References | 19 |

Tables

| | |
|---|----|
| Table 1. Wetland Buffer Summary..... | 1 |
| Table 2. Terrestrial Noise Attenuation Calculations. | 13 |
| Table 3. Species Determination Summary. | 16 |

Appendices

| |
|--|
| Appendix A — Existing Conditions and Proposed Exhibits |
| Appendix B — Action Area Map |
| Appendix C — Qualifications |

Chapter 1. Regulatory Considerations

Soundview Consultants LLC (SVC) has been assisting Gages Crossing LLC (Applicant) with a Conceptual Mitigation Plan for a proposed residential development of a 13.36-acre site located at 900 South Pine Street in the City of Burlington, Washington. The subject property consists of seven parcels situated in the Northwest ¼ of Section 5, Township 34 North, Range 4 East, W.M. (Skagit County Tax Parcel Numbers P62772, P72178, P72179, P72180, P72181, P133597 and P133596).

The site investigations in March of 2022 identified one potentially-regulated wetland (Wetland A), and one potentially-regulated shoreline feature (Gages Slough). In addition, one wetland (Wetland 1) was identified offsite, directly southwest-adjacent to the subject property. No other potentially-regulated wetlands, waterbodies, fish and wildlife habitat, or priority species were identified within 300 feet of the subject property during the site investigations.

1.1 Local Considerations

1.1.1 Critical Area Buffers

Burlington Municipal Code (BMC) BMC 14.15.180.B has adopted the current wetland rating system for western Washington (Hruby, 2014). Category III wetlands generally provide moderate levels of functions, have generally been disturbed in some ways, and are often less diverse or more isolated in the landscape than Category II wetlands. Per BMC 14.15.180.B, Wetland A and Wetland 1 are classified as Category III wetlands with high impact land use and low habitat scores (5) subject to standard 150-foot buffers.

BMC 14.15.185 established wetland buffers based on wetland rating and the intensity of land uses proposed on the development site. Table 1 below presents the standard wetland buffer widths for the identified wetlands. Per BMC 14.15.185.C, buffer averaging is allowed when the conditions outlined in BMC.14.15.185.C.1 are met. Category III wetlands may be reduced to a minimum of 50 feet or three quarters of the required width, whichever is greater.

Table 1. Wetland Buffer Summary.

| Wetland | Category | Habitat Score | Proposed/Potential Future Land Use Intensity | Standard Buffer Width | Minimum Buffer Widths |
|---------|----------|---------------|--|-----------------------|-----------------------|
| A | III | 5 | High | 150 | 112.5 |
| 1 | III | 5 | High | 150 | 112.5 |

Additionally, per BMC 14.15.185.A.1.a, the standard buffer presumes the presence of a dense multi-storied native vegetation community. When a buffer lacks adequate vegetation, buffer planting may be required, or the buffer should be widened to ensure that adequate functions of the buffer are provided. As the onsite buffer consists of a managed crop community, the buffer located north of Wetland A between the development and the wetland will be restored with native plantings. Per BMC 14.15.420.E.4, an additional 15-foot setback from critical areas is required for all structures.

The buffer area south of Wetland A will be expanded and all of the wetland and buffers will be placed in a Protected Critical Area tract and dedicated to the City of Burlington for protection in perpetuity.

Additionally, per BMC 14.15.185.D.6, "drilling for utilities/utility corridors under a buffer, with entrance/exit portals located completely outside of the wetland buffer boundary; provided, that the drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column" is allowed. In order to provide water to the proposed residential development, a water line will be bored under Gages Crossing. The proposed boring will have entrance/exit points located outside of the buffer, and is not anticipated to interrupt ground water connections.

1.1.2 Mitigation Sequencing

The proposed development has been designed to best avoid all direct wetland impacts. Due to the layout, topography, and other site constraints, minimal buffer averaging is proposed in order to avoid buffer impact. Additionally, buffer restoration is proposed for the remainder of the degraded buffer located between the wetland and the proposed development, and buffer increase is proposed on the south side of the wetland. Mitigation sequencing as described per BMC 14.15.220.A is addressed below.

1. *Avoid the impact altogether by not taking a certain action or parts of an action.*

The site has been designed to avoid all impacts to Gages Slough (Wetland A). Boring a water line under the wetland and its buffer is proposed in order to avoid all impacts to the critical areas. Additionally, due to site constraints, buffer averaging will be utilized to avoid buffer impacts. The buffer will be decreased by 205 square feet to accommodate the corner of the development and necessary grading. The proposed buffer averaging will result in a net increase of 49,615 square feet of contiguous wetland buffer in the vicinity of the development. Additionally, the southern buffer will be expanded, and all of the wetland and buffers will be placed in a Protected Critical Area tract and dedicated to the City of Burlington for protection in perpetuity. The southern buffer expansion will provide an additional 49,406 square feet of buffer, resulting in a total of 49,820 square feet of buffer increase onsite, and a net increase of 49,615 square feet overall. No impacts are proposed to any wetland or buffer area.

2. *Minimize the 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.*

All impacts have been avoided through site design and buffer averaging. The site layout has been redesigned to remove potential impacts from a trail in the outer buffer area. Buffer restoration is proposed for the degraded buffer located between the wetland and the development on the northside of Wetland A, and the buffer on the south side of the wetland has been increased, widened and placed in a Protected Critical Area tract and dedicated to the City of Burlington for protection in perpetuity in order to provide further protection. Minimization measures including typical best management practices (BMPs) and temporary erosion and sediment control (TESC) measures will be implemented to minimize any potential temporary construction impacts.

3. *Rectify the impact by repairing, rehabilitating or restoring the affected environment.*

No impacts are proposed, therefore rectification is not necessary. However, the existing buffer is degraded due to its historical agricultural use and lack of native vegetation. As a result, the buffer located between the wetland and the proposed development will be restored through planting on

the northside of Wetland A. The native vegetation within the buffer restoration area will provide screening of the wetland from the development and lift in habitat, hydrologic, and water quality functions. The buffer on the south side of the wetland will be expanded and all the wetland and buffers will be placed in a Protected Critical Area tract and dedicated to the City of Burlington for protection in perpetuity.

4. *Reduce or eliminate the impact over time by preservation and maintenance operations.*

Split-rail fence and critical areas signage will be placed around the buffer areas post-development to limit intrusion into the area as required per BMC 14.15.185E. The Applicant also proposes to restore the Wetland A buffer adjacent to the development in order to improve habitat functions and increase screening of the onsite wetland from the proposed development. The increased buffer on the south side of the wetland will also provide additional protection for the wetland/ These measures are anticipated to reduce intrusion into the wetland.

5. *Compensate for the impact by replacing, enhancing, or providing substitute resources or environments;*

No impacts are proposed; therefore, compensation is not required. However, given that the existing wetland buffer is degraded due to agricultural use and presence of non-native invasive species, restoration of the buffer adjacent to the development area is proposed north of the wetland. The proposed project will result in a net gain in buffer area and function when compared to the existing degraded buffers. In addition, buffer averaging will result in a net gain of 535 square feet of wetland buffer.

6. *Monitor the required compensation and take remedial or corrective measures when necessary.*

Monitoring events will take place annually for at least 5 years by a qualified consulting scientist for the buffer restoration area. City monitoring events will take place at least once every two years. If performance standards are not met, contingency measures will be implemented.

1.1.3 Shoreline Considerations

As Gages Slough is identified as an associated wetland to the Skagit River according to BMC 18.06.020.B, the slough itself is subject to shoreline jurisdiction. However, no 200-foot shoreline management zone or setback is required. Any work occurring in the wetland itself would be subject to shoreline permitting requirements; while work occurring within the wetland buffer would only be subject to the City of Burlington's critical area code and would not require shoreline permitting.

Per BMC 18.07.040.A.3.b, the shoreline designation of Gages Slough onsite is Urban Conservancy, which aims to “*protect and restore ecological functions of open space, floodplain, and other sensitive lands where they exist in developed shoreline settings, while allowing for compatible uses and public access*”. Per BMC 18.16.110.C.1, utilities are permitted within urban conservancy environments, however, transmission lines for conveyance, such as pipelines, must be located to assure no net loss of shoreline and cause minimum harm to the shoreline, or be located outside of the shoreline when possible. The proposed water line will be bored under Gages Slough. Entrance and exit locations for the bore will be located outside of shoreline jurisdiction and the wetland buffer. The boring has been located as far outside of the shoreline environment as possible and is anticipated to result in no net loss of shoreline function.

1.1.4 Buffer Averaging Measures

Per BMC 14.15.185.C.1, buffer averaging to allow reasonable use of a parcel may be permitted when all of the following are met:

- a. *There are no feasible alternatives to the site design that could be accomplished without buffer averaging.*

The site has been designed to avoid all impacts to Gages Slough, an associated wetland of the Skagit River shoreline. However, buffer averaging is necessary in order to accommodate the corner of the development, including grading and a yard. No other alignment or layout of the residence could be located outside the buffer.

- b. *The averaged buffer will not result in degradation of the wetland's functions and values as demonstrated by a critical areas report from a qualified wetland professional.*

Wetland function will not be degraded as a result of averaging a portion of the buffer. Lower intensity land uses (backyard) are proposed in the buffer area to be decreased, limiting potential impacts. The proposed buffer averaging will result in a net increase of 49,615 square feet of contiguous wetland buffer. Additionally, the southern buffer will be expanded, and all of the wetland and buffers will be placed in a Protected Critical Area tract and dedicated to the City of Burlington for protection in perpetuity. The southern buffer expansion will provide an additional 49,406 square feet of buffer, resulting in a total of 49,820 square feet of buffer increase onsite, and a net increase of 49,615 square feet overall. Additionally, the buffer located between the wetland and the proposed development will be entirely restored through native plantings, providing additional protection and screening of the wetland.

- c. *The total buffer area after averaging is equal to the area required without averaging.*

Buffer averaging will result in a net increase of 49,615 square feet of wetland buffer in the vicinity of the development, and a net increase of 49,615 square feet of buffer throughout the site due to the expanded buffer south of the wetland.

- d. *The buffer at its narrowest point is never less than either three-quarters of the required width or 75 feet for Category I and II, 50 feet for Category III and 25 feet for Category IV, whichever category is applicable.*

Wetland A is a Category III wetland with a proposed high impact land use and is subject to a 150-foot buffer, which may be reduced to 75 percent or 112.5 feet. The proposed buffer decrease area will be approximately 141 feet wide, exceeding the minimum required buffer width.

1.2 State and Federal Considerations

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

- (a) *Waters of the United States means:*

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

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

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

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

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

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

Chapter 2. Buffer Modification Plan

2.1 Purpose and Need

The purpose of the proposed project is to provide additional residential lots within the City of Burlington to help alleviate the shortage of residences in the greater Northern Puget Sound area.

2.2 Proposed Buffer Modification

The Applicant is proposing an 89 townhome development that will include the improvement of South Pine Street, along with associated infrastructure including additional access roads and driveways, utilities, stormwater detention and treatment, and landscaped areas. The project was carefully designed to avoid impacts to the identified onsite Wetland A by utilizing all developable upland areas onsite. In order to avoid wetland and buffer impacts, the project proposes buffer averaging in alignment with BMC 14.15.185.C.1 to decrease a small portion of the western edge of the Wetland A buffer (205 square feet buffer decrease), with buffer increase (49,820 square feet) occurring along the southwestern portion of Wetland A, which will result in a net buffer increase of 49,615 square feet of contiguous onsite buffer area in the vicinity of the development. The implementation of a buffer averaging plan allows for the proposed project to avoid all wetland and buffer impacts.

The Applicant proposes to restore 79,982 square feet of buffer of the onsite Wetland A buffer. The restoration actions will improve buffer habitat functions and increase vegetative screening of the onsite wetland from the proposed residential development. Restoration actions will take place concurrently to project development and before any use of the proposed residential development. Additionally, while no restoration is proposed for the buffer located south of the wetland; the southern buffer will be increased and widened to encompass the remainder of the parcel and all of the wetland and buffers will be placed in a Protected Critical Area tract and dedicated to the City of Burlington for protection in perpetuity. The southern buffer expansion will provide an additional 49,406 square feet of buffer, resulting in a total of 49,820 square feet of buffer increase onsite, and a net increase of 49,615 square feet overall.

Habitat functions in the Wetland A buffer onsite are currently limited due to the agricultural use, which lacks native trees and shrubs and contains non-native invasive species, which provide low habitat function and structure. The proposed buffer restoration actions will consist of removing non-native, invasive species and replanting with native trees and shrub species to provide browse, cover, and nesting for small mammals, which in turn provide prey for raptors and other mammals. The proposed native plantings will also provide dense vegetation between the proposed development and offsite wetland to minimize disturbance to the wetland. The proposed project will result in a net gain in ecological functions when compared to the existing degraded conditions of the existing wetland buffer area.

The proposed buffer restoration actions include, but may not be limited to, the following recommendations:

- Plant all restoration areas with native shrubs, such as rose or hawthorn, and groundcovers to help retain soils, filter stormwater, and increase biodiversity;
- Remove any trash and other debris within the wetland buffer area;

- 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 and shrubs listed in Appendix A; pre-treatment of the invasive plants should occur a minimum of two weeks prior to removal;
- An approved native seed mix will be used to seed the disturbed restoration 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;
- Installation of a split rail fence and critical area signs along the buffer edge;
- Direct exterior lights away from the stream wherever possible; and
- Place all activities that generate excessive noise (e.g., generators and air conditioning equipment) away from the identified critical areas where feasible.

2.3 Approach and Best Management Practices

The onsite buffer restoration 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 restoration 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 wetlands and regulated buffers, 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 the remaining wetlands. As no work windows are expected to limit the construction schedule, this schedule is flexible, and site work will likely commence as soon as permits are issued and the site is able to support heavy equipment.

2.4 Goals, Objectives, and Performance Standards

The goals and objectives for the buffer restoration actions north of Wetland A adjacent to the residential development are based on increasing habitat functions and provide greater screening and protection for the onsite wetlands. 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 restoration actions are as follows:

Goal 1 – Improve and protect wetland buffer functions by restoring degraded wetland buffer areas onsite (131,424 square feet).

Objective 1– Restore the buffer areas with a suite of native trees, shrubs, and emergent plants to create diverse horizontal and vertical vegetation structure and additional wildlife habitat.

Performance Standard 1.1.1 – Minimum plant survivorship within the buffer restoration areas will be at 100 percent of installed trees and shrubs at the end of Year 1 and 80 percent in all remaining years (utilization of native recruits and replacement of lost plants allowed).

Performance Standard 1.1.2 – Minimum native woody species total areal cover within the buffer restoration areas will be at 20 percent total cover at the end of Year 3, 30 percent at the end of Year 4, and 45 percent at the end of Year 5.

Performance Standard 1.1.3 – State-listed, Class A noxious weeds must be completely eliminated from the buffer restoration areas in all monitoring years and invasive species that are not considered state-listed, Class-A noxious weeds shall not exceed 10 percent aerial cover in the buffer restoration areas in all monitoring years.

2.5 Plant Materials and Installation

2.5.1 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. Bare root plants may be substituted for container stock at the discretion of the consulting Scientist. Seed mixture used for hand or hydroseeding shall contain fresh, clean, and new crop seed mixed by an approved method.

All plant material shall be inspected by the consulting 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.

2.5.2 Plant Scheduling, Species, Density, and Location

Plant installation should occur as close to conclusion of clearing and grading activities as possible to limit erosion and limit the temporal loss of function provided by the wetlands and buffers. 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. All planting will be installed according to the procedures detailed in the site plans in Appendix A.

2.5.3 Quality Control for Planting Plan

All plant material shall be inspected by the consulting 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

consulting Scientist with documentation of plant material that includes the supplying nursery contact information, plant species, plant quantities, and plant sizes.

2.5.4 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 consulting Scientist. Plants 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.

2.5.5 Preparation and Installation of Plant Materials

The planting contractor shall verify the location of all elements of the mitigation plan with the consulting Scientist prior to installation. The responsible consulting Scientist reserves the right to adjust the locations of landscape elements during the installation period as appropriate to the mitigation actions outlined above. 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 consulting Scientist.

Circular plant pits with vertical sides will be excavated for all container stock. The pits should be at least 12 inches in diameter, and the depth of the pit should accommodate the entire root system. The bottom of each pit will be scarified to a depth of 4 inches.

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 the plants thoroughly midway through backfilling and add Agriform tablets. Water the pits again upon completion of backfilling. No filling should occur around trunks or stems. Do not use frozen or muddy mixtures for backfilling.

2.5.6 Temporary Irrigation Specifications

While the native species selected for mitigation are hardy and typically thrive in northwest conditions, and the mitigation 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 will be provided, if necessary, 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 Maintenance & Monitoring Plan

This section outlines a maintenance and monitoring plan in accordance with BMC 14.15.220.L. The Applicant is committed to compliance with the buffer restoration plan and overall success of the project. As such, the Applicant will continue to maintain the project, keeping the site free from of non-native invasive vegetation, trash, and other waste. Depending on the success of the restoration,

maintenance frequency may be decreased or increased at the discretion of the responsible consulting Scientist.

The buffer restoration actions will require continued monitoring and maintenance to ensure the actions are successful. Therefore, the non-compensatory buffer restoration areas will be monitored annually for a period of 5 years, with formal inspections by a qualified consulting Scientist. Monitoring events will occur no less frequently than once every two years by the city to inspect critical area and buffer size and condition and for compliance with any required mitigation or other conditions of approval. Closeout assessment will also be conducted in Year 5 for the buffer restoration areas to ensure the success of the actions.

Monitoring will consist of percent cover measurements at permanent monitoring stations, walk-through surveys to identify invasive species presence and dead or dying restoration 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 and buffer areas and terminate at the observed wetland or buffer 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 will be included within the monitoring report.

2.7 Reporting

Following the implementation of the onsite buffer restoration actions, the responsible consulting Scientist and/or Project Engineer will prepare an As-Built (Year 0) Report and will be submitted to the City of Burlington project manager by December 31st following the post-construction monitoring event. Following each monitoring event, a brief monitoring report detailing the current ecological status of the mitigation areas, measurement of performance standards, and management recommendations will be prepared and submitted to the City of Burlington by December 31st each year to ensure full compliance with the mitigation plan, performance standards, and regulatory conditions of approval.

2.8 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 portion of the site fail to meet the success criteria, a contingency plan will be developed and implemented with City 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 wetland and buffers associated with the proposed buffer restoration areas. The contingency plan is presented below in accordance with BMC 14.15.150.C.6:

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 and buffer 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.

2.9 Critical Area Protective Measures

According to BMC 14.15.150.A.5, the wetland shall be identified as a Protected Critical Area (PCA). All PCAs shall be recorded with the county auditor through recording of the final subdivision map and require appropriate signage in accordance requirements in BMC 14.15.160. The PCA tract will also be dedicated to the City of Burlington for protection in perpetuity.

2.10 Financial Assurances

Per BMC 14.15.150.E, performance security is required to assure that all actions approved under this buffer restoration plan are satisfactorily completed in accordance with the conceptual buffer restoration plan, performance standards, and regulatory conditions of approval. The Applicant will provide a performance bond (prior to the issuance of any building permits) and monitoring and maintenance bond in an amount equal to 125 percent of the total estimated fair market cost of labor, materials, and irrigation, as applicable. The term of the financial assurance shall remain in place until the required mitigation is complete.

Chapter 3. FEMA Habitat Assessment

3.1 Background

The FEMA National Flood Insurance Program Record of Decision requires local communities to obtain and maintain documentation of compliance with appropriate state and federal laws, including the Endangered Species Act (ESA), as a condition of issuing floodplain development permits (FEMA, 2018). FEMA has provided local jurisdictions with guidelines for floodplain habitat assessments consistent with the National Marine Fisheries Services' Biological Opinion on the implementation of the National Flood Insurance Program in Puget Sound; these guidelines from the Puget Sound BiOp Floodplain Habitat Assessment Worksheet (FEMA, 2017) are addressed below.

3.2 Proposed Project

The proposed residential development requires the construction of 89 townhouse lots along with associated infrastructure, which is located within the mapped 100-year floodplain. The project was carefully designed to fully utilize the developable upland area on the site and has taken several steps to minimize impacts to the critical areas onsite, and no direct impacts are proposed. Development will mainly take place outside of critical area buffers, however, due to site's location entirely within the floodplain, floodplain impacts cannot be avoided. Proposed work will consist of grading and construction actions associated with residential development including the installation of a new water line. No in-water work is proposed. Installation of the water line will require boring under Gages Slough, which is not anticipated to have any terrestrial or in-water noise or water quality effects. No woody debris will be removed from the floodplain and bank armoring/stabilization is not required for this project.

Per the Burlington flood hazard permit application, proposals to develop in the special flood hazard areas (SFHA) shall include an assessment of the impact of the project on federal, state, or locally protected species and habitat, water quality and aquatic and riparian habitat according to the 2008 Puget Sound Biological Opinion, more recently updated per FEMA (2017). It should be noted that while the proposed project is located within mapped FEMA 100-year floodplain, the mapping is outdated and inaccurate, and the proposed development will occur outside of the 100-year floodplain elevations. A letter of map amendment (LOMA) is being submitted under separate cover to document the floodplain elevations onsite. However, this FEMA floodplain habitat assessment has been completed conservatively given the mapped floodplain present onsite. These proposed project effects are outlined below.

3.3 Action Area

The "Action Area" for evaluation of potential impacts to ESA-listed species encompasses the locations where project activities will occur plus areas that may be directly or indirectly affected by the proposed project either through physical, chemical, or biological mechanisms. The geographic limits of the Action Area were defined by considering the potential spatial extent of mechanisms that may affect listed species. A mechanism identified as having a potential for impacting ESA-listed species or species habitat includes noise from construction equipment and temporary turbidity impacts within the roadside ditch due to the construction activities. No negative impacts to ESA-listed species were identified by either mechanism.

Terrestrial Noise

The residential development will necessitate the use of the following three pieces of equipment with the loudest noise levels for grading and construction: an excavator, concrete pump truck, and dozer. The Washington State Department of Transportation (WSDOT) Biological Assessment Advanced Training Manual Preparation (“BA Manual”), Version 2023, lists average noise levels for typical construction equipment; average ambient sound levels based on population density of the surrounding area as well as the general landscape setting; and noise levels for automobile traffic given certain speeds. According to WSDOT, the average decibel level at 50 feet from a working excavator is 87 dBA. The average decibel level at 50 feet from a working concrete pump truck is 82 dBA. The average decibel level at 50 feet from a working dozer is 85 dBA. Using decibel addition, 90 dBA was calculated to be the loudest projected noise level that will be heard at a 50-foot radius from where the construction actions will be performed. The use of construction equipment in this area will potentially lead to a higher noise level than traffic noise and ambient sound levels during portions of the project actions.

According to 2022 U.S. Population Density data adjusted by estimated population growth rates, population density in the vicinity of the installation site is 2,928 persons per square mile (Esri, 2022). The background sound level associated with this population density is 50 dBA (WSDOT, 2020). The closest significant noise generator is WA State Route 20, which is approximately 2,210 feet away. The highway has approximately 1,600 vehicles per hour according to WSDOT Traffic Count Database System from 2021, and a speed limit of 35 mph. According to Table 7-3 of the BA Manual traffic, this would result in approximately 68 dBA noise levels (WSDOT, 2023). Based on these noise levels, construction noise would attenuate to background noise levels at a greater distance (1,991 feet) than the attenuation of construction noise to traffic noise levels (792 feet). As such, background noise levels were used as the ambient noise level for determining the terrestrial noise impact.

Construction noise levels will be elevated above normal ambient noise but will not reach levels that are likely to significantly impact terrestrial species. Sound impacts on ESA-listed species are discussed in below. For terrestrial noise, standard attenuation is approximately 6-7.5 dBA per doubling of distance from the source of noise, depending on whether the site is classified as hard or soft (WSDOT, 2023). The area surrounding the project area is generally considered a soft site due to the presence of surrounding agricultural and residential areas that help attenuate terrestrial noise. Using an ambient noise level of 50 dBA (WSDOT, 2023) and normal attenuation of 7.5 dB per distance doubling for a soft site, the construction noise will attenuate to background levels approximately 1,991 feet offsite (Table 1). Therefore, the Action Area for noise has an approximate 1,991-foot radius around project activities. The following table present the estimated construction noise attenuation distance.

Table 2. Terrestrial Noise Attenuation Calculations.

| <i>Proposed Project and Site Noise Levels</i> | |
|---|------------|
| Project Noise Level | 90 dBA |
| Background Noise Level ¹ | 50 dBA |
| Traffic Noise Level ² | 51.5 dBA |
| <i>Attenuation Distances</i> | |
| Construction to Background | 1,991 feet |
| Traffic to Background | 792 feet |

| <i>Construction Noise Extent</i> | |
|----------------------------------|------------|
| Construction to Traffic | 1,991 feet |

1 - Background noise per BA Manual pg. 7-18. (WSDOT, 2023)

2 - Traffic noise at the property line based on 1600 vehicles/hour traveling 35 mph 2210 feet away.

Water Quality

One associated wetland of the Skagit River (Wetland A/Gages Slough) was identified on the subject property. No in-water work is proposed, however, increases in impervious surfaces associated with the proposed development may have an effect on local hydrologic and water quality functions within the watershed. In order to dampen these effects, the project proposes stormwater detention and enhanced water quality treatment, which is anticipated to adequately address changes in land cover associated with the proposed development so that no detrimental effects to downgradient areas occurs. Best management practices (BMP's) and temporary erosion and sediment control (TESC) measures will be implemented to avoid in avoiding potential water quality impacts throughout the duration of construction.

The overall Action Area associated with the proposed site development is characterized by the 1,991-foot radius for impacts from terrestrial noise from construction activities. Refer to Appendix B for the Action Area map.

3.4 Proposed Project Effects to Habitat

Impacts to Water Quality and Quantity and Flood Storage Capacity

The proposed residential development will result in excavation, grading, waterline boring under Wetland A, and road construction along South Pine Street which is located within the 100-year floodplain of the Skagit River. An increase in impervious surfaces associated with the development is proposed, however, stormwater detention and wetland buffer restoration actions are anticipated to adequately offset the impacts to water quality and flood storage capacity.

During project construction, TESC measures and BMPs designed to control site runoff will further minimize potential immediate effects to hydrology and water quality. The installation activities will likely be performed during the dry season when water levels within the wetland are lowest, minimizing potential indirect impacts. No adverse impacts to water quality, quantity, or flood storage capacity will occur due to the de minimis impacts of floodplain excavation and grading, proposed floodplain compensation, appropriate construction measures that will be in place, and anticipated long-term water quality and flood storage functions.

Impacts to Riparian Vegetation

The proposed residential development will not negatively impact any riparian vegetation associated with the floodplain. The majority of the floodplain currently consists of maintained agricultural land and lacks typical native riparian vegetation. The proposed work will be located outside of the wetland buffer, limiting potential impacts. Furthermore, buffer restoration is proposed due to the degraded nature of the existing buffer. The proposed restoration actions will restore and improve riparian vegetation.

Impacts to Habitat Forming Processes

The proposed development will not adversely impact any habitat forming processes within the floodplain. The subject property is largely comprised of maintained agricultural land that lacks native woody plant cover, habitat interspersion, and large woody debris, which is further surrounded by commercial and residential properties. The proposed project will improve native habitat forming processes through wetland buffer restoration. Native vegetation plantings within the floodplain will aid in stabilizing the bank, removing pollutants and sediment from water prior to entering the wetland and stream, providing shading to the channel, and increasing the input of leaf litter and large woody debris. As a result, while new development is proposed within portions of the floodplain, the project will significantly enhance the remainder of the floodplain onsite through native plantings, which in turn will improve floodplain habitat processes.

Impacts to Floodwater Refuge

The proposed development and buffer restoration will not impact any side channels that could potentially provide floodwater refuge habitat.

Impacts to Spawning Substrate

The proposed project will not impact spawning substrate within the floodplain as there are no documented salmonoid spawning areas adjacent to the project location. The nearest salmonoid spawning location documented by WDFW SalmonScape is for winter steelhead in the Skagit River approximately 3.5 miles northeast of the project area. Furthermore, no in-water work or wetland impacts are proposed, further avoiding potential impacts to spawning substrates.

Impacts from Habitat Isolation, Bank Armoring, Channel Straightening, Construction Effects, and Direct Effects

No habitat isolation, bank armoring, channel straightening or other related direct effects are proposed. The proposed development avoids all direct impacts to wetlands and waterbodies. The proposed project may result in temporary construction noise impacts. The noise impacts will be limited to terrestrial noise associated with the use of construction equipment such as a dozer, excavator, and concrete pump truck. Best management practices (BMP's) and temporary erosion and sediment control (TESC) measures that will be implemented throughout construction to limit potential indirect effects.

3.5 Proposed Project Effects to Species

Per the Regional Guidance for Floodplain Habitat Assessment and Mitigation, FEMA Region X, 2010, this document will include effects determinations for Bull Trout, Southern Resident Killer Whales, Puget Sound Chinook Salmon and Puget Sound Steelhead Trout (Table 3).

Table 3. Species Determination Summary.

| Species Name | Common Name | Federal Listing Status | Determination of Effect to Species ¹ | Determination of Effect to Critical Habitat |
|---------------------------------|--------------------------------|------------------------|---|---|
| <i>Oncorhynchus mykiss</i> | Puget Sound Steelhead Trout | Threatened | No Effect | No Effect |
| <i>Oncorhynchus tshawytscha</i> | Puget Sound Chinook Salmon | Threatened | No Effect | No Effect |
| <i>Orcinus orca</i> | Southern Resident Killer Whale | Endangered | No Effect | No Effect |
| <i>Salvelinus confluentus</i> | Bull Trout | Threatened | No Effect | No Effect |

Puget Sound Steelhead ESU and Critical Habitat

Oncorhynchus mykiss – Threatened, listed May 11, 2007

Critical habitat designated 2005 (78 FR 2725)

In freshwater habitats, steelhead need productive, well-oxygenated streams for spawning that have riffles, pools, overhanging vegetation, boulders and gravel to lay their eggs. WDFW SalmonScape identifies gradient accessible reach for winter steelhead salmon within Gages Slough. Terrestrial noise associated with the project actions are not expected to have any effect on fish species. No in-water work is proposed; therefore, no turbidity impacts are anticipated, and BMP’s and TESC measures will be implemented to further prevent any potential indirect effects. As such, it is anticipated the proposed project actions will have **No Effect on Puget Sound Steelhead**. In addition, Gages Slough lacks suitable habitat for steelhead trout given the lack of pool and riffle sequences and large woody debris that are essential in creating habitat complexity, cover, and areas of spawning gravels. Given the lack of suitable habitat, the proposed activities will have **No Effect on Puget Sound Steelhead Critical Habitat**.

Puget Sound Chinook Salmon ESU and Critical Habitat

Oncorhynchus tshawytscha – Threatened, listed (reaffirmed) June 28, 2005 (70FR37160)

Critical habitat designated September 2, 2005 (70FR52630)

Chinook range from the Chukchi Sea in Alaska down to Monterey Bay, California, using many of the rivers located within their range for spawning and rearing. In freshwater, spawning chinook require deep, coarse gravel with adequate irrigation to build their redds. WDFW SalmonScape identifies the gradient accessible reach of fall chinook salmon within Gages Slough, however, due to the pump station, the slough is likely inaccessible to fish. Terrestrial noise associated with the project actions are not expected to have any effect on fish species. No in-water work is proposed; therefore, no turbidity impacts are anticipated, and BMP’s and TESC measures will be implemented to further prevent any potential indirect effects. As such, it is anticipated the proposed project actions will have **No Effect on Puget Chinook Salmon**. The nearest documented presence is located approximately 1.7 miles downstream of the project area, within the Skagit River and outside of the Action Area. In addition, habitat within Gages Slough is not suitable for spawning and rearing as it lacks adequate gravel and irrigation for building their redds. As there is no designated critical habitat within the Action Area the proposed activities will have **No Effect on Puget Sound Chinook Critical Habitat**.

Southern Resident Killer Whale

Orcinus orca - Endangered, listed November 15, 2005

Critical Habitat designated November 2006

Southern Resident Killer Whales (*Orcinus orca*) are currently endangered with a declining population. The proposed project area is not adjacent to marine waters, and the only relevant discussion of potential effects to Southern Resident Killer Whale is in possible indirect effects. The primary prey source of these whales is chinook salmon. The project will have no effect on chinook salmon or their habitat, therefore, the project will result in no appreciable change in available prey for Southern Resident Killer Whale. As such, the project is expected to have **No Effect on Southern Resident Killer Whales**. The nearest designated critical habitat is located approximately 0.6 miles southeast of the project area, within the Skagit River. As there is no designated critical habitat in the Action Area, the proposed activities will have **No Effect on Southern Resident Killer Whale Critical Habitat**.

Bull Trout and Critical Habitat

Salvelinus confluentus – Threatened, listed November 1, 1999

Critical habitat designated October 18, 2010 (75FR64004)

Bull trout have the most specific habitat requirements of salmonids. They require colder water temperatures, clean stream substrates for spawning and rearing, complex habitats including streams with riffles and deep pools, undercut banks and large logs; and they also rely on river, lake and ocean habitats that connect to headwater streams for annual spawning and feeding migrations (USFWS, 2010). No documented or modeled presence of bull trout or associated critical habitat is identified by the WDFW SalmonScape or PHS maps in the Action Area of the proposed project area. Terrestrial noise associated with the project actions are not expected to have any effect on fish species. No in-water work is proposed; therefore, no turbidity impacts are anticipated, and BMP's and TESC measures will be implemented to further prevent any potential indirect effects. As such the project will have **No Effect on Bull Trout**. The nearest designated critical habitat is located approximately 0.6 miles southeast of the project area, within the Skagit River and outside of the Action Area. As there is no designated critical habitat near the project area, the proposed activities will have **No Effect on Bull Trout Critical Habitat**.

Chapter 4. Closure

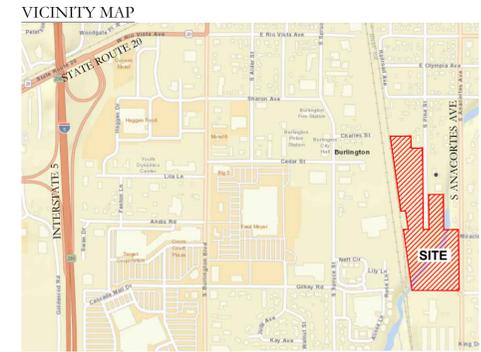
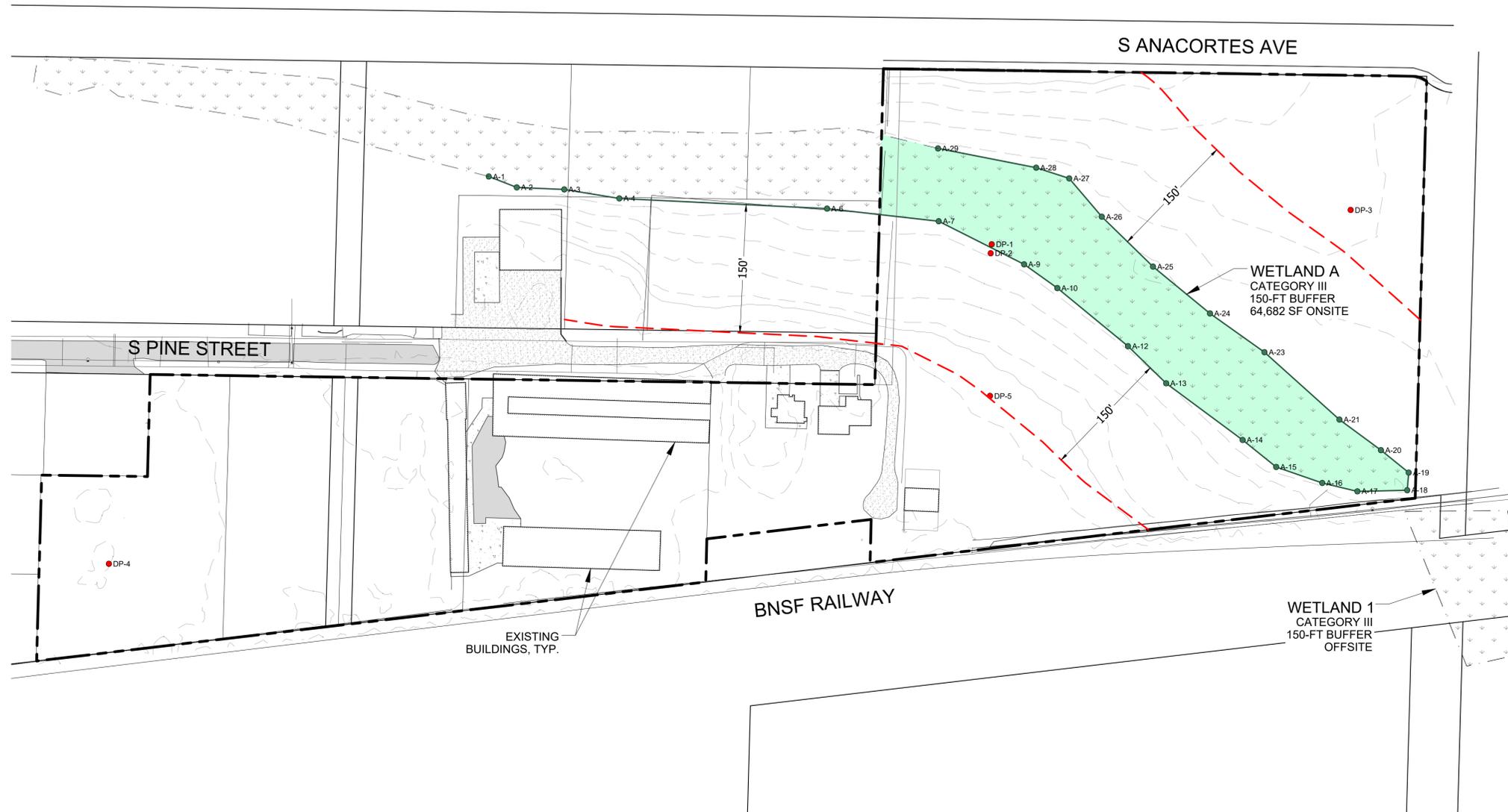
The findings and conclusions documented in this report have been prepared for specific application to this project. They have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar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

Chapter 5. References

- Burlington Municipal Code (BMC). 2023. *Chapter 14.15 – Critical Area Regulations*. Website: <https://www.codepublishing.com/WA/Burlington/#!/Burlington14/Burlington1415.html>. Current through December 8, 2022.
- Burlington Municipal Code (BMC). 2023. *Title 18 – Shoreline Master Program*. Website: <https://www.codepublishing.com/WA/Burlington/#!/Burlington18/Burlington18.html>. Current through December 8, 2022.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
- Federal Emergency Management Agency (FEMA). 2017. *FEMA Region X - Puget Sound BiOp Floodplain Habitat Assessment Worksheet, Version 1.6*. November 2017.
- FEMA. 2018. *National Flood Insurance Program Record of Decision*. April 2018.
- Granger, T., T. Hruby, A. McMillan, D. Peters, J. Rubey, D. Sheldon, S. Stanley, and E. Stockdale. 2005. *Wetlands in Washington State - Volume 2: Guidance for Protecting and Managing Wetlands*. Washington State Department of Ecology. Publication #05-06-008. Olympia, Washington. April 2005.
- Hruby, T. 2014. *Washington State Wetland Rating System for Western Washington – Revised*. Washington State Department of Ecology Publication #04-06-029.
- Hruby, T., K. Harper, and S. Stanley. 2009. *Selecting Wetland Mitigation Sites Using a Watershed Approach*. Washington State Department of Ecology. Publication #09-06-032.
- U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (EPA). 2008. *Compensatory Mitigation for Losses of Aquatic Resources; Final Rule*. Federal Register. Volume 73, Number 70 (33 CFR Parts 325 & 332, 40 CFR Part 230)
- USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center. Vicksburg, Mississippi.
- U.S. Fish and Wildlife Service (USFWS). 2010. 75 FR 63898, October 18, 2010. Federal Register Vol. 75, No. 200, Monday October 18, 2010, Rules and Regulations Department of the Interior Fish and Wildlife Service; 50 CFR Part 17. Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for Bull Trout in the Coterminous United States.
- Washington State Department of Ecology (WSDOE), U.S. Army Corps of Engineers (USACE), and U.S. Environmental Protection Agency (EPA). 2006. *Wetland Mitigation in Washington State Part 2: Developing Mitigation Plans (Version 1.0, March 2006, WSDOE publication # 06-06-11b)*. WSDOE Shorelands and Environmental Assistance Program. Olympia, Washington.

WSDOE, USACE, and EPA Region 10. 2021. Wetland Mitigation in Washington State–Part 1: Agency Policies and Guidance (Version 2). Washington State Department of Ecology Publication #21-06-003.

Appendix A — Existing Conditions and Proposed Exhibits



SOURCE: ESRI (ACCESSED 06/14/2023)

LOCATION

THE NW ¼ OF SECTION 05,
TOWNSHIP 34N, RANGE 04E, WM

APPLICANT/OWNER

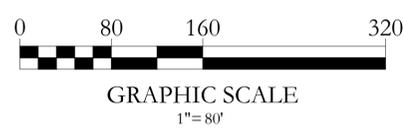
NAME: CORNER 9 PROPERTIES, LLC
ADDRESS: 504 E FAIRHAVEN AVENUE
BURLINGTON, WA 98223
CONTACT: ANNA NELSON
PHONE: (360) 755-9021
E-MAIL: ANNA@LANDEDGENTRY.COM

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 | BUFFER AVERAGING PLAN |
| 3 | PLANT SCHEDULE, NOTES, & DETAILS |



PLAN LEGEND

| | |
|--|--|
| | PROPERTY LINE |
| | EXISTING WETLAND BOUNDARY |
| | APPROXIMATED WETLAND BOUNDARY (NOT SURVEYED) |
| | WETLAND BUFFER |
| | WETLAND FLAG LOCATION (W-#) |
| | DATA PLOT LOCATION (DP-#) |

SOURCE:

12100 Ne 195th St, Suite 305
Bothell, Washington 98011
425.885.7877 Fax 425.885.7963

ENGINEERING · PLANNING · SURVEYING

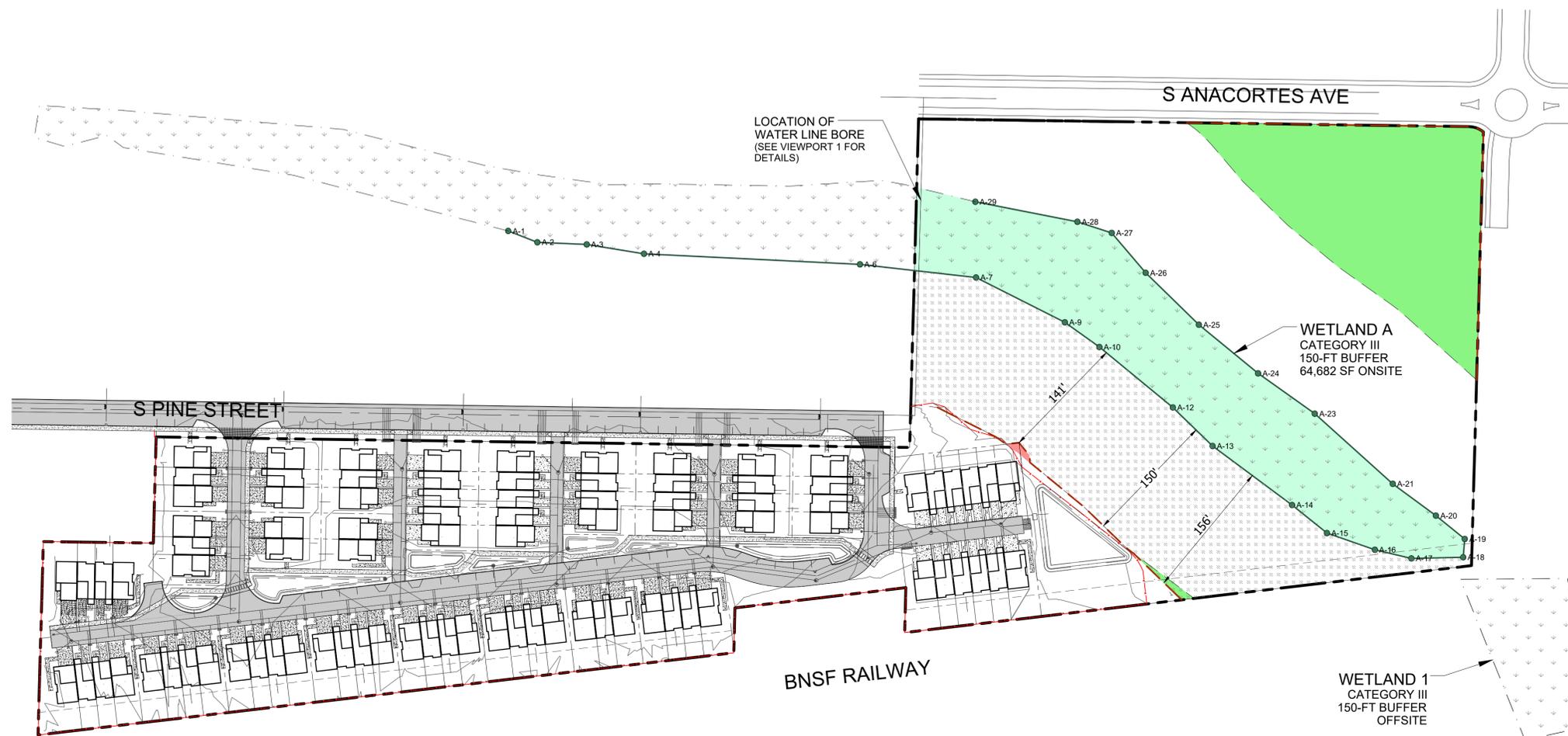
Soundview Consultants LLC
Environmental Assessment · Planning · Land Use Solutions
P: 253.514.8952 F: 253.514.8954
2907 HARBORVIEW DRIVE
GIG HARBOR, WASHINGTON 98355
WWW.SOUNDVIEWCONSULTANTS.COM

GAGES CROSSING
900 S PINE STREET
BURLINGTON, WA 98233

SKAGIT COUNTY PARCEL NUMBERS:
P62772, P62771, P72178, P72179, P72180,
P72181, P133597, and P133596

| |
|------------------|
| DATE: 07/18/2023 |
| JOB: 1916.0003 |
| BY: MW/DS |
| SCALE: AS SHOWN |
| SHEET: 1 |

S:\GAGES\1916\Drawings\1916.dwg
 Current Date: 07/18/2023
 Printed: July 18, 2023



PLAN LEGEND

- PROPERTY LINE
- EXISTING WETLAND BOUNDARY
- APPROXIMATED WETLAND BOUNDARY (NOT SURVEYED)
- CLEARING AND GRADING LIMIT LINE
- POST CONSTRUCTION BUFFER

BUFFER AVERAGING LEGEND

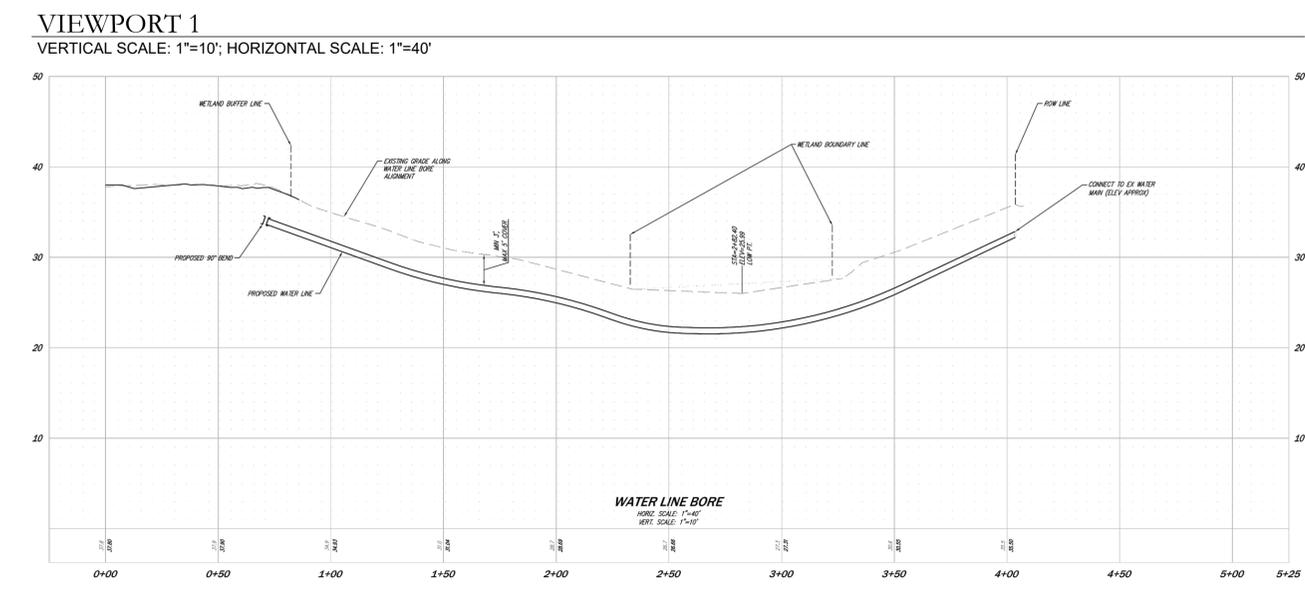
WETLAND BUFFER

| | | |
|---------------------------|----------------------|-----------|
| | BUFFER DECREASE AREA | 205 SF |
| | BUFFER INCREASE AREA | 49,820 SF |
| (WETLAND BUFFER NET GAIN) | | 49,615 SF |

MITIGATION LEGEND

BUFFER MITIGATION

| | | |
|--|--------------------|-----------|
| | BUFFER RESTORATION | 79,982 SF |
|--|--------------------|-----------|



PRELIMINARY INFORMATION ONLY

NOT FOR CONSTRUCTION

SOUNDVIEW CONSULTANT'S LLC ASSUMES NO LIABILITY OR RESPONSIBILITY FOR CONSTRUCTION, IMPROVEMENTS, OR ESTIMATES BASED ON THIS PLAN SET

SOURCE:

12100 Ne 195th St, Suite 305
Bothell, Washington 98011
425.885.7877 Fax 425.885.7963

CORE DESIGN
ENGINEERING · PLANNING · SURVEYING

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

GAGES CROSSING
900 S PINE STREET
BURLINGTON, WA 98233

SKAGIT COUNTY PARCEL NUMBERS:
P62772, P62771, P72178, P72179, P72180,
P72181, P133597, and P133596

| |
|------------------|
| DATE: 07/18/2023 |
| JOB: 1916.0003 |
| BY: MW/DS |
| SCALE: AS SHOWN |
| SHEET: 2 |

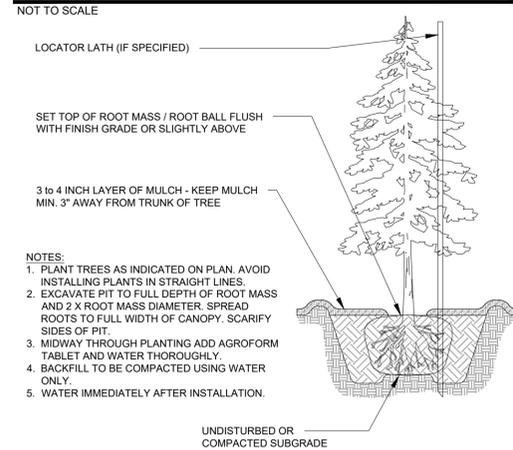
S:\CURRENT\1916_Crossing\1916.dwg (1916.dwg) Gages Crossing\Graphics & Maps\Gages - CURRENT SVC DRAWINGS.dwg
Current Date: 07/18/2023 10:03:07 AM
Printed: July 18, 2023

| | | Area (sf): | 79,982 | | | | |
|---|-------------------------|---------------------|---------------------------|----------------|---------------|-------------|--------------------|
| | | Cov'g (%): | 100 | | | | |
| | | Trees (%): | 50 | | | | |
| | | Shrubs (%): | 50 | | | | |
| Scientific Name | Common Name | WL Status | Buffer Restoration | Spacing (min.) | Height (min.) | Size (min.) | Planting Area |
| TREES | | (Qty) | | | | | |
| <i>Acer macrophyllum</i> | bigleaf maple | FACU | 12 | 10 ft | 3 ft | 2 gal | Near Tract G |
| <i>Picea sitchensis</i> | Sitka spruce | FAC | 88 | 10 ft | 3 ft | 2 gal | Moist - on hummock |
| <i>Pseudotsuga menziesii</i> | Douglas fir | FACU | 88 | 10 ft | 3 ft | 2 gal | Dry |
| <i>Salix lasiandra</i> | Pacific willow | FACW | 8 | 10 ft | 4 ft | Stakes | Near Wetland |
| <i>Salix scouleriana</i> | Scouler's willow | FAC | 76 | 5 ft | 4 ft | Stakes | Dry |
| <i>Salix sitchensis</i> | Sitka willow | FACW | 31 | 5 ft | 4 ft | Stakes | Near Wetland |
| <i>Thuja plicata</i> | western redcedar | FAC | 111 | 10 ft | 3 ft | 2 gal | Moist - on hummock |
| <i>Tsuga heterophylla</i> | western hemlock | FACU | 50 | 10 ft | 3 ft | 2 gal | Moist - on hummock |
| | | Total: | 464 | | | | |
| SHRUBS | | (Qty) | | | | | |
| <i>Acer circinatum</i> | vine maple | FAC | 57 | 10 ft | 4 ft | 2 gal | Dry/Moist |
| <i>Cornus stolonifera</i> | red-osier dogwood | FACW | 357 | 4 ft | 3 ft | 1 gal | Near Wetland |
| <i>Mahonia aquifolium</i> | tall Oregon grape | FACU | 119 | 4 ft | 2 ft | 1 gal | Dry |
| <i>Mahonia nervosa</i> | low Oregon grape | FACU | 190 | 4 ft | 1 ft | 1 gal | Dry/Moist |
| <i>Morella californica (Myrica c.)</i> | Pacific wax-myrtle | FACU | 19 | 10 ft | 4 ft | 2 gal | Dry |
| <i>Physocarpus capitatus</i> | Pacific ninebark | FACW | 228 | 5 ft | 2 ft | 1 gal | Near Wetland |
| <i>Polystichum munitum</i> | western swordfern | FACU | 119 | 4 ft | 1 ft | 1 gal | Dry/Moist |
| <i>Rosa nutkana</i> | Nootka rose | FAC | 238 | 4 ft | 2 ft | 1 gal | Dry |
| <i>Rubus spectabilis var. spectabilis</i> | salmonberry | FAC | 238 | 4 ft | 2 ft | 1 gal | Near Wetland |
| <i>Spiraea splendens</i> | subalpine spirea | NL | 48 | 4 ft | 2 ft | 1 gal | Moist/Wet |
| <i>Symphoricarpos albus var. laevigatus</i> | common snowberry | FACU | 238 | 4 ft | 2 ft | 1 gal | Dry/Moist |
| | | Total: | 1851 | | | | |
| SEED MIXES (www.riverrefugeseed.com) | | WL Status | Buffer Restoration | | | | |
| Native Moist Soil Flower Mix #2 | | 9 lbs/acre | | (Qty) | | | |
| <i>Plagiobothrys figuratus</i> | Fragrant popcorn flower | 30% | | | | | |
| <i>Polygonum pensylvanicum</i> | Pennsylvania smartweed | 30% | | | | | |
| <i>Epilobium densiflorum</i> | Dense spiked primrose | 15% | | | | | |
| <i>Camassia leichlinii</i> | Large camas | 10% | | | | | |
| <i>Sagittaria latifolia</i> | Wapato | 5% | | | | | |
| <i>Grindelia integrifolia</i> | Puget Sound gumweed | 5% | | | | | |
| <i>Downingia elegans</i> | Elegant calicoflower | 5% | | | | | |
| | | Total (lbs): | 17 | | | | |

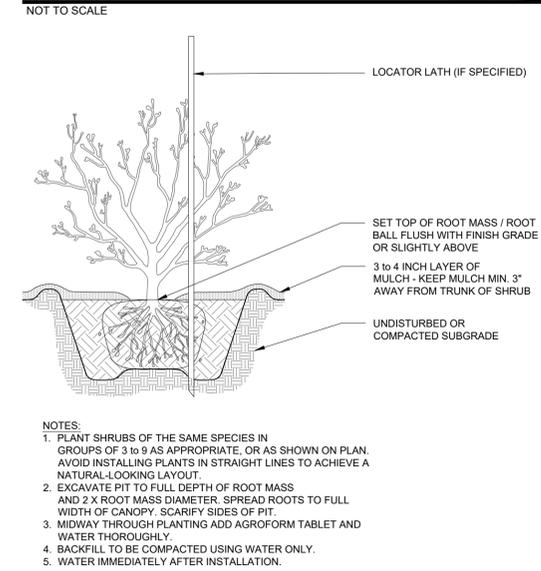
1 - Scientific names and species identification taken from *Flora of the Pacific Northwest, 2nd Edition (Hitchcock and Cronquist, Ed. by Giblin, Ledger, Zika, and Olmstead, 2018)*.
 2 - Over-sized container plants are suitable for replacement pending Wetland Scientist approval.
 3 - Alternate native 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 - Shrub calculations based upon 5-ft average spacing.
 6 - Tree calculations based upon 10-ft average spacing.
 7 - *Gaultheria shallon*, *Mahonia nervosa*, & *Polystichum munitum* to be planted in groups of 3 to 5 around the base of new trees and in areas of sparse vegetation

PLANT SCHEDULE

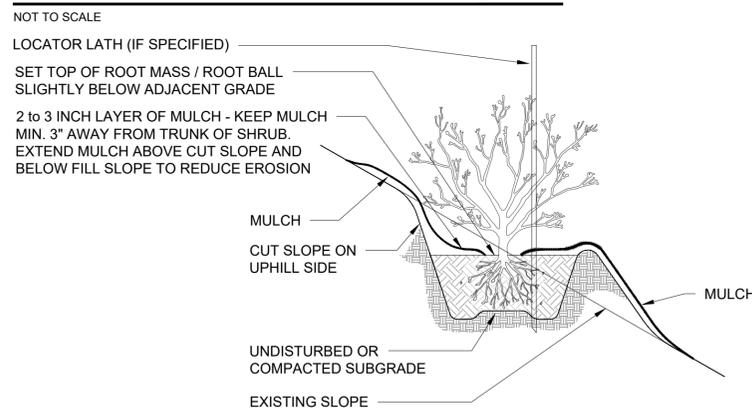
CONIFEROUS TREE PLANTING DETAIL (TYPICAL)



TREE AND SHRUB PLANTING DETAIL (TYPICAL)



TREE AND SHRUB PLANTING ON STEEP SLOPE



SOURCE:

12100 Ne 195th St, Suite 305
 Bothell, Washington 98011
 425.885.7877 Fax 425.885.7963

CORE DESIGN

ENGINEERING · PLANNING · SURVEYING

Soundview Consultants LLC

Environmental Assessment · Planning · Land Use Solutions

P: 253.514.8952
 F: 253.514.8954
 WWW.SOUNDVIEWCONSULTANTS.COM

2907 HARBORVIEW DRIVE
 GIG HARBOR, WASHINGTON 98335

GAGES CROSSING

900 S PINE STREET
 BURLINGTON, WA 98233

SKAGIT COUNTY PARCEL NUMBERS:
 P62772, P62771, P72178, P72179, P72180,
 P72181, P133597, and P133596

PRELIMINARY INFORMATION ONLY

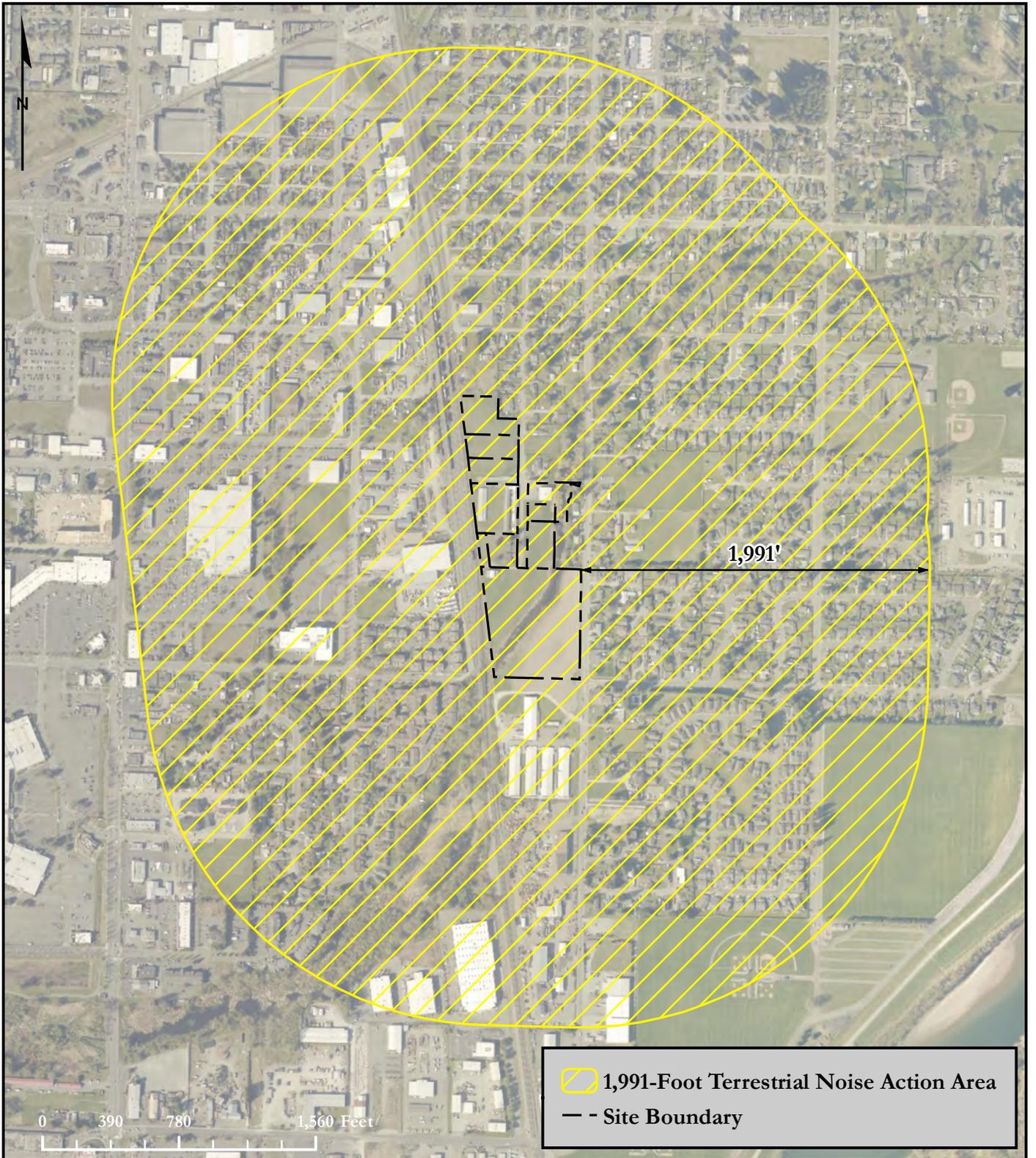
NOT FOR CONSTRUCTION

SOUNDVIEW CONSULTANTS LLC ASSUMES NO LIABILITY OR RESPONSIBILITY FOR CONSTRUCTION, IMPROVEMENTS, OR ESTIMATES BASED ON THIS PLAN SET

| |
|------------------|
| DATE: 07/18/2023 |
| JOB: 1916.0003 |
| BY: MW/DS |
| SCALE: AS SHOWN |
| SHEET: 3 |

Appendix B — Action Area Map

ACTION AREA MAP



Soundview Consultants LLC
Environmental Assessment • Planning • Land Use Solutions

2907 Harborview Dr., Suite D, Gig Harbor, WA 98335
Phone: (253) 514-8952 Fax: (253) 514-8954
www.soundviewconsultants.com

GAGES CROSSING

900 S PINE ST
BURLINGTON, WA 98233

SKAGIT COUNTY PARCEL NUMBERS:
P62772, P72178, P72179, P72180,
P72181, P133597 & P133596

| |
|------------------|
| DATE: 7/3/2023 |
| JOB: 1916.0003 |
| BY: DDS |
| SCALE: 1" = 800' |
| FIGURE NO. 1 |

Appendix C — Qualifications

All determinations and supporting documentation, including this *Conceptual Mitigation Plan* prepared for the *Gages Crossing* property were prepared by, or under the direction of, Jon Pickett of SVC. In addition, report preparation was completed by Cody Berthiaume and general project oversight and final quality assurance/quality control was completed by Rachael Hyland.

Jon Pickett

Principal

Professional Experience: 14+ years

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

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

Cody Berthiaume

Staff Scientist

Professional Experience: 5+ years

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

Rachael Hyland, PWS, Certified Ecologist

Senior Environmental Scientist

Professional Experience: 10 years

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

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