Attachment M

CONCEPTUAL WETLAND BUFFER MITIGATION PLAN
NORTHWEST DRIVE

FEBRUARY 2024

Soundview Consultants
Environmental Assessment
Planning + Land Use Solutions

CONCEPTUAL WETLAND BUFFER MITIGATION PLAN
NORTHWEST DRIVE

FEBRUARY 13, 2024

PROJECT LOCATION

4241 NORTHWEST DRIVE
BELLINGHAM, WASHINGTON 98226

PREPARED FOR

ETHAN POTTS
PROSPECT DEVELOPMENT
220 W CHAMPION STREET, #240
BELLINGHAM, WASHINGTON 98225

PREPARED BY

SOUNDVIEW CONSULTANTS LLC
2907 HARBORVIEW DRIVE
GIG HARBOR, WASHINGTON 98335
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Soundview Consultants
Environmental Assessment
Planning + Land Use Solutions

Executive Summary

Soundview Consultants LLC (SVC) is assisting Ethan Potts and Chay Tan (Applicant) with a Conceptual Mitigation Plan for the proposed residential development of a 3.99-acre site located at 4241 Northwest Drive in the City of Bellingham, Washington. The subject property is situated in the Southwest ¼ of Section 11, Township 38 North, Range 02 East, W.M. (Whatcom County Tax Parcel Number 3802114351860000).

SVC investigated the subject property for the presence of potentially-regulated wetlands, waterbodies, and fish and wildlife habitat in the fall of 2022. The site investigations identified two potentially regulated wetlands on the subject property (Wetlands A and B). Per Bellingham Municipal Code (BMC) 16.55.280, Wetlands A and B are classified as Category III wetlands with low habitat scores of 4. Per BMC 16.55.340.B.2., Wetlands A and B are subject to 80-foot buffers based on proposed high land use intensity. An additional 15-foot building setback is required from the edge of all wetland buffers per BMC 16.55.340.G. No other potentially regulated wetlands or fish and wildlife habitat conservation areas were identified on or within 300 feet of the subject property. Please see SVC's *Wetland and Fish and Wildlife Habitat Assessment Report – Northwest Drive* (SVC, 2024) prepared under separate cover for more details regarding the site assessment.

Applicant proposes residential development of the subject property with seven multi-unit townhouses, paved site access and parking stalls, utilities, and associated infrastructure, and includes frontage improvements along Northwest Drive to meet City development standards. The existing single-family residence and associated landscaping on the eastern portion of the subject property will be retained as non-conforming land uses as allowed pursuant to BMC 16.55.130.A. The project was carefully designed to avoid and minimize impacts to Wetlands A and B and the associated buffer areas to the greatest extent feasible by centralizing the location of development to maximize the use of available upland areas onsite, implementing buffer reduction and reasonable measures to reduce the adverse effect of adjacent land uses pursuant to BMC 16.55.340.C.2, containing frontage improvements within the existing footprint of Northwest Drive, and implementing best management practices (BMPs) and temporary erosion and sediment control (TESC) measures to protect the identified wetlands and associated buffers from temporary construction impacts. However, due to the extent of encumbrance by Wetlands A and B and the reduced buffers, complete avoidance is not feasible. The project requires 510 square feet of permanent impacts to the buffer of Wetland A in order to accommodate site layout needs, and 1,892 square feet of permanent impacts to the buffer of Wetland B in order to accommodate City requirements for a stormwater/sewer connection and pedestrian trail connecting to the southwest of the site. Per BMC 16.55.310, regulated activities, such as trail construction and utility installation, are not outright prohibited in wetland buffers provided the activity obtains appropriate permits and is offset with mitigation. The project also requires minor intrusion into the 15-foot building setbacks from the buffers of Wetlands A and B to accommodate the proposed development; however, development activities have been designed to ensure they do not cause damage to the critical root zones of trees existing or proposed in the wetland buffer and permitted pursuant to BMC 16.55.340.G.

In order to compensate for necessary, unavoidable wetland buffer impacts, 4,496 square feet of wetland buffer will be created (519 square feet adjacent to Wetland A and 3,977 square feet adjacent to Wetland B), in excess of the standard 1:1 ratio required for mitigation to buffer impacts. Approximately 2,450 square feet of buffer creation is proposed in areas currently degraded by non-

conforming land uses and will be fully restored. The remaining buffer areas onsite, totaling 41,366 square feet, will be enhanced. Restoration and enhancement activities will include the removal of non-native invasive species and other degradations from the buffer areas, and planting a dense assortment of native trees, shrubs, and groundcover to improve habitat and screening between Wetlands A and B and the proposed development. Overall, these actions are anticipated to ensure no net loss of buffer functions onsite. See Chapter 2 for additional details.

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

Wetland Name	Size (Onsite)	Category[1]	Regulated Under BMC Chapter 16.55	Regulated Under RCW 90.48	Regulated Under Clean Water Act
Wetland A	15,186 SF	III	Yes	Yes	Not Likely
Wetland B	40,968 SF	III	Yes	Yes	Not Likely

1. Current WSDOE and BMC 16.55.280 wetland ratings.

The table below summarizes the proposed wetland buffer impacts.

Type of Impact	Impact Area
Permanent Wetland A Buffer Impacts	510 SF
Permanent Wetland B Buffer Impacts	1,892 SF

The table below summarizes the proposed mitigation to offset wetland buffer impacts.

Mitigation Type	Mitigation Area
Wetland A Buffer Creation	519 SF
Wetland B Buffer Creation	3,977 SF
Buffer Enhancement (Wetland A and B)	41,366 SF
Buffer Restoration (Wetland A and B)	2,450 SF
Total Buffer Mitigation	**43,816 SF**

Site Map

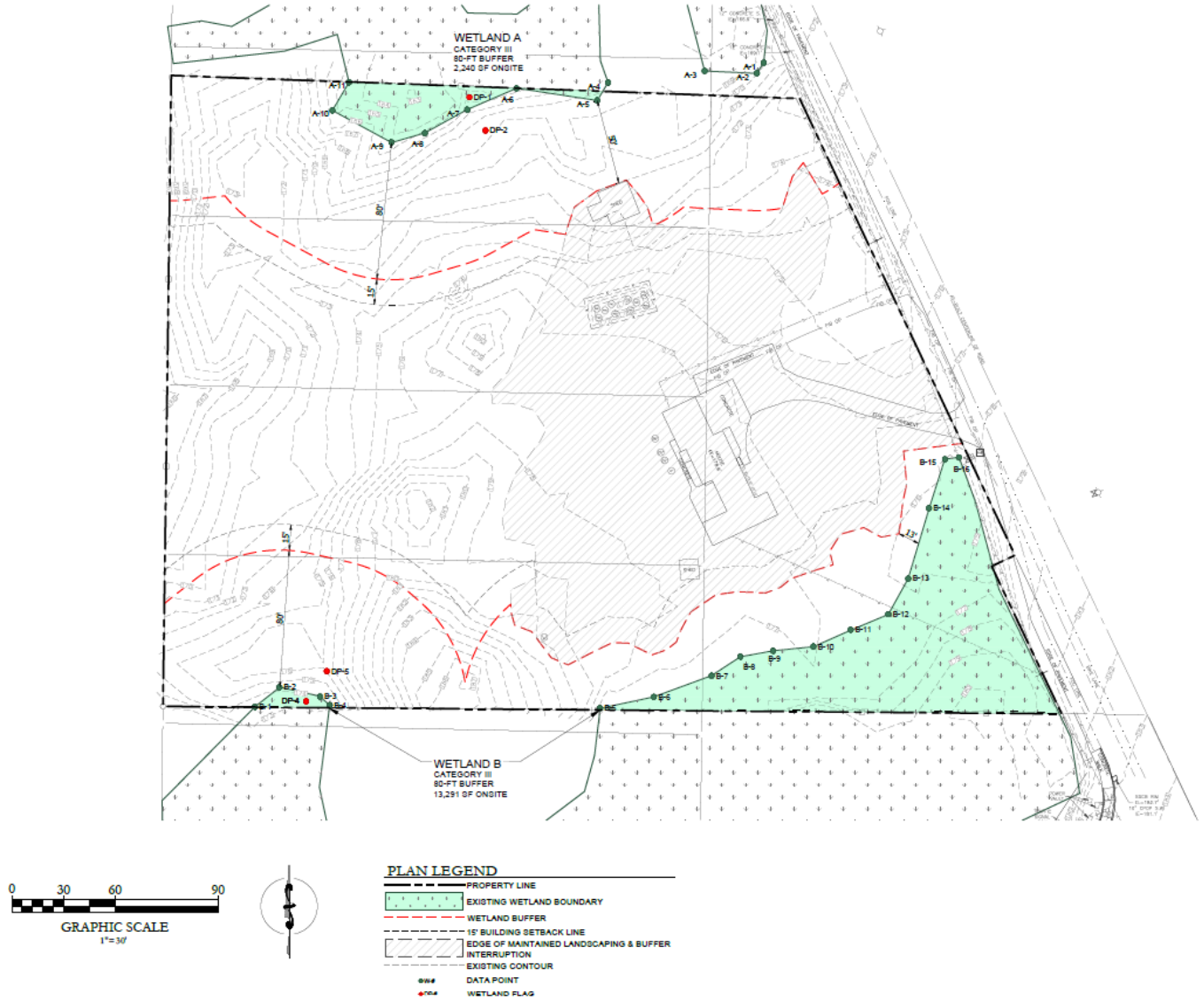

WETLAND A
CATEGORY III
80-FT BUFFER
2,240 SF ONSITE
WETLAND B
CATEGORY III
80-FT BUFFER
13,291 SF ONSITE
DP-1
DP-2
DP-3
DP-4
DP-5
80'
15'
0
30
60
90
GRAPHIC SCALE
1"= 30'
PLAN LEGEND
PROPERTY LINE
EXISTING WETLAND BOUNDARY
WETLAND BUFFER
15' BUILDING SETBACK LINE
EDGE OF MAINTAINED LANDSCAPING & BUFFER INTERRUPTION
EXISTING CONTOUR
DATA POINT
WETLAND FLAG

Table of Contents

Tables

Appendices

Chapter 1. Regulatory Considerations

SVC identified two wetlands (Wetlands A and B) on the subject property during site investigation work completed on November 15, 2022. No other potentially regulated wetlands, waterbodies, or fish and wildlife habitat conservation areas were identified on or within 300 feet of the subject property. A detailed assessment of these areas is provided in the *Wetland and Fish and Wildlife Habitat Assessment Report – Northwest Drive* prepared under separate cover (SVC, 2024). This chapter provides a detailed analysis of local, state, and federal regulatory requirements applicable to the proposed project.

1.1 Local Regulations

1.1.1 Buffer Requirements

Bellingham Municipal Code (BMC) 16.55.280 has adopted the current wetland rating system for western Washington (Hruby, 2014). Category III wetlands are wetlands with a moderate level of functions, as characterized by a score ranging from 16 to 19 points. Generally, these wetlands have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands. Wetlands A and B are classified as Category III wetlands with low habitat scores of 4 points.

BMC 16.55.340.B has established wetland buffers based on wetland rating, adjacent land use intensity, and habitat score. Per BMC 16.55.340.B.3, Category III wetlands with low habitat scores adjacent to high-intensity land uses require a standard 80-foot buffer. A summary of the standard buffer widths for the onsite wetlands is provided in Table 1.

Table 1. Wetland Summary Table

Wetland	Category	Habitat Score	Standard Buffer Width (ft)
A	III	4	80
B	III	4	80

An additional 15-foot building setback is also required from the edge of any wetland buffer per BMC 16.55.340.G.

The proposed project requires intrusion in the building setback associated with Wetlands A and B in order to meet site layout needs. Per BMC 16.55.340.G, the purpose of the building setback is to avoid conflicts with tree branches and/or critical root zones of trees that are in the buffer or will be planted in the buffer. Land uses not causing damage to the critical root zone are permitted in the building setback. The proposed project activities within the building setback include portions of uncovered porches, a paved sidewalk, and the edge of one of the proposed townhome units. These developments are not anticipated to cause damage to the critical root zone of existing trees or trees to be planted within the wetland buffers.

The Applicant intends to maintain the existing single-family residence and associated infrastructure onsite, including areas of landscaping located within the buffer of Wetland B. Per BMC 16.55.130, all land uses, buildings, structures, parking, driveways, utilities, stormwater facilities, trails, landscaping,

and supporting facilities that were lawfully established prior to the adoption of BMC Chapter 16.55 – Critical Areas, but otherwise would be determined to be located within a critical area or minimum standard buffer for a critical area, shall be deemed nonconforming, but not in violation of the Chapter's provisions. All such facilities may be continued, maintained, and replaced in kind. Landscaped areas associated with the existing single-family residential development onsite are located within the minimum standard buffer area associated with Wetland B and are protected as a non-conforming use under this provision.

1.1.2 Wetland Buffer Reduction

The Applicant proposes to reduce the standard buffer widths of Wetlands A and B in order to meet site layout needs and avoid and minimize critical area impacts. Per BMC 16.55.340.C.2, the director shall have the authority to reduce the standard buffer widths provided that the following criteria apply:

a. The buffer of a Category I wetland shall not be reduced.

N/A – The Applicant proposes to reduce the standard buffers associated with two Category III wetlands (Wetlands A and B).

b. The buffer reduction shall not adversely affect the functions and values of the adjacent wetlands.

The proposed buffer reduction will not adversely affect the functions and values of the adjacent wetlands. The existing buffers of Wetlands A and B are degraded due to the presence of landscaped areas associated with the existing single-family residence and non-native invasive species, such as Himalayan blackberry (*Rubus armeniacus*). The Applicant will implement all reasonable measures to reduce the adverse effects of the proposed residential development consistent with the requirements of item "e" below. Additionally, a combination of buffer creation, restoration, and enhancement is proposed which will improve onsite habitat and establish a dense vegetative screen between Wetlands A and B and the proposed development. Additional details are provided in Chapter 2.

The implementation of these measures, combined with the proposed buffer restoration and enhancement activities, will improve habitat and screening adjacent to Wetlands A and B, and ensure no adverse impacts to the functions and values of the wetlands result from the proposed buffer reduction.

c. The buffer of a Category II or III wetland shall not be reduced to less than 75 percent of the required buffer or 50 feet, whichever is greater;

The Applicant proposes to reduce the buffers of Wetlands A and B by 75 percent to 60 feet.

d. The buffer of a Category IV wetland shall not be reduced to less than 50 percent of the required buffer, or 25 feet, whichever is greater, provided the buffer reduction does not result in reducing the functions and values of the wetland; and

N/A – The Applicant proposes to reduce the standard buffers associated with two Category III wetlands (Wetlands A and B).

e. The applicant implements all reasonable measures to reduce the adverse effects of adjacent land uses and ensure no new loss of buffer functions and values. The specific measures that shall be implemented include, but are not limited to, the following:

i. Direct lights away from the wetland and buffer;

Lights will be directed away from the wetlands to the greatest extent feasible. Major light generating sources, such as access roads, are located internal to the proposed residences where possible. Additionally, proposed buffer restoration and enhancement actions will provide additional protection from light generating sources.

ii. Locate facilities that generate substantial noise (such as some manufacturing, industrial and recreational facilities) away from the wetland and buffer;

No substantial noise generating sources are anticipated from the proposed residential development. Nonetheless, proposed buffer restoration and enhancement actions are anticipated to provide an adequate buffer for noise from the proposed development.

iii. Implement integrated pest management programs;

Integrated pest management programs will be implemented as needed.

iv. Infiltrate or treat, detain and disperse runoff into buffer;

N/A – new runoff from the proposed development will be collected and routed either to the City's sewer system underneath Northwest Avenue, or to stormwater system that drains to the North End Regional Pond offsite to the southwest of the subject property.

v. Construct a wildlife permeable fence around buffer and post signs at the outer edge of the critical area or buffer to clearly indicate the location of the critical area according to the direction of the city;

A split-rail fence will be installed around the perimeter of the wetland buffers and marked with critical area signs to indicate the location of these areas and prevent intrusion.

vi. Plant buffer with "impenetrable" native vegetation appropriate for the location;

Approximately 43,816 square feet of modified buffer area onsite will be restored and enhanced with a dense assortment of native trees, shrubs, and groundcover in order to establish an "impenetrable" screen between Wetlands A and B and the proposed development. See Chapter 2 for additional details.

vii. Use low impact development techniques to the greatest extent possible;

Low impact development techniques will be implemented to the greatest extent feasible; additional details are provided by the Project Engineer under separate cover.

viii. Establish and record a permanent conservation easement to protect the wetland and the associated buffer and restrict the use of pesticides and herbicides in the easement.

Wetlands A, B, and the associated buffers will be placed in an established and recorded conservation easement where the use of pesticides and herbicides will be restricted.

1.1.3 Regulated Activities

The proposed project requires permanent impacts to the reduced buffers of Wetlands A and B in order to meet site layout needs, and to meet the City's offsite utility connection requirements, and provide a pedestrian trail connecting to Arctic Avenue offsite to the southwest. Per BMC 16.55.320, regulated activities, such as trail construction and utility installation, are not outright prohibited in wetland buffers. Approval of these activities should obtain the appropriate critical area permit, minor critical area permit, or exception depending on the activity, and mitigation should be provided in accordance with the provisions of BMC Chapter 16.55. This report provides mitigation to offset impacts to the buffers of Wetlands A and B and ensure no net loss of wetland buffer functions, and has been prepared to support the application for a critical area permit from the City of Bellingham.

1.1.4 Review Criteria

Per BMC 16.55.200.A, any alteration to a critical area shall be reviewed and approved, with conditions, or denied based on the proposals ability to comply with all of the following criteria:

1. *The proposal minimizes the impact on critical areas in accordance with mitigation sequencing (BMC 16.55.250);*

   The mitigation sequencing criteria under BMC 16.55.250 is addressed in Section 1.1.6 below.

2. *The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;*

   The proposed project does not pose an unreasonable threat to public health, safety, or welfare on or off the development proposal site. All runoff from the proposed development will be collected and conveyed to existing stormwater facilities in the vicinity of the development site. Project impacts are limited to minor, permanent impacts (2,402 square feet) to the outer portions of the reduced buffers associated with Wetlands A and B. Impacts will be offset through a combination of buffer creation (4,496 square feet), restoration (2,450 square feet), enhancement (41,366 square feet) to ensure no net loss of wetland buffer functions onsite. No adverse wetland impacts or impacts to offsite areas are anticipated.

3. *The proposal is consistent with the general purposes of this chapter and the public interest;*

   The proposed project has been designed for consistency with the general purposes of BMC Chapter 16.55 – *Critical Areas*. Impacts to Wetlands A and B and the associated buffers are being avoided and minimized to the greatest extent feasible (see Section 1.1.6 below), and the proposed project has been designed to ensure no net loss of wetland/wetland buffer functions. Additionally, all project activities are consistent with the Chapter's provisions and allowances as demonstrated herein.

4. *Any alterations permitted to the critical area are mitigated in accordance with mitigation requirements in BMC 16.55.240 and 16.55.260 and additional requirements as outlined in specific critical area sections;*

   Mitigation for impacts to the buffers of Wetlands A and B is proposed in accordance with the mitigation requirements of BMC 16.55.240 (Section 1.1.5 below) and BMC 16.55.260, as well as additional requirements applicable to wetlands outlined in BMC 16.55.270-350. The proposed project avoids direct wetland impacts entirely; as such, mitigation requirements for direct and indirect wetland impacts under BMC 16.55.350 are not applicable.

5. *The proposal protects the critical area functions and values consistent with the best available science and results in no net loss of critical area functions and values; and*

   The proposed project has been designed to protect critical are functions and values and ensure no net loss of critical area functions and values, consistent with best available science. See Chapter 2 for additional details.

6. *The proposal is consistent with other applicable regulations and standards.*

   The proposed impacts to the buffers of Wetlands A and B are consistent with all applicable regulations and standards outlined in BMC Chapter 16.55 – Critical Areas.

1.1.5 Mitigation Requirements

Per BMC 16.55.240, proposals requiring critical area impacts must meet the following requirements:

A. *The applicant shall avoid all impacts that increase risk to the general public and/or degrade the functions and values of a critical area or areas and their buffers. Unless otherwise provided in this chapter, and after mitigation sequencing in BMC 16.55.250 has been applied, if alteration to the critical area is unavoidable, all adverse impacts to critical areas and buffers resulting from a development proposal or alteration shall be mitigated using the best available science in accordance with an approved critical area report and SEPA documents, so as to result in no net loss of critical area functions and values.*

   No impacts are proposed that will increase the risk to the general public and/or degrade the functions and values of the identified wetlands or their associated buffers. The proposed project has been carefully designed to avoid and minimize critical area impacts to the greatest extent feasible, and direct wetland impacts are avoided entirely. However, due to site layout needs and the City's requirements for utility connections offsite to the southwest and a pedestrian access trail connecting to Arctic Avenue offsite to the south, permanent impacts to the buffers of Wetlands A and B are necessary and unavoidable. Mitigation sequencing demonstrating reasonable measures to avoid and minimize wetland impacts is addressed in Section 1.1.6 below. As permanent impacts to the reduced buffers of Wetlands A and B are necessary and unavoidable, a buffer restoration and enhancement plan has been prepared to ensure no net loss of critical area functions and values. See the Conceptual Mitigation Plan in Chapter 2 for additional details.

B. *Mitigation site selection shall be focused on the site's ability to sustain a critical area over the long term. Mitigation design shall be based on replacing functions and values in the context of the watershed in order to compensate for loss. In some case, on-site mitigation may not be the best location.*

Mitigation for permanent impacts to the buffers of Wetlands A and B will be provided through a combination of onsite buffer creation, restoration, and enhancement in order to maintain adequate screening between Wetlands A and B and the proposed development.

C. *Mitigation shall not be implemented until after city approval of a critical area report that includes a mitigation plan, and mitigation shall be in accordance with the provisions of the approved critical area report.*

Acknowledged. The proposed buffer restoration and enhancement plan will be provided concurrently with residential development of the subject property, after appropriate approvals have been obtained from the City.

D. *The applicant shall be required to submit a financial guarantee ("surety" or "assignment of funds") for 150 percent of the total costs of mitigation to ensure the mitigation requirements are met and the mitigation plan is fully implemented, including, but not limited to, the required monitoring and maintenance periods.*

Acknowledged. A financial guarantee will be submitted to the City of Bellingham as a condition of project approval.

1.1.6 Mitigation Sequencing

Per BMC 16.55.25, Applicants shall demonstrate that all reasonable efforts have been examined with the intent to avoid impacts to critical areas and buffers. When an alteration to a critical area is proposed, Applicants shall follow the mitigation sequential order of preference below:

A. *Avoid impact to critical areas by not taking a certain action or parts of an action*;

The proposed project is for residential development of the subject property with seven multi-unit townhouses, paved site access and parking stalls, utilities, and associated infrastructure, and includes frontage improvements along Northwest Drive to meet City development standards. The existing single-family residence and associated landscaping on the eastern portion of the subject property will be retained as non-conforming land uses as allowed pursuant to BMC 16.55.130.A.

The project has been carefully designed in order to avoid impacts to Wetlands A and B and the associated buffer areas identified onsite, and direct and indirect impacts to Wetlands A and B are avoided entirely. Development activities have been centralized to maximize the use of available upland areas. Additionally, buffer reduction pursuant to BMC 16.55.340.2 is being implemented, and frontage improvements are being limited to the existing footprint of Northwest Drive to avoid buffer impacts to the greatest extent feasible. However, due to the extent of encumbrance by Wetlands A and B and the associated buffers following reduction, the proposed development requires 510 square feet of permanent impacts to the reduced buffer of Wetland A to meet site layout needs and accommodate the footprint of one of the proposed townhouses. Additionally, 1,892 square feet of permanent impacts to the reduced buffer of Wetland B are necessary and unavoidable to meet the City's requirements for utility connections offsite to the southwest and a pedestrian access trail connecting to Arctic Avenue offsite to the south. The proposed project also requires intrusion into the 15-foot building

setbacks from the buffers of Wetlands A and B; however, these intrusions will not damage the critical root zone of trees currently present or proposed in the wetland buffer and as such, are permitted pursuant to BMC 16.55.340.G.

B. *Minimize impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;*

As mentioned under part 1 above, direct impacts to the buffers of Wetlands A and B are necessary and unavoidable to meet site layout needs and City development requirements. In order to minimize these impacts, the project will implement all reasonable measures to reduce the adverse effects of adjacent land uses in compliance with the buffer reduction criteria of BMC 16.55.340.C.2.e. Additionally, all permanent buffer impacts are located at the outer perimeter of the wetland buffer and will be limited to the minimum disturbance required to meet site layout needs and City development requirements. Furthermore, all appropriate best management practices (BMPs) and temporary erosion and sediment control (TESC) measures will be implemented for the duration of project activities to protect Wetlands A and B and the associated buffers from temporary construction impacts.

C. *Rectifying the impact to wetlands, critical aquifer recharge areas, frequently flooded areas, and habitat conservation areas by repairing, rehabilitating, or restoring the affected environment to the historical conditions or the conditions existing at the time of the initiation of the project;*

Mitigation to offset 2,402 square feet of permanent buffer impacts will be provided in excess of the standard 1:1 ratio for mitigation to buffer impacts by creating 519 square feet of buffer adjacent to Wetland A and 3,977 square feet of buffer area adjacent to Wetland B (4,496 square feet of wetland creation total). Approximately 2,450 square feet of proposed buffer creation area is currently degraded by non-conforming land uses protected under 16.55.120.A. These areas will be fully restored by removing non-native invasive species and other degradations (including a shed currently present in the buffer of Wetland A) and establishing a dense assortment of native trees, shrubs, and groundcover. Buffer creation areas not currently degraded by non-conforming land uses, as well as the remaining wetland buffer areas onsite (41,366 square feet total) will be enhanced by removing non-native invasive species and planting a dense assortment of native trees shrubs and groundcover. These actions will improve habitat and screening between the proposed development and Wetlands A and B and ensure no net loss of wetland buffer functions onsite. Additional details are provided in Chapter 2.

D. *Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods;*

Following site development, any disturbed soils outside of the buffer restoration and enhancement areas will be seeded with a native grass-seed mix and landscape plantings at the discretion of the Project Engineer to remove any erosion hazards. The establishment of a dense assortment of native trees, shrubs, and groundcover within the buffers is anticipated to provide adequate stability within those areas.

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

Consistent with the buffer reduction requirements of BMC 16.55.340.C.2.e, permanent split-rail fencing and signs indicating the presence of critical areas will be installed along the perimeter of the buffers of Wetlands A and B onsite in order to discourage trespassing and reduce potential impacts over time. Additionally, the wetlands and associated buffer areas will be established and recorded in a conservation easement to restrict the use of pesticides and herbicides and prohibit development in perpetuity.

F. *Compensating for the impact to wetlands, critical aquifer recharge areas, frequently flooded areas, and habitat conservation areas by replacing, enhancing, or providing substitute resources or environments;*

No direct wetland impacts are proposed. Permanent impacts to the buffers of Wetlands A and B, totaling 2,402 square feet, will be compensated by creating 4,496 square feet of buffer area between Wetlands A and B and the proposed development. The proposed buffer creation exceeds the standard 1:1 ratio of mitigation required for impacts to wetland buffers. A combination of buffer restoration and enhancement will be provided throughout the buffer creation areas as well as the remaining buffer areas onsite, totaling 43,816 square feet. The proposed buffer restoration and enhancement actions will include removing non-native invasive species and other degradations and planting a dense assortment of native trees, shrubs, and groundcover. These actions will improve habitat and screening between the proposed development and Wetlands A and B and ensure no net loss of wetland buffer functions onsite. Additional details are provided in Chapter 2.

G. *Monitoring the hazard or other required mitigation and taking remedial action when necessary.*

To ensure success of the enhancement and restoration actions, the project site will be monitored for a period of five years with formal inspections by a qualified biologist. If monitoring results indicate the performance standards are not being met, it may be necessary to implement part or all of a contingency plan. Refer to Chapter 2 for more details regarding the maintenance, monitoring, and contingency plan details.

1.2 State and Federal Considerations

On January 18, 2023, USACE and EPA published a revised definition of "Waters of the United States" (USACE and EPA, 2023a). The revised rule became effective on March 20, 2023. On May 25, 2023, the U.S. Supreme Court issued a decision affecting the definition of Waters of the United States, or "WOTUS", in *Sackett Et Ux. V Environmental Protection Agency Et Al.* On August 29, 2023, the US EPA and USACE issued a final rule to amend the final "Revised Definition of 'Waters of the United States'" rule. Under the 2023 revised rule, Waters of the United States is described as follows (USACE and EPA, 2023b):

(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;

(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: that are relatively permanent, standing or continuously flowing bodies of water; or;

(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) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section: 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) of this section;

(b) The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

Both Wetlands A and B are depressional wetlands that do not appear to have a continuous surface water connection to regulated Waters of the United States (WOTUS). As such, they do not likely meet the adjacent wetland criteria under part (a)(4) above and are not likely regulated by the USACE under Section 404 of the Clean Water Act (CWA).

Wetlands A and B are considered natural waters that are likely regulated by the WSDOE through the Revised Code of Washington (RCW) 90.48.

As no direct or indirect wetland impacts are proposed, additional State and Federal permits are not required.

Chapter 2. Conceptual Mitigation Plan

The following sections present the proposed conceptual wetland and buffer mitigation plan to improve wetland and wetland buffer protections and ecological functions. The proposed enhancement and restoration actions for the project attempt to strike a balance between achieving project goals and creating a positive result for the watershed and critical area habitat functions within the confines of the site.

2.1 Purpose and Need

The proposed project is for residential development of the subject property with seven multi-unit townhouses and associated infrastructure. The purpose of the proposed project is to provide additional housing units in the City of Bellingham and alleviate the shortage of residences in the greater Whatcom County area.

2.2 Description of Wetland Buffer Impacts

The proposed project is for residential development of the subject property with seven multi-unit townhouses, paved site access and parking stalls, utilities, and associated infrastructure, and includes frontage improvements along Northwest Drive to meet City development standards. The existing single-family residence and associated landscaping on the eastern portion of the subject property will be retained as non-conforming land uses as allowed pursuant to BMC 16.55.130.A. The project was carefully designed to avoid and minimize impacts to Wetlands A and B and the associated buffer areas to the greatest extent feasible by centralizing the location of development to maximize the use of available upland areas onsite, implementing buffer reduction and reasonable measures to reduce the adverse effect of adjacent land uses pursuant to BMC 16.55.340.C.2, containing frontage improvements within the existing footprint of Northwest Drive, and implemented best management practices (BMPs) and temporary erosion and sediment control (TESC) measures to protect the identified wetlands and associated buffers from temporary construction impacts.. However, due to the extent of encumbrance by Wetlands A and B and the reduced buffers, complete avoidance is not feasible. The project requires 510 square feet of permanent impacts to the buffer of Wetland A in order to accommodate site layout needs, and 1,892 square feet of permanent impacts to the buffer of Wetland B in order to accommodate City's requirements for utility connections offsite to the southwest and a pedestrian access trail connecting to Arctic Avenue offsite to the south. Per BMC 16.55.310, regulated activities, such as trail construction and utility installation, are not outright prohibited in wetland buffers provided the activity obtains appropriate permits and is offset with mitigation. The project also requires minor intrusion into the 15-foot building setbacks from the buffers of Wetlands A and B to accommodate the proposed development; however, development activities have been designed to ensure they do not cause damage to the critical root zones of trees existing or proposed in the wetland buffer, and permitted pursuant to BMC 16.55.340.G.

The table below summarizes the proposed wetland buffer and building setback impacts. A figure depicting the location of impacts is provided in Appendix A.

Table 2. Proposed Impacts to Critical Areas

Type of Impact	Impact Area
Permanent Wetland A Buffer Impacts	510 SF
Permanent Wetland B Buffer Impacts	1,892 SF

2.3 Onsite Mitigation Strategy

Full compensation for impacts to the buffers of Wetlands A and B will be provided through a combination of onsite buffer creation, restoration, and enhancement. The existing buffers of Wetlands A and B are degraded due to the presence of landscaped areas that are considered a non-conforming use protected under BMC 16.55.130.A and the presence of non-native invasive species. Buffer creation activities will include restoring 2,450 square feet of non-conforming land uses within the buffers of Wetlands A and B to functional, native buffer habitat. The buffer will also be increased in other areas between Wetlands A and B and the proposed development where feasible to provide additional screening. Overall, approximately 519 square feet of buffer will be created adjacent to Wetland A, and 3,977 square feet of buffer area adjacent to Wetland B will be created. The buffer creation areas not currently degraded by non-conforming uses, as well as the remaining buffer areas onsite (41,366 square feet total) will be enhanced. A figure depicting the location of buffer creation, restoration, and enhancement areas is provided in Appendix A.

Overall, the project proposes to restore and enhance approximately 43,816 square feet of modified buffer associated with Wetlands A and B. Buffer restoration and enhancement actions will focus on removing non-native invasive species and other buffer degradations potentially present (including a shed in the buffer of Wetland A), and planting a dense assortment of native trees, shrubs, and groundcover. These actions are intended to improve habitat diversity in the wetland buffers and provide a dense screen between the wetlands and the proposed development. A summary of mitigation actions is provided below.

Table 3. Proposed Mitigation

Mitigation Type	Mitigation Area
Wetland A Buffer Creation	519 SF
Wetland B Buffer Creation	3,977 SF
Buffer Enhancement (Wetlands A & B)	41,366 SF
Buffer Restoration (Wetlands A & B)	2,450 SF
Total Buffer Mitigation:	**43,816 SF**

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

- Remove any trash and other debris within the buffer mitigation areas;
- Pre-treat invasive plants, if present, with a Washington Department of Agriculture approved herbicide. Pre-treatment of the invasive plants should occur a minimum of two weeks prior to removal. After pre-treatment, grub to remove the invasive plants in preparation of plant installation;
- Plant all enhancement/restoration areas with native trees, shrubs and/or groundcovers to help retain soils, filter stormwater, and increase biodiversity;

- An approved native seed mix will be used to seed the disturbed enhancement 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 wetland 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.

2.4 Approach and Best Management Practices

Mitigation activities within the wetland buffers should occur immediately after grading is complete. TESC measures will be implemented that consists of high-visibility fencing (HVF) installed around native vegetation along the perimeter of the buffers, silt fencing between the graded areas and buffers, plastic sheeting on stockpiled materials, and seeding of disturbed soils. These TESC measures should be installed prior to the start of development or enhancement actions and actively managed for the duration of the project.

All equipment staging and materials stockpiles should be kept out of the critical areas and buffers, and the area will need to be kept free of spills and/or hazardous materials. Construction materials along with all construction waste and debris should be effectively managed and stockpiled on paved surfaces and kept free of the modified buffer areas. Following completion of the development, the entire site should be cleaned and detail graded using hand tools wherever necessary, and TESC measures will need to be removed.

2.5 Goals, Objectives, and Performance Standards

The goals and objectives for the proposed wetland buffer mitigation actions are based on providing additional habitat and protection for the onsite wetlands (Wetlands A and B) and providing supplementary water quality and hydrological functions. The wetland buffer creation, restoration and enhancement actions are capable of improving habitat function for the wetlands over time by establishment of a dense native, diverse vegetation barrier between the project and the critical areas. The goals and objectives of the creation, enhancement and restoration actions are as follows:

Goal 1 – Restore and enhance 43,816 square feet of buffer associated with Wetlands A and B.

Objective 1 – Establish dense cover of native trees, shrubs, grasses and forbs within the targeted enhancement and restoration areas to create diverse horizontal and vertical vegetation structure and improve wildlife habitat.

Performance Standard 1.1.1 – Minimum plant survivorship within the enhancement and restoration areas will be 100 percent of installed plants at the end of Year 1. Native recruits may be counted.

Performance Standard 1.1.2 – Minimum native woody species cover in the enhancement/restoration areas will be a minimum 30 percent total cover at the end

of Year 2, 40 percent total cover at the end of Year 3, and 50 percent at the end of Year 5.

Performance Standard 1.1.3 – At least 3 native tree species and 5 native shrub species will be present in the enhancement/restoration areas in all monitoring years. Native volunteer species will be included in the count.

Performance Standard 1.4 – State-listed, Class A noxious weeds must be completely eliminated from the enhancement/restoration areas in all monitoring years and invasive species that are not considered state-listed, Class-A noxious weeds shall not exceed 15 percent aerial cover in the buffer areas in all monitoring years.

2.6 Plant Materials and Installation

2.6.1 Plant Materials

All plant materials to be used for buffer 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 this 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 Agriform plant tabs or an approved like form. Mulch will consist of sterile wheat straw or clean recycled wood chips approximately 1/2 inch to 1 inch in size and 1/2 inch thick. If free of invasive plant species, the mulch material may be sourced from woody materials salvaged from the land clearing activities.

2.6.2 Plant Scheduling, Species, Size, and Spacing

Plant installation should occur as close to the conclusion of clearing and grading activities as possible to limit erosion and limit the temporal loss of function provided by the wetland buffer. 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 following subsections using the species and densities outlined in Appendix A.

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 mitigaton plan with the 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 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 plants thoroughly midway through backfilling and add Agriform 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.

2.6.6 Temporary Irrigation Specifications

While the native species selected for enhancement 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 while the native plantings become established.

2.6.7 Invasive Plant Control and Removal

Invasive species onsite to be removed include Himalayan blackberry and any listed noxious weeds or other invasive species that are existing or may colonize the enhancement area. These species are found nearby; therefore, to ensure these species do not expand following the enhancement actions, invasive

species within the enhancement and restoration areas will be pretreated with a root-killing herbicide approved for use in aquatic sites (e.g. Glyphosate 5.4 containing herbicide) a minimum of two weeks prior to being removed from the wetland buffer. The pre-treatment with herbicide should occur prior to all planned enhancement actions, and spot treatment of any surviving other invasive vegetation should be performed again each fall prior to leaf senescence for a minimum of three years.

2.7 Maintenance & Monitoring Plan

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 project, keeping the site free from of non-native invasive vegetation, trash, and waste.

The mitigation plan will require continued monitoring and maintenance to ensure the actions are successful. Therefore, the project site 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, early in the growing season and the end of the growing season for Year 1, twice during Year 2, and annually in Years 3 and 5. Closeout assessment will also be conducted in Year 5 to ensure the adequate enhancement and restoration area was established.

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

2.8 Reporting

Following each formal monitoring event, a brief annual monitoring report detailing the current ecological status of the enhancement and restoration actions, measurement of performance standards, and management recommendations will be prepared and submitted to the City of Bellingham by December 31st each year 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 portion of the site fail to meet the success criteria, a

contingency plan will be developed and implemented with regulatory approval. Such plans are adaptive and should be prepared on a case-by-case basis to reflect the failed enhancement/restoration 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 buffer associated with the proposed project site.

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

- Replacing plants lost to vandalism, drought, or disease, as necessary;
- Replacing any plant species with a 15 percent or greater mortality rate after two growing seasons with the same species or native species of similar form and function;
- Irrigating the enhancement and restoration areas only as necessary during dry weather if plants appear to be too dry, with a minimal quantity of water;
- Reseeding and/or repair of wetland and buffer areas as necessary if erosion or sedimentation occurs;
- Spot treat non-native invasive plant species; and
- Removing all trash or undesirable debris from the wetland and buffer areas as necessary.

2.10 Critical Area Protective Measures

Long-term protection of the enhancement and restoration site shall be provided by establishing a conservation easement to protect the identified wetlands and associated buffers consistent with the requirements of BMC 16.55.340.C.2.e.viii. The easement will be recorded and dedicated to the City of Bellingham. In addition, the entire onsite buffer area will be permanently marked with critical areas fencing and signage consistent with the requirements of BMC 16.55.230 and BMC 16.55.340.C.2.e.v to limit intrusion into the critical area following development.

2.11 Financial Assurance

Per BMC 16.55.240.D, performance security is required to assure that all actions approved under this mitigation plan are satisfactorily completed in accordance with the 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 150 percent of the total fair market cost of construction/installation labor and materials. A bond quantity worksheet will be prepared and included with the Final Mitigation Plan.

Chapter 3. Closure

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

Chapter 4. References

Bellingham Municipal Code (BMC). 2023. Chapter 16.55 — Critical Areas. Website: https://bellingham.municipal.codes/BMC/16.55. Current through December 11, 2023.

Soundview Consultants (SVC). 2024. *Wetland and Fish and Wildlife Habitat Assessment Report – Northwest Drive*. February 2024.

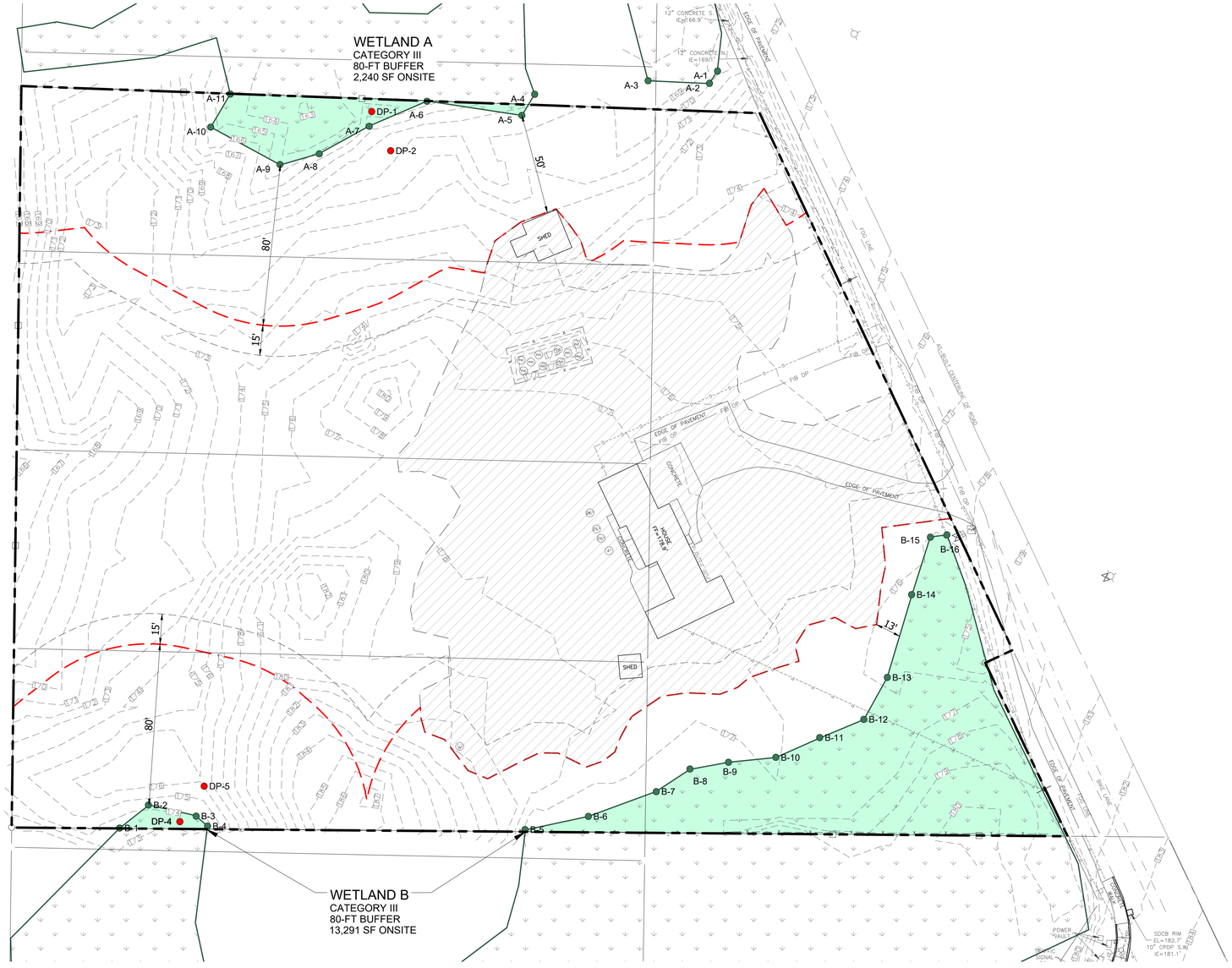
Supreme Court of the United States. *Sackett Et Ux. V Environmental Protection Agency Et Al.* May 25, 2023. https://www.epa.gov/system/files/documents/2023-05/Sackett%20Opinion.pdf.

USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Ver2.0),* ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-3. U.S. Army Engineer Research and Development Center. Vicksburg, Mississippi.

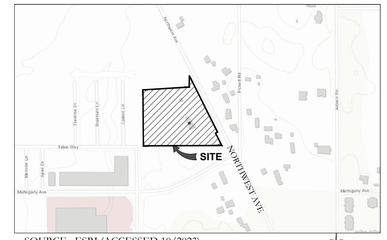
USACE and Environmental Protection Agency (EPA). 2023a. *"Revised Definition of Waters of the United States."* 88 FR 3004. January 18, 2023.

USACE and EPA. 2023b. *Revised Definition of "Waters of the United States"; Conforming. Final Rule.* Federal Register. Volume 88, Number 173 (33 CFR Part 328, 40 CFR Part 120). September 8, 2023.

Appendix A – Existing and Proposed Conditions Exhibits



VICINITY MAP



SOURCE: ESRI (ACCESSED 10/2023)

LOCATION

THE SW ¼ OF SECTION 11,

TOWNSHIP 38N, RANGE 2E, WM

APPLICANT/OWNER

NAME: ETHAN POTTS
ADDRESS: 220 W CHAMPION STREET #240
BELLINGHAM, WA 98225
PHONE: (360) 510-1049
E-MAIL: ETHANPOTTS@GMAIL.COM

ENVIRONMENTAL CONSULTANT

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

SHEET INDEX

SOURCES:

Soundview Consultants LLC
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WWW.SOUNDVIEWCONSULTANTS.COM

NORTHWEST DRIVE
4241 NORTHWEST DRIVE
BELLINGHAM, WA

WHATCOM COUNTY
PARCEL NUMBER(S):
380211435186000

0 30 60 90
GRAPHIC SCALE
1"= 30'

PLAN LEGEND

- PROPERTY LINE
- EXISTING WETLAND BOUNDARY
- WETLAND BUFFER
- 15' BUILDING SETBACK LINE
- EDGE OF MAINTAINED LANDSCAPING & BUFFER INTERRUPTION
- EXISTING CONTOUR
- W-# DATA POINT
- DP-# WETLAND FLAG

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: 01/08/2024
JOB: 2486.0001
BY: DLS
SCALE: AS SHOWN
SHEET: 1

S:\CURRENT\2486 Potts\2486.0001 Northwest Drive\Graphics & Maps\CAD\A - CURRENT SVC DRAWINGS\A - Current Base DWGs\2486.0001 (2023-1) base.dwg
Plotted January 9, 2024

0 30 60 90

GRAPHIC SCALE
1"= 30'

PLAN LEGEND

- PROPERTY LINE
- EXISTING WETLAND BOUNDARY
- REDUCED WETLAND BUFFER
- POST CONSTRUCTION BUFFER
- EDGE OF MAINTAINED LANDSCAPING
- 15' BUILDING SETBACK LINE
- CLEARING LIMITS

IMPACTS LEGEND

BUFFER IMPACTS

PERMANENT WETLAND A BUFFER IMPACTS	510 SF
PERMANENT WETLAND B BUFFER IMPACTS	1,892 SF
TOTAL BUFFER IMPACTS:	2,402 SF

BUILDING SETBACK

BUILDING SETBACK INTRUSIONS	1,231 SF

MITIGATION LEGEND

BUFFER MITIGATION

WETLAND A BUFFER CREATION	519 SF
WETLAND B BUFFER CREATION	3,977 SF
TOTAL BUFFER MITIGATION:	4,496 SF

PRELIMINARY INFORMATION ONLY

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SHEET: 2

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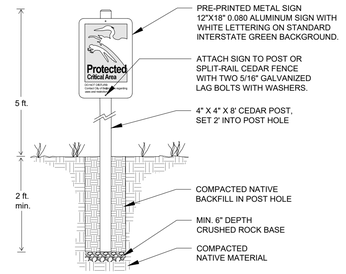
Plotted January 16, 2024

PROPOSED BUFFER PLANTING PLAN

CRITICAL AREA SIGN DETAIL

NOT TO SCALE

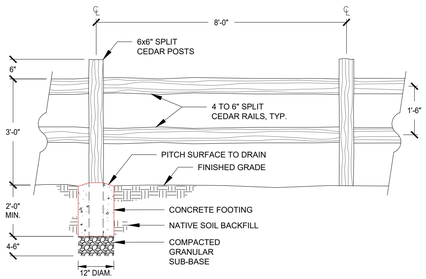


CRITICAL AREA BOUNDARY SIGN NOTES:

1. THE DIRECTOR MAY REQUIRE THE APPLICANT TO INSTALL PERMANENT SIGNS ALONG THE BOUNDARY OF A CRITICAL AREA.
2. SIGNS MUST BE POSTED AT AN INTERVAL OF 100 FEET, OR AS THE DIRECTOR DEEMS NECESSARY, AND MUST BE MAINTAINED AND REPLACED BY THE PROPERTY OWNER IF THE SIGN LANGUAGE IS NO LONGER VISIBLE.
3. SIGNS SHALL BE MADE OF A DURABLE MATERIAL AND VANDAL-RESISTANT, AND SHALL BE ATTACHED TO A METAL POST, OR OTHER MATERIAL OF EQUAL DURABILITY.
4. PRE-PRINTED METAL SIGN AVAILABLE THROUGH:
   ZUMAR INDUSTRIES
   PHONE: 1-800-426-7967,
   WEBSITE: WWW.ZUMAR.COM

SPLIT RAIL FENCE DETAIL

NOT TO SCALE



NOTES:

1. POSTS AND RAILINGS PRE-CUT FOR ASSEMBLY.
2. 3-RAIL DESIGNS ARE PERMITTED.
3. FENCE SHALL BE PLACED AT APPROVED BUFFER EDGE.

0 30 60 90

GRAPHIC SCALE
1"= 30'

PLAN LEGEND

- PROPERTY LINE
- EXISTING WETLAND BOUNDARY
- POST CONSTRUCTION BUFFER & SPLIT RAIL FENCE (1,000 SF)
- CRITICAL AREA SIGNAGE (10 SIGNS)

PLANTING LEGEND

BUFFER PLANTING

BUFFER RESTORATION	2,450 SF
BUFFER ENHANCEMENT	41,366 SF
TOTAL BUFFER MITIGATION:	43,816 SF

PRELIMINARY
INFORMATION ONLY

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JOB: 2486.0001
BY: DLS
SCALE: AS SHOWN
SHEET: 3

\\svc-server\COMPANY\CURRENT\2486 Patla\2486.0001 Northwest Drive\Graphics & Maps\CAD\A - CURRENT SYC DRAWINGS\A - Current Base DWGs\2486.0001 (2023-1) base.dwg
Plotted January 17, 2024

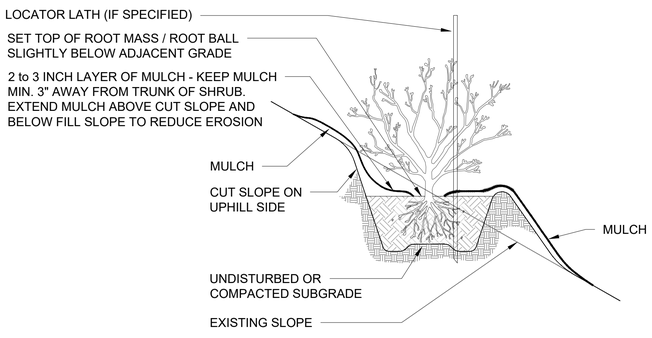
		Area (sf):	2,450	41,366	43,816				
		Cov'g (%):	100	65					
		Trees (%):	50	50					
		Shrubs (%):	50	50					
Scientific Name	**Common Name**	**WL Status**	**Buffer Restoration**	**Buffer Enhancement**	**TOTAL**	**Spacing (min.)**	**Height (min.)**	**Size (min.)**	**Planting Area**
TREES			**(Qty)**	**(Qty)**	**(Qty)**				
Abies grandis	grand fir	FACU	2	12	**14**	**10 ft**	**3 ft**	**5 gal**	**Dry**
Acer macrophyllum	bigleaf maple	FACU	1	8	**9**	**10 ft**	**3 ft**	**2 gal**	**Dry**
Alnus rubra	red alder	FAC	11	117	**128**	**10 ft**	**3 ft**	**1 gal**	**Dry/Moist - on hummock**
Pseudotsuga menziesii	Douglas fir	FACU	2	18	**20**	**10 ft**	**3 ft**	**2 gal**	**Dry**
Tsuga heterophylla	western hemlock	FACU	1	3	**4**	**10 ft**	**3 ft**	**2 gal**	**Moist - on hummock**
		Total:	**17**	**158**	**175**				
SHRUBS			**(Qty)**	**(Qty)**	**(Qty)**				
Holodiscus discolor	oceanspray	FACU	4	38	**42**	**5 ft**	**2 ft**	**1 gal**	**Dry**
Mahonia nervosa	low Oregon grape	FACU	5	51	**56**	**4 ft**	**1 ft**	**1 gal**	**Dry/Moist**
Polystichum munitum	western swordfern	FACU	11	114	**125**	**4 ft**	**1 ft**	**1 gal**	**Dry/Moist**
Ribes lacustre	swamp gooseberry	FAC	2	17	**19**	**4 ft**	**2 ft**	**1 gal**	**Moist/Wet**
Rubus spectabilis var. spectabilis	salmonberry	FAC	26	279	**305**	**4 ft**	**2 ft**	**1 gal**	**Moist**
Rubus ursinus	trailing blackberry	FACU	4	44	**48**	**5 ft**		**1 gal**	
Sambucus racemosa var. racemosa	red elderberry	FACU	2	22	**24**	**5 ft**	**2 ft**	**2 gal**	**Dry**
Vaccinium parvifolium	red huckleberry	FACU	6	59	**65**	**4 ft**	**18 in**	**1 gal**	**Dry**
		Total:	**60**	**624**	**684**				
SEED MIXES (www.riverrefugeseed.com)		**WL Status**	**Buffer Restoration**	**Buffer Enhancement**	**TOTAL**				
Native Upland Grass Mix #9	**20 lbs/acre**		**(Qty)**	**(Qty)**	**(Qty)**				
Elymus glaucus	Blue wildrye	30%							
Bromus carinatus	California brome	25%							
Hordeum brachyantherum	Meadow barley	10%							
Festuca roemeri	Roemer's fescue	10%							
Deschampsia elongata	Slender hairgrass	10%							
Agrostis exarata	Spike bentgrass	5%							
Deschampsia cespitosa	Tufted hairgrass	5%							
Festuca rubra var. rubra	Red fescue	5%							
		Total (lbs):	**1**	**0**	**1**				

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 Project Biologist approval.
3 - Alternate native plant species may be substituted or added with Project Biologist 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
8 - Dense plantings to be located around buffer edge.

PLANT SCHEDULE

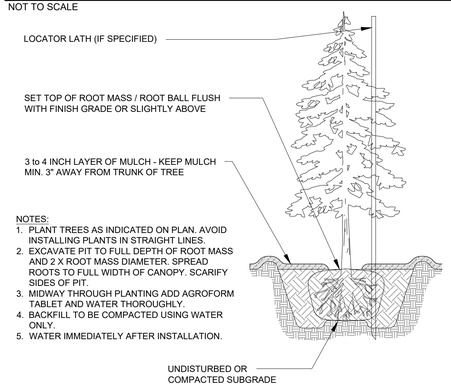
TREE AND SHRUB PLANTING ON STEEP SLOPE

NOT TO SCALE



CONIFEROUS TREE PLANTING DETAIL (TYPICAL)

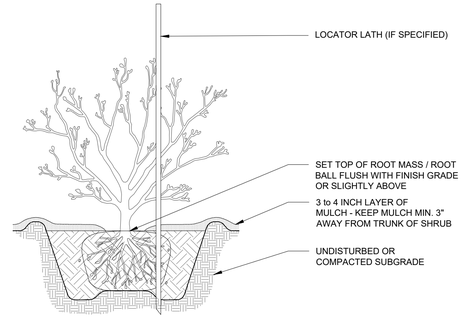
NOT TO SCALE



NOTES:
1. PLANT TREES AS INDICATED ON PLAN. AVOID INSTALLING PLANTS IN STRAIGHT LINES.
2. 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.
3. MIDWAY THROUGH PLANTING ADD AGROFORM TABLET AND WATER THOROUGHLY.
4. BACKFILL TO BE COMPACTED USING WATER ONLY.
5. WATER IMMEDIATELY AFTER INSTALLATION.

TREE AND SHRUB PLANTING DETAIL (TYPICAL)

NOT TO SCALE



NOTES:
1. 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.
2. 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.
3. MIDWAY THROUGH PLANTING ADD AGROFORM TABLET AND WATER THOROUGHLY.
4. BACKFILL TO BE COMPACTED USING WATER ONLY.
5. WATER IMMEDIATELY AFTER INSTALLATION.

SOURCES:

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

NORTHWEST DRIVE
4241 NORTHWEST DRIVE
BELLINGHAM, WA

WHATCOM COUNTY
PARCEL NUMBER(S):
3802114351860000

PRELIMINARY
INFORMATION ONLY

NOT FOR CONSTRUCTION

DATE: 01/08/2024
JOB: 2486.0001
BY: DLS
SCALE: AS SHOWN
SHEET: 3

\\serv-server\COMPANY\CURRENT\2486 Paths\2486.0001 Northwest Drive\Graphics & Maps\CAD\A - CURRENT SVC DRAWINGS\A - Current Base DWGs\2486.0001 (2023-1) base.dwg
Plotted January 11, 2024

Appendix B – Qualifications

All determinations and supporting documentation, including this ***Conceptual Buffer Mitigation Plan*** prepared for the ***Northwest Drive*** project were prepared by, or under the direction of, Alex Murphy of SVC. In addition, site investigations were performed by Kramer Canup, report preparation was completed by Garrett M. Jordan, and additional project oversight and final report review was completed by Morgan Kentch.

Alex Murphy, AICP

Project Manager / Senior Environmental Planner
Professional Experience: 8 years

Alex Murphy is a Planner and Project Manager with a background in land use planning, site planning & design, permitting, and project management. He has over 7 years of experience working for local jurisdictions in the Intermountain West and Pacific Northwest with an emphasis on maximizing opportunities for culturally and environmentally sensitive projects.

Alex earned a Bachelor of Landscape Architecture degree from Utah State University. He is a Certified Planner through the American Institute of Certified Planners and has received formal training in climate adaptation planning for coastal communities from NOAA. Mr. Murphy 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. He also manages development projects, supporting clients through the regulatory and planning process for various land use proposals

Kramer Canup

Environmental Scientist
Professional Experience: 10 years

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

Kramer has completed Basic Wetland Delineator Training with the Wetland Training Institute and received 40-hour USACE wetland delineation training. Kramer has been formally trained through the Washington State Department of Ecology, Coastal Training Program, How to Determine the Ordinary High Water Mark, and Using the Washington State Wetland Rating System. Beyond Kramer's project management, coordination, and delineation skills, he brings over 10 years of

experience performing ecological field work such as vegetation monitoring, plant installation and invasive weed control.

Morgan Kentch

Environmental Scientist
Professional Experience: 5 years

Morgan Kentch is an Environmental Scientist with a background in marine and freshwater ecology, wildlife and natural resource assessments, and monitoring wetland and riparian habitat restoration sites in the Pacific Northwest. Morgan has field experience conducting wetland, stream, and shoreline delineations and fish and wildlife habitat assessments in Washington State. She currently assists with performing wetland, stream, and shoreline delineations and fish and wildlife habitat assessments, conducting environmental code analysis, and preparing and/or providing final quality assurance/control for various types of scientific reports and permits for agency submittal.

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, conducting scientific background research, and performing statistical analyses. She has also received 40-hour wetland delineation training (Western Mountains, Valleys, and Coast and Arid West Regional Supplements) and has received formal training through the Washington State Department of Ecology and Coastal Training Program in Using the 2014 Wetland Rating System and How to Determine the Ordinary High Water Mark.

Garrett M. Jordan

Environmental Scientist
Professional Experience: 2 years

Garrett M. Jordan is an Environmental Scientist with a background in conducting critical habitat investigations, wetland delineations, botanical surveys, avian surveys, and threatened & endangered species surveys. He has considerable experience in production of wetland delineations and Biological Assessments and Evaluations for projects regulated by the U.S. Army Corps of Engineers and the Washington State Department of Ecology. Garrett has completed wetland delineation training with Portland State University and OHWM training with Washington's Coastal Training Program. . In addition, Garrett is a FAA trained remote pilot for unmanned aircraft and has extensive experience in utilizing GIS to collect, manage and analyze spatial and temporal field data.