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December 20, 2024

VIA EMAIL

Ms. Kathy Bell
Senior Planner
Planning and Community Development
City of Bellingham
210 Lottie St.
Bellingham, WA 98225

RE: Woods at Viewcrest; Response to City of Bellingham ("City" or "COB") Request for Information (RFI) No. 4, dated August 14, 2024 (RFI No. 4)

Our Clients: The Jones Family, Property Owner and Applicant

Dear Ms. Bell,

The Jones Family takes this opportunity to specifically respond to the City's RFI No. 4, referenced above, as well as some of the comments received from the public, reserving the right to supplement this response to public comments.

Generally speaking, there are two overriding and erroneous themes in the public comment. First that Chuckanut Creek Pocket Estuary (aka Mud Bay or Chuckanut Bay)[1] is a Category 1 wetland, it is not. Second, that an EIS is required, it is not. These erroneous assertions are addressed in the project consultant reports and addendums, and in this letter.

Further, in RFI No. 4, the City asked that the applicant respond to general themes of public comment. We note that such a request to respond to general themes of public comment made in response to the April 5, 2022, Notice of Complete Application is not required in the City Code, is not necessary to process an application, nor required as part of a SEPA threshold analysis. Nevertheless, in addition to the technical responses requested in RFI No. 4, we do provide a general response to the identified

[1] At the pre-application neighborhood community meeting, public comments were received that the estuarine area in question should be referred to as "Chuckanut Bay" rather than Mud Bay without objection from any member of the public at that time. Since that meeting, the Jones Family has sought to refer to this area as "Chuckanut Bay" without objection until the Opposition Letter disparaging the Jones family for referring to the area as Chuckanut Bay as had been requested. As noted by C. Van Slyke, NW Ecological Services (NES), the subject area is technically referred to as a pocket estuary- See NES November 2024 Addendum, and Wetland Delineation Update and Critical Areas Summary for the Woods at Viewcrest, June 2023 ("NES CA Report June 2023").

general themes of public comment identified by the City, often with reference to the technical reports submitted to the City. We also provide a response to the comment letter from the Bricklin and Newman law firm dated April 24, 2024 ("Opponent Letter"). It should be noted that the applicant also included a response to early public comment in Section VIII of the project narrative.

I. RESPONSE TO PUBLIC COMMENT[2]

Public comments generally addressed the topics noted below.

A. Critical Areas- Wetlands

1. CHUCKANUT CREEK POCKET ESTUARY (aka MUD BAY) *abutting the Jones property is a Mud Flat - not a Wetland*

Chuckanut Creek Pocket Estuary (also referred to as Mud Bay or Chuckanut Bay), the estuarine area erroneously referred to as a wetland by the project opponents is a complex system, however , the entire area is not a wetland as defined by the US Army Corp of Engineers (USACE).[3]

Following the Corps of Engineers Wetland Delineation Manual and Code of Federal Regulations are critical to assure that wetlands are properly identified and distinguished from other Special Aquatic Sites, such as mud flats.[4] Most of Chuckanut Creek Pocket Estuary is not vegetated and therefore not a wetland per the 1987 USACE wetland delineation manual at page 9.[5] Due to the lack of hydric soils and hydrophytic vegetation, the mudflats depicted in Figure 1 to the NES November 2024 Addendum do not meet wetland criteria defined by the federal, state, or local regulatory agencies and are instead classified as mudflats.[6]

The most notable wetland in the Chuckanut Creek Pocket Estuary is the Chuckanut Village Marsh located approximately 1000' northeast of the Jones' property. There is also an additional smaller wetland located approximately 240' east of the Jones' property within the plat of Briza, and 870' NE of the proposed stormwater outfall.[7]

Opponents to the project erroneously rely on the National Wetland Inventory (NWI) maps to assert that Mud Bay is an estuarine wetland.[8] The NWI maps are a digital map that includes resource information on wetlands, riparian areas and deepwater habitats.[9] Riparian areas and deepwater habitats are NOT wetlands. The NWI maps are based, in part, on the Cowardin classification of

[2] RFI No. 4 listed 4 themes that related to critical areas. The responses here have re-categorized these under this Critical Areas heading.
[3] See NES CA Report, June 2023 and the November 2024 Addendum's .
[4] NES November 2024 Addendum.
[5] See NES CA Report, June 2023 and the NES November 2024 Addendum's.
[6] Id.
[7] See Figure 1 of the NES November 2024 Addendum.
[8] See Lyndon Lee April 18, 2024, Memorandum at page 3.
[9] See NES November 2024 Addendum.

wetland and Deepwater Habitats.[10] Cowardin, and thus the NWI maps, recognize that both wetlands and deepwater habitats are in an estuarine system, but are not the same by definition.[11] Thus, the entirety of Chuckanut Creek Pocket Estuary (Mud Bay) is not a wetland as it does not support vegetation. This is consistent with the Washington State Department of Ecology guidance that requires a wetland to be vegetated to be considered an estuarine wetland.[12]

Accordingly, the opponents are in error and mischaracterize the NWI mapping when they assert that the Chuckanut Creek Pocket Estuary (Mud Bay) is a Category 1 wetland.

2. Past Agency Approvals do not consider Mud Bay as a wetland.

As noted in the NES November Addendum , the City, Washington Department of Fish and Wildlife and the USACE Corps have reviewed the subject area and have not considered this area a wetland.[13]

a. Review of public projects and permits

In 2009, the City undertook the removal of a culvert and parking at the end of Fairhaven Avenue and the installation of a bridge. This work involved a full wetland review and delineation. The review of this project did not identify Mud Bay as a wetland.[14]

In 2020, the Whatcom County Marine Resources Committee filed a Joint Aquatic Resource Protection Application (JARPA) for the study of restoring native Olympia oyster populations in North Chuckanut Bay, referring to Chuckanut Bay as "(Mud Bay)". This JARPA filed by Whatcom County and circulated to a variety of regulatory agencies identified the Chuckanut Village Marsh and the Chuckanut Creek Marsh as a wetland on or adjacent to the project location, but did not identify the Chuckanut Creek Pocket Estuary or that area as wetland, similar to the 2009 City culvert removal project.[15]

b. Review of Private projects and permits

In 2014, a Shoreline Substantial Development Permit was approved by the City, and a Shoreline Conditional Use Permit and Shoreline Variance were approved by the City and the Department of Ecology (SHR2014-00014; Ecology ID:2415) for a new single family residence along Chuckanut Bay. The Shoreline Variance was required because the project was within the 200' shoreline buffer associated with "Chuckanut (Mud) Bay". Neither Ecology or the City required any environmental review or characterization of the adjacent beach or bay, including the Chuckanut Creek Pocket Estuary.[16]

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[10] Id.
[11] Id. Section 3.1.2 Estuarine System Definition. The Estuarine System consists of deepwater tidal habitats and adjacent tidal wetlands.
[12] Ecology Publication 96-94- Washington State Wetlands Identification and Delineation Manual. This publication incorporates all USACE and EPA guidance on delineation protocol tailored specifically to wetlands in WA.
[13] NES November 2024 Addendum, at page 4 in reference to City culvert replacement project.
[14] *See Exhibit D-1; - Northwest Ecological Services Fairhaven Right of Way Wetland Delineation, February 2009 .*
[15] *See Exhibit D-2, Whatcom County Marine Resources JARPA.*
[16] *See Exhibit D-3; SHR2014-00014; Ecology ID:2415.*

3. Even if Mud Bay was a Cat 1 wetland, and it is not, the project meets all applicable City regulations, including the City Critical Areas Ordinance (CAO) and Shoreline Master Program (SMP) requirements.

a. SMP and CAO Requirements

Apart from a stormwater outfall system including the energy dissipator, no lots, trails, roads or other infrastructure are proposed within the jurisdiction of the Shoreline Management Act (SMA) or City Shoreline Master Program (SMP). This outfall pipe does require a Shoreline Substantial Development Permit (SSDP) and Shoreline Conditional Use Permit (SCUP), and those applications have been filed with the City. These applicable shoreline regulations were extensively reviewed in the Project Narrative[17], supported by the accompanying reports submitted with the application, and as supplemented in response to requests from the City.

Again, even if Mud Bay was a Category 1 wetland, and it is not, and a wetland buffer existed in the area of the stormwater system, and no such buffer exists, the stormwater outfall may be permitted in a wetland buffer pursuant to applicable City regulations. For example, specifically, stormwater conveyance systems, such as the outfall pipe, are allowed in wetland buffers on a case by case basis when approved by both the public works and planning departments.[18] In this regard, the project opponents erroneously argue that the outfall is not allowed in a shoreline or wetland buffer by selective omission citation to the City code, and mischaracterization of the Chuckanut Estuary.[19]

b. No Net Loss

The “no net loss” doctrine is a governing principle of the SMA.[20] Under this doctrine, a shoreline master program (“SMP”) need not *prohibit* development that will result in a loss of shoreline ecological function, but the negative impacts of development must be mitigated.[21]

The Department of Ecology’s SMP Handbook, which has been cited by the Shoreline Hearings Board (SHB)[22], provided that “the ‘no net loss’ concept does not assume no impacts, but instead recognizes that future development will occur.[23] Indeed, the definition of no net loss considers the potential for mitigation of impact. “The no net loss standard requires that the impacts of shoreline development and/or use, whether permitted or exempt, be identified *and mitigated* such that there are no resulting significant adverse impacts on shoreline ecological functions.” (emphasis added) [24]

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[17] See page 16-25.
[18] BMC 22.08.010.B.4.g (for shoreline buffers), and BMC 22.08.060(H)(1) (for critical area buffers)
[19] See Opponents letter at Page 18.
[20] WAC 173-26-201(2) (c).
[21] WAC 173-26-186(8); and WAC 173-26-201(2) (c).
[22] *Coalition To Protect Puget Sound Habitat*, SHB Dec. 13-016c, 2014 WL 309283, at *23 (2014),
[23] SMP Handbook-Chapter 4 Ecology, Revised 6/17; chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://apps.ecology.wa.gov/publications/parts/1106010part4.pdf
[24] BMC 22.10.010.89.

The NES November 2024 Critical Areas Impact Assessment and Mitigation Plan sets forth how this project achieves No Net Loss of shoreline and critical area functions through mitigation sequencing, and mitigation.

B. Critical Areas-Geohazards- including slope stability/windfall

Element Solutions was tasked with reviewing the Geohazards related public comments received by the City as well as those referenced in RFI #4. Elements Solutions addresses these questions in its Memorandum #2 dated November 22, 2024 ("Elements Memo #2"). In addition, Elements Solutions as part of its response to RFI #4 was tasked with performing additional Geologic Hazard review for the project to specifically address the proposed stormwater outfall and dispersion systems depicted on preliminary plat civil drawings, Sheets 7 and 8, and related site conditions. This additional review and analysis are contained in Elements Solutions Geohazard Addendum – Stormwater outfall dated November 22, 2024 ("Element November 2024 GHA Addendum"). The Elements Memo #2, and Elements November 22, 2024, GHA Addendum are companion reports. Element, working with Pacific Survey & Engineering, the project civil engineer, have evaluated all proposed road, utility and stormwater infrastructure, and have verified that with the proposed conditions the construction of all project elements can be completed safely, without unreasonable risk to slope stability. Furthermore, each proposed lot has a building envelope meeting applicable code requirements for size and location, situated outside of geohazards and recommended geohazard buffers. The assertions made by members of the public questioning the safety and stability of the site because of the construction of the project are not supported by the technical analysis or professional reports completed for the project. Regarding windfall risk, Element has not identified any concerns regarding this topic. The applicant is proposing to retain significant canopy on site, including a buffer of retained mature trees extending from the shoreline over 400' into the site. Significant areas of canopy are proposed to be retained throughout the remainder of the Property, and even on each individual developable lot, mass grading and/or clearing is not proposed, limiting the likelihood of isolated trees subject to increased risk of windfall.

C. Critical Areas-Wildlife and Habitat

As reviewed in part above with regard to the Chuckanut Pocket Estuary, the NES November 2024 CA Addendum and the Raedeke Wildlife Habitat Technical Memorandum, Revised November 22, 2024 ("Raedeke Wildlife Memo Revised November 2024"), submitted in response to RFI #4, these reports address item #4 and the comments regarding critical areas impacts and mitigation in RFI #4. The design of the project limits overall clearing and grading, preserves significant tree canopy, avoids and minimizes impacts to all critical areas, maintains a large habitat corridor along the shoreline, treats all stormwater runoff to an enhanced standard, and includes recommended conditions to further mitigate for potential impacts to wildlife and habitat.

D. Drainage and Stormwater Runoff

A detailed preliminary storm water management report has been submitted to the City. Proposed stormwater mitigation measures include the capture and treatment of all runoff from pollution generating impervious surfaces, and the implementation of best management practices (BMP's) designed to assure post development conditions meet or exceed minimum requirements outlined by

the City of Bellingham's Municipal Code (BMC) and applicable sections of the Washington State Department of Ecology "Storm Water Management Manual for Western Washington", 2019 publication (hereinafter referred to as the DOE Manual). As discussed in Section II.A below, during review of a preliminary plat application, the City of Bellingham is required to determine if the proposed plat can be reasonably expected to *meet* applicable City Codes and development standards. The preliminary stormwater design meets all applicable City requirements at this stage, recognizing that final design is subject to approval by the City public works department. The current report provides a greater level of analysis and design detail than is typical at this stage of a project review. This included evaluation of three different outfall locations where surface water can be safely dispersed were evaluated. After review with staff with the City of Bellingham and Washington State Department of Ecology, and consideration of the costs and benefits of each proposed outfall approach, it was determined that a new outfall to saltwater along the beach front of the subject property above the high tide line was preferred as it met all applicable codes and reduced the risk of adverse environmental impacts.[25]

E. Traffic and Pedestrian Safety

The submitted traffic impact analysis addressed the potential traffic impacts from the project. The project will add a sidewalk on Viewcrest along the property frontage, as well a public trail within the project that connects from Viewcrest to Sea Pines Road and will provide access to Chuckanut Bay utilizing an existing safe access point (which will also generate less environmental impact than an onsite connection to the shoreline). The proposed improvements exceed the pedestrian/road development standards within Edgemoor, which have not historically required construction of sidewalks, while also providing for pedestrian safety and alternative pedestrian routes. A detailed Traffic Impact Assessment was prepared for the project by a qualified professional; this Assessment concluded that no off-site mitigating measures were necessary.

F. Affordability

The project opponents have erroneously suggested that 100 + "luxury" homes are proposed[26]; this is not factual nor supported by any applicant submission or proposal and is an untruthful statement. The proposal is for only 38 single family lots or homes.[27] Further, there are no design standards proposed that require any form of "luxury" finish or detail.[28] Further, neither the State nor the City have passed, nor may they, any requirement single family homes be sold at any specific market price set for affordability. Development at this site, with this zoning, at this scale is consistent with the City's Comprehensive Plan. The City has not adopted an inclusionary zoning mandate for any zone in the City and there is no requirement in the code or the Comprehensive Plan for permanently affordable housing to be incorporated into a project.

G. Density

[25] See Pacific Survey and Engineering report dated November 22, 2024.
[26] See https://www.king5.com/article/news/local/bellingham/bellingham-fight-shoreline-from-luxury-home-development/281-49cab234-b718-429d-bb24-7aac2f959fdf
[27] The maximum gross density allowed at this site is 82 lots, but only 38 lots have been proposed, less than half the allowed density.
[28] "Luxury" is not defined in the City Code, nor in any proposed covenant or requirement.

Some members of the public appear to have been misinformed that over 100 units are proposed; only 38 lots are proposed. Although the City zoning would allow 82 units on the site, the proposal is for only 38 single family lots or homes, or less than half of the allowable density. The project is clustered over 1/3rd of the site in order to preserve and protect as much of the existing natural vegetation and critical areas as possible while still achieving a reasonable density of development. Despite clustering, the proposed lots are still comparable in size to surrounding developed lots, particularly around the edge of the project. Project opponents have made the assertion in public comment, and utilized in their adversarial marketing materials, that the project will include 152 homes. As noted, the applicants have at no point indicated that the project is for any more than 38 homes, or designed any project infrastructure, or included any application materials that would authorize the construction of more than 38 homes. To the contrary, all the studies, reports, plans and other project materials have been specifically completed to address the impacts of 38 homes. Building envelopes on each lot are sized to accommodate 1 home, not 4. Traffic analysis has studied trip generation from 38 homes. Variances requested for road design have been predicated on a limited number of homes served by each private road. All SEPA threshold analysis has been completed based on 38 homes. Any increased density beyond that proposed as suggested by project opponents would require a new plat application, new public comment opportunities, and SEPA review, utility and traffic capacity analysis, among other impact analysis, and likely new subdivision variance requests.

H. Neighborhood Character

The City does not have design standards for single family development, but the project is designed to limit view and aesthetic impacts to neighboring properties and is in character with the Edgemoor Neighborhood in terms of layout, lot size, proposed road and utility design, open space preservation and other design components. As addressed in the Project Narrative, the City Comprehensive Plan identifies this as a Residential Single-Family Low-Density area. The site is in Area 7 of the Edgemoor Neighborhood. The special conditions in the City Zoning Code are “clearing” and “view buffering from adjacent residences”. The project is the type of project contemplated by the City’s Comprehensive Plan, and is consistent with the goals and objectives of Area 7 of the Edgemoor Neighborhood Plan, which is to “permit development while maintaining the exceptional natural qualities of the properties” The project site has limited the clearing by limiting the number of units to less than half of allowable zoning, by focusing development to avoid critical areas and buffers, and preserving these sensitive areas with conservation easements, and by identifying the building site footprints, understanding the individual lot owners may or may not pursue additional clearing for yards and driveways. Significant tree retention of existing trees abutting neighboring properties is proposed, which will buffer views of the site from neighboring properties, although some neighbors may seek to have some of the view buffering limited so that views of Bellingham Bay are available from their property. The road system has been redesigned, in response to early public comment, to reduce the intersections along Viewcrest from two to one, limiting headlight glare and traffic conflicts for neighbors. Through the design elements incorporated into the Project, as described in the project narrative, project reports, and project plans (See Exhibit A) the project maintains and enhances the neighborhood character.

II. RESPONSE TO OPPONENT LETTER

A. LEVEL OF ENGINEERING AT PRELIMINARY PLAT

The preliminary stormwater design meets all applicable city requirements at this stage, recognizing that final design is subject to approval by the City public works department.

During review of a preliminary plat application, the City of Bellingham is required to determine if the proposed plat *can be reasonably expected to meet* applicable City Codes and development standards. The City's approval of a preliminary plat application does not constitute final approval of engineering design. In the preliminary platting process, the City staff provides the applicant with initial review comments, including a list of design guidelines and requirements that must be followed during full design. Compliance with these requirements and comments are typically conditions of preliminary plat approval. Only after the City staff determines that the plat is designed to meet or exceed applicable codes and standards, including compliance with any City staff comments, the City staff may then issue a recommendation for consideration at a public hearing on the preliminary plat application.

During their initial review of the Preliminary Plat application, the City staff will normally determine whether or not additional information is needed to make a decision or recommendation regarding each item required to be reviewed by the City Code. Often such reviews result in consultation with other agencies, as was the case here. Here, the design team did receive comments from the City of Bellingham, Department of Fish and Wildlife, and the Department of Ecology, among others, which resulted in preparation of additional design details, memorandums and even design revisions, ultimately resulting in the systems and facilities currently proposed to serve the project.
It is typical that early plat engineering designs are prepared without a detailed analysis of site constraints and other land use considerations. However, this was not the approach taken here. For this project, the preliminary engineering designs t included a detailed review of site grading impacts, hydraulics and drainage basin analysis, topographic and geologic considerations and nearshore stormwater mitigation design. Further, additional site analysis is anticipated to be required when determining the location of the stormwater piping after preliminary plat approval and prior to the City's final design approval.

After preliminary plat approval the applicant is then required to produce full sets of construction drawings, including calculations for roads, underground utilities, stormwater management facilities and erosion control plans, street lighting and other related site design elements as part of its final design for approval by City staff. These plans are, and must be, reviewed and ultimately approved by the City staff before any construction can begin. These final design plans must be certified by the design engineer licensed as an engineer in the State of Washington before the public roads and utilities can be accepted by and dedicated to the City.

We firmly believe that the level of engineering design provided to the City of Bellingham to date clearly demonstrates that the plat can meet or even exceed all applicable codes and guidelines, including those pertaining to stormwater management.

B. ASSESSMENT OF SIGNIFICANCE UNDER SEPA

There is no question that the Woods at Viewcrest project requires review under the State Environmental Policy Act (SEPA). However, contrary to the suggestion and argument of the

opponents, SEPA does not require nor demand a particular result in its review process- an Environmental Impact Statement (EIS) is NOT required, and certainly not because of the opponent generated opposition and controversy.[29]

The question is *IF*, *AFTER* consideration of the substantial technical analysis included in the Expanded SEPA Checklist[30] already submitted to the City, along with substantial supplemental information from the Jones family[31] as requested by the City, probable significant adverse impacts remain.

Here the answer is no – as no unaddressed unmitigated significant adverse impacts remain.[32] The elements of the design of this Project and the City Code requirements are such that there are not probable significant adverse impacts resulting from this Project. These impact reducing design elements have been incorporated into the design or are included as consultant recommended and accepted mitigating conditions of approval addressed in the various technical memorandums. [33]

It is notable that the Opponents indicate that they will appeal a DNS OR MDNS even before the City has completed its threshold determination revealing that their comments are not grounded in fact or law, just base opposition or NIMBYism.[34]

When an action or project with a potential environmental impact has been proposed, the City is required to conduct a "threshold determination" to assess whether an EIS is needed.[35]

To facilitate the making of the threshold determination, the Jones family submitted an Expanded SEPA Checklist . The Expanded SEPA Checklist as supplemented in response to City requests, provides information reasonably sufficient to evaluate the proposal's environmental impact as required by SEPA.[36] These technical analysis reports are identified in Exhibit B, attached hereto.

The City's SEPA responsible official "must (1) "[r]eview the environmental checklist"; (2) "[d]etermine if the proposal is likely to have a probable significant adverse environmental impact, based on the proposed action, the information in the checklist (WAC 197-11-960), and any additional information

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[29] See Opponent Letter at page 3.
[30] With its application, the Jones family has submitted an expanded SEPA environmental checklist, expanded with supporting technical analysis.
[31] See Request for Information (RFI) numbers 1-4.
[32] *Boehm v. City of Vancouver*, 111 Wn. App. 711, 719, 47 P.3d 137 (2002) (applicant's submission of a detailed environmental checklist and city's preparation of a MDNS and an environmental review report supported prima facie compliance with SEPA.
[33] See Exhibit A- Incorporated mitigation design elements and Exhibit C- recommended Mitigation Measures/Conditions.
[34] See Opponent Letter at page 3.
[35] WAC 197-11-330. *Advocates for a Cleaner Tacoma v. Puget Sound Clean Air Agency*, 540 P.3d 821, 830 (Wash. App. Div. 2 2023)
[36] See *Klickitat Land Preservation Fund v. Klickitat Cnty*., 28 Wash. App. 2d 1036 (Wash. App. Div. 3 2023), citing *Anderson*, 86 Wn. App. at 301 (citing WAC 197-11-315 to 335).

furnished under WAC 197-11-335 and 197-11-350"; and (3) "[c]onsider mitigation measures" that the agency or applicant will implement as part of the proposal." WAC 197-11-330(1).[37]

A proposal "...can be conditioned to have no probable significant adverse impacts by imposing specific mitigation measures.[38]

"A 'significant' impact means a 'reasonable likelihood' exists that the proposal will have 'more than a moderate adverse impact on environmental quality.' " [39] " '[A]n agency does not have to consider every conceivable environmental impact when making its threshold SEPA determination.' "[40] *Id.* SEPA requires consideration of environmental impacts "with attention to impacts that are likely, not merely speculative."[41]

The Department of Ecology provides guidance related to the assessment of a project's potential significant adverse impact.[42] Per this guidance, the lead agency reviews the environmental checklist and other information about the proposal, and should consider any comments received from the public or other agencies. Likely adverse environmental impacts are identified, *and potential mitigation* is taken into account—particularly that mitigation already required under development and permit regulations. The responsible official must then decide *after such mitigation* whether there are any likely significant adverse environmental impacts that have not been adequately addressed.[43]

The City must consider mitigation measures the Jones family will implement, and any such measures required by regulations, comprehensive plans, or other existing environmental rules or laws.[44] As noted, much of the project's mitigation of potential adverse impacts is achieved though avoidance and has been incorporated into the design of the project. See Exhibit A and C, attached hereto.

C. A MDNS IS WARRANTED

The responsible official may issue a MDNS, which involves changing or conditioning a project "to mitigate the impacts that would lead an agency to consider a DS likely."[45] With a MDNS, promulgation

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[37] See *Klickitat Land Preservation Fund v. Klickitat Cnty.*, 28 Wash. App. 2d 1036 (Wash. App. Div. 3 2023)
[38] *Citizens to Stop the SR 169 Asphalt Plant v. King County et al*, No 85566-2-I, May 28, 2024, citing *Wild Fish Conservancy v. Dep't of Fish & Wildlife*, 198 Wn.2d 846, 856, 502 P.3d 359 (2022) (citing WAC 197-11-350).
[39] *Klickitat Land Preservation Fund v. Klickitat Cnty*., 28 Wash. App. 2d 1036 (Wash. App. Div. 3 2023), citing *Wild Fish Conservancy v. Dep't of Fish & Wildlife*, 198 Wn.2d 846, 873, 502 P.3d 359 (2022) (quoting WAC 197-11-794(1)).
[40] Id., (quoting *PT Air Watchers v. Dep't of Ecology*, 179 Wn.2d 919, 932, 319 P.3d 23 (2014)).
[41] Id., (quoting WAC 197-11-060(4)(a)).
[42] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/guide-for-lead-agencies; See Also WAC 197-11-330-WAC 197-11-350.
[43] *WAC 197-11-330 to WAC 197-11-350350*
[44] WAC 197-11-330 (1)(c). *Chuckanut Conservancy v. Washington State Dept. of Nat. Resources*, 232 P.3d 1154, 1159 (Wash. App. Div. 1 2010); See also *Rossi Larson, LLC v. Chelan County*, 2024 WL 1163358, Div 3. (2024) Unreported.
[45] *Klickitat Land Preservation Fund v. Klickitat Cnty*., 28 Wash. App. 2d 1036 (Wash. App. Div. 3 2023), citing WAC 197-11-350(2), and *Anderson*, 86 Wn. App. at 301.

of a formal EIS is not required, although environmental studies and analysis can be, and here is, quite comprehensive.[46]

Use of mitigation to bring projects into compliance with SEPA, without promulgation of an EIS, has been viewed favorably by the Washington courts. The Washington State Supreme Court deems the MDNS process to be "eminently sensible."[47]

The Court of Appeals, Division One, has held that "SEPA encourages compromise and accommodation by requiring that the decision-maker consider mitigation and state why it is inadequate to relieve the adverse impact. When the decision-maker imposes some mitigation measures, this does not necessarily mean that unmitigated impacts no longer exist or will be totally eradicated by mitigation, but merely that as mitigated, the project as a whole is acceptable."[48]

Similarly, the Washington Department of Ecology (DOE) has favorably characterized the MDNS process as conducive to efficient, cooperative reduction or avoidance of adverse environmental impacts:

> The mitigated DNS provision in WAC 197–11–350 is intended to encourage applicants and agencies to work together early in the SEPA process to modify the project and eliminate significant adverse impacts. The mitigated DNS process is not intended to reduce the amount of environmental review done on a project, but to reduce the paperwork needed to document the process.[49]

Here, significant effort has been undertaken to analyze the potential significant adverse impacts and identify mitigation measures that adequately and feasibly mitigate the potential significant adverse impacts that may be created by the Project, if unmitigated. This effort includes following mitigation sequencing consistent with the City's Critical Areas Ordinance. BMC 16.35.250. The critical areas mitigation sequencing analysis is set forth in the NES November 2024 Critical Areas Impact Assessment and Mitigation Plan.

Mitigation Measures already identified and proposed by the Jones family to be included in an MDNS are set forth in Exhibit C, including the Critical Areas Mitigation Plan.

Based on the Expanded SEPA Checklist as supplemented, including design elements incorporated into the project, additional recommended mitigation measures, and considering existing development regulations, the issuance of a Mitigated Determination of Non-Significance or MDNS under WAC 197-11-350 for the Project is warranted.

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[46] *Anderson v. Pierce Cnty*., 936 P.2d 432, 439 (Wash. App. Div. 2 1997). WAC 197-11-350.
[47] *Hayden v. City of Port Townsend,* 93 Wash.2d 870, 880, 613 P.2d 1164 (1980), *overruled on other grounds, SANE v. Seattle,* 101 Wash.2d 280, 676 P.2d 1006 (1984).
[48] *Victoria Tower Partnership v. City of Seattle,* 59 Wash. App. 592, 603, 800 P.2d 380 (1990) (footnote omitted).
[49] Richard L. Settle, *DOE Interpretations of Determination of Non–Significant Provisions,* at 466 app. (1988 SEPA Handbook G–1 to G–6).

The record already in front of the City provides technical analysis of environmental factors and project impacts sufficient to support the issuance of an MDNS and incorporation of reasonable and feasible mitigation measures.[50] The City required, collected and has assessed environmental information regarding the Project including issues raised by public comment.[51] The record here, particularly given the Jones' Family responses to multiple follow up questions from the City relative to the Expanded SEPA Checklist, establishes that environmental factors have been considered in a manner sufficient to satisfy the procedural requirements of SEPA and to support the issuance of an MDNS.[52]

To require an EIS for this Project a SEPA Responsible Official must ignore this record and the evidence submitted by the Jones Family, which would be an arbitrary and capricious action that is unreasoned and without regard to the attending facts and circumstances.[53]

Indeed, the SEPA regulations anticipate a process where an applicant can clarify, change or condition its proposal to include specific mitigation measures to enable a DNS or MDNS[54], as has been done here.

The Jones family looks forward to moving this project forward to a public hearing.

Sincerely,

CSD ATTORNEYS AT LAW P.S.

Jon Sitkin

JS/
cc: Client
Client Consultant Team

[50] *Anderson v. Pierce Cnty.*, 936 P.2d 432, 439 (Wash. App. Div. 2 1997)
[51] See City Request for Information Nos. 1-4.
[52] *Citizens to Stop the SR 169 Asphalt Plant v. King County et al*, No 85566-2-I, May 28, 2024,citing *Moss v. Bellingham*, 109 Wn. App 6, 23 (2001).
[53] *Citizens to Stop the SR 169 Asphalt Plant v. King County et al*, No 85566-2-I, May 28, 2024, citing Hillis v. Dep't of Ecology, 131 Wn. 2d 373, 383 (1997).
[54] WAC 197-11-350; *Citizens to Stop the SR 169 Asphalt Plant v. King County et al*, No 85566-2-I, May 28, 2024

EXHIBIT A

IMPACT REDUCING DESIGN ELEMENTS INCORPORATED INTO PROPOSAL

The Woods at Viewcrest Impact Reducing Design Elements

Plat impacts are primarily mitigated by implementation of site-specific plat design elements. These design elements were developed in consultation with the design team professionals, and in response to City RFI documents. They include, but are not limited to the following:

Road Design:

- Alternative public road standards (reducing road section footprint).
- Variances requested for private roads (reducing road section footprint).
- These efforts reduce clearing and grading and tree removal, contribute to avoidance/reduction of geohazard impacts, and reduce pollution generating impervious surfaces.

Storm Design:

- Enhanced stormwater treatment.
- Installation of low-impact stormwater conveyance system near shoreline (surface mounted pipe/dispersion tee).
- No infrastructure is located on the beach. Design follows contours of land, no excavation or significant clearing required, no significant tree removal.
- Adaptable treatment system is incorporated into the design

Transportation:

- New pedestrian sidewalk/walkway added along frontage of Viewcrest Drive.
- New public trail connecting Viewcrest to Sea Pines, providing public beach access without new shoreline impacts.
- Limited public road connections to existing neighborhood roads. Reduced from 2 to 1 on Viewcrest. Fewer intersection points on public road increases safety, reduces impacts from headlights to neighbors.
- Net addition of public access right of way/easement areas (12,000 sf +/-).

Environmental/Habitat:

- Extensive shoreline building setbacks (also providing aesthetic view retention from shore). All single-family residential homes are to be set back from the shoreline, entirely outside the shoreline jurisdiction and buffer; Lot 37 is just over 200’ from shoreline. All others are a min. of 400’ from shoreline. Entire shoreline jurisdiction preserved in open space tracts. No tree removal in these areas at all.
- Tree and tree canopy retention, particularly near shoreline areas and steep slopes. Almost 80% of existing site canopy to be preserved.
- Mitigation Sequencing followed, with focus on Critical Areas impact Avoidance. No direct impacts to any wetlands. Wetland buffer impact is very limited and only for public trail.

Shoreline buffer impact is very limited and only for storm conveyance system. No unmitigated impacts exist in wetland or shoreline buffers.

- Significant preservation and protection of critical topographic features. Building setbacks from steep slopes. All lots designed with minimum 54' x 54' building envelope outside steep slopes/buffers. Entire project clustered in north ½ of site to avoid actual bluffs entirely.
- 10.5 acres preserved in conservation and/or similar easements. Equates to approximately 32% of the entire property.

Lot/Plat Design:

- Project incorporates less than ½ allowable density.
- Cluster-style lot design, reduces area dedicated to development/reduces tree removal.
- Larger lots are designed at exterior of plat/to front on neighboring plats, reducing impacts to neighborhood character.

Cultural Resource:

- Project designed to avoid archaeological resource areas consistent with Cultural Resource Assessment.

In addition, transportation impact fees, school impact fees, and park impact fees will be paid as mitigation for project impact to these services. The project will be conditioned with inadvertent discovery plan (IDP) and tribal notification archaeological conditions to mitigate potential inadvertent resource discovery during construction.

EXHIBIT B
LIST OF TECHNICAL REPORTS/STUDIES, PLANS and EXHIBITS, WITH UPDATES LISTED SUBMITTED TO THE CITY

Exhibit A – Project Plans, updated 12.04.23
Exhibit B – Critical Areas Reconnaissance & Delineation Report, Elizabeth Binney, 01.2010
Exhibit C – Wetland Delineation Update & Critical Areas Summary, Northwest Ecological Services, 10.31.2021, updated 09.28.22
Exhibit D – Wildlife Habitat Assessment, Raedeke Associates Inc, 01.22.2022, updated 11.16.22 **Updated, November 22nd, 2024, in response to RFI#4**
Exhibit E – Geotechnical Investigation & Geohazard Report, Element Solutions, 11.03.2021, updated 10.06.22
Exhibit F – Preliminary Storm Water Report, Pacific Survey & Engineering, 01.22.2022, updated 10.19.22, updated 06.19.23, updated, 12.04.23, **Updated, November 22nd, 2024, in response to RFI#4**
Exhibit G – Traffic Impact Analysis, TENW, 07.30.2021, updated 09.29.22
Exhibit H – Cultural Resources Report, Drayton Archaeology, 07.20.2020, **Updated, October 28th, 2024, in response to RFI#4**
Exhibit I – Phasing Plan, updated 11.22.22, updated 06.19.23, updated 12.04.23
Exhibit J – ROW Vacation & Dedication Plan, updated 11.22.22, updated 06.19.23, updated 12.04.23
Exhibit K – Variance Exhibits, updated 11.22.22, updated 06.19.23, updated 12.04.23
Exhibit L – Vegetation Management Plan, updated 11.22.22, updated 06.19.23, updated 12.04.23
Exhibit M – Subdivision Guarantee, updated 11.15.22
Exhibit N – Supporting Documents
N.1 – Assessor Tax Statements
N.2 – City Maps (Shorelines, Steep Slopes, Utilities, Zoning)
N.3 – Traffic Concurrency Certificate
N.4 – Vesting Deed
N.5 – Mailing Labels
N.6 – Mailing List
N.7 – Mailing Verification
N.8 – Neighborhood Meeting Notice
N.9 – Neighboring Subdivisions
Exhibit O – Prior Right of Way Vacation Documents Exhibit P – Easement Relinquishment Request Package Exhibit Q – Clarkwood Tracts Documents
Exhibit R – Element Memo #1 RFI Response
Exhibit S – Tree Survey Exhibit
Exhibit T – Water System Analysis Memo
Exhibit U – TRC Letter for Street Vacation Petition
Exhibit V – RFI #1 Response TM & Letter
Exhibit W – “Before and After” Outfall Rendering, 12.04.23

New Exhibits

Exhibit X – Critical Areas Impact Assessment and Mitigation Plan, Northwest Ecological Services, November 2024 (new Exhibit in response to RFI#4)

Exhibit Y – Wetlands and HCA Report Addendum Memorandum, Northwest Ecological Services, November 2024 (new Exhibit in response to RFI#4)

Exhibit Z – Technical Memorandum RFI#4 Response, Raedeke & Associates, November 22nd, 2024 (new Exhibit in response to RFI#4)

Exhibit AA – Geohazard Review Addendum – Stormwater Outfall Plan, Element Solutions, November 22nd, 2024 (new Exhibit in response to RFI#4)

Exhibit BB – Memorandum #2 – Response to Public Comment & COB RFI #4, Element Solutions, November 22nd, 2024 (new Exhibit in response to RFI#4)

Exhibit CC - Wetland Proximity to Outfall Exhibit

EXHIBIT C

MITIGATION MEASURES

In addition to the mitigating design measures incorporated into the plat, the project design professionals have included recommended mitigating measures in their various reports and studies completed for the project. These measures will further protect the property and mitigate for unavoidable project impacts. These measures include, but are not limited to, the following:

1. Submit to the City Public Works for review and approval Stormwater Pollution Prevention Plan (SWPPP) consistent with the Department of Ecology Stormwater Management Manual for Western Washington (Manual) and City Code including hydrologic and hydraulic calculations after the preliminary plat approval and during the review of permit applications.

2. Comply with recommendations of Project Consultants, including:
    a. Element Solutions recommendations contained in its Geohazard Review Addendum (November 22, 2024) (“2024 Geohazard Addendum”) , its Memorandum No. 2 (November 22, 2024) (“2024 Geohazards Memo #2”) and its Geotechnical Investigations and Geohazard Report from October 2022 (“2022 Geohazard Report”). These include, without limitation, detailed field reconnaissance with final design of the stormwater outfall to assess for alternative routes for optimal avoidance of outcrop obstructions, construction of additional shielding, and location of pipe at-grade placement be optimized to minimize a surface debris “catch” hazard. Additional recommendations as set forth in the 2024 Geohazard Addendum and 2024 Geohazards Memo #2 are subject to approval by the City of Bellingham.
    b. Comply with the Critical Areas Mitigation Plan contained in the NES November 2024 Critical Areas Impact Assessment and Mitigation Plan, including establishment of Conservation Easement over the shoreline buffer, wetlands and wetland buffers as depicted in the Project Plans. In addition to buffer enhancement requirements, management requirements shall be implemented to ensure no net loss of critical area functions result from the proposed project (16.55.480(C)(6). Comply with design regarding lot layout, road layout, and trail location with any minor adjustments approved by City Planning and Public Work, and Parks, as applicable.
    c. Comply with recommendations of Pacific Survey and Engineering Stormwater Plan dated November 22, 2024.
    d. Comply with recommendations of Drayton Archeology Cultural Resources Review, dated October 28, 2024.
    e. Comply with recommendations of Raedeke & Associates Wildlife Habitat Assessment dated November 16, 2022, as revised November 22, 2024.
    f. Comply with recommendations of Traffic Engineer, TENW in its Traffic Impact Analysis dated September 29, 2022.

3. Comply with requirements of Ecology NPDES Construction Stormwater General Permit.

4. Compliance with applicable City regulations and adherence to best practices approved by the Washington State Department of Ecology and temporary erosion and sediment control

measures required by the City and the National Pollution Discharge Elimination System related to grading, erosion, and sedimentation control. These will include those set forth in the Raedeke & Associates Wildlife Habitat Assessment dated November 16, 2022 as revised November 22, 2024., subject to approval by the City Planning Department.

5. Compliance with applicable City, State and Federal Regulations, including the following:

    a. Applicable emission regulations.
    b. Applicable City of Bellingham regulations and codes related to energy efficiency and consumption.
    c. Applicable noise regulations during construction.
    d. Applicable state and federal requirements for hazardous materials handling during construction.
    e. Applicable cultural and archeological resource regulations, If archaeological resources are observed during project activities, all work in the immediate area will stop and the area secured. In this instance, a project archaeologist must be contacted immediately to inspect the materials and contact relevant parties to assess and consult prior to determining next steps to proceed.
    f. All relevant standards and guidelines for provisions of public services and utilities to meet growth in demand.
    g. Applicable regulations related to landscaping and vegetation.

6. Construction areas, including staging areas, would be clearly marked in the field prior to beginning construction activities. To the extent feasible, construction staging areas would be located outside of wetland and shoreline buffers to minimize impacts to vegetation. Critical area buffers temporarily disturbed for construction access and staging would be revegetated with a be revegetated with a mixture of native plant species following completion of construction activities.

7. Payment of Impact Fees as required, including Transportation, School and Parks impact fees.

EXHIBIT D-1

WETLAND DELINEATION REPORT

FAIRHAVEN AVENUE ROW
BELLINGHAM, WA

DECEMBER 2009

prepared for
City of Bellingham Public Works
210 Lottie Street
Bellingham, WA 98225

prepared by
Northwest Ecological Services, LLC
1229 Cornwall Ave, Suite 313
Bellingham, WA 98225
360.734.9484

EXECUTIVE SUMMARY

Northwest Ecological Services, LLC (NES) conducted a wetland delineation for a proposed restoration project that involves removal of a culvert and relocation of parking away from the marine shoreline. The project site is located within road Right-of-way for Fairhaven Avenue, Bellingham, WA (NE quarter of Section 13, Township 37N, Range 02E, W.M.). The review area was located within the ROW west of 18th Street.

NES identified three wetlands within the Fairhaven ROW. Identified wetlands include one palustrine scrub-shrub and two estuarine emergent wetlands. The wetlands have WDOE Categories ranging from I to III. Wetland categorization is based on the Washington State Department of Ecology (WDOE) Wetland Rating System for Western Washington.

All project wetlands appear to be regulated by the City of Bellingham, The Corps, WDOE and possibly WDFW. Only regulatory agencies have the ability to make final jurisdictional determinations.

NES QUALIFICATIONS

Northwest Ecological Services, LLC (NES) is a small, service-oriented environmental consulting firm based in Bellingham, Washington. We provide a range of biological services including wetland assessments; biological assessments; wetland restoration and mitigation plans; natural resource analysis and regulatory compliance; landscape and ecological design; and environmental impacts assessments of plants, animals, fish and sensitive habitats to both the public and private sectors. NES staff have performed wetland and biological assessments on over 26,000 acres [1991-2008] in Whatcom, Skagit, Island, Snohomish and King Counties.

NES staff qualifications summary:

- Vikki Jackson is a senior ecologist with NES and has over 18 years of experience in providing environmental consulting services within the north Puget Sound area. Ms. Jackson obtained a Masters in Science from Western Washington University with emphasis on ecological processes and wetlands. She is certified through the Society of Wetland Scientists (SWS) as a Professional Wetland Scientist (PWS), #000514.
- Michele Bodtke is a senior ecologist with NES and has over seven years experience with environmental consulting services and has an extensive understanding of land use laws. Ms. Bodtke has Bachelors of Science degree in Geology from Michigan State University, and a certificate in wetland science and management from the University of Washington.
- Analiese Burns is a senior ecologist with NES and has over nine years of experience with environmental consulting services. Ms. Burns obtained a Bachelors of Science in Biology from the University of Washington. She is certified through SWS as a PWS, #1618; is a Leadership in Energy and Environmental Design ® (LEED) Accredited Professional; and is a Washington State Department of Transportation (WSDOT) Senior Biological Assessment Author.
- Molly Porter is a staff ecologist with NES and has over five years of experience with environmental consulting services. Ms. Porter obtained a Bachelors of Science in Environmental Science from Huxley College of the Environment at Western Washington University.
- Clover Muters is a staff ecologist with NES and has over two years experience with environmental consulting services. Ms. Muters has a Bachelor of Science in Environmental Science from Huxley College of the Environment at Western Washington University.

DISCLAIMER

Wetland and stream delineations and determinations are based upon protocols defined in manuals and publications produced by federal, state and local agencies. The wetland methodology used in this report is consistent with methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Corps, 2008), the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Washington State Wetlands Identification and Delineation Manuel* (WDOE, 1997). The maps included in this report were generated from field measurements, but not a professional survey. The findings were based on conditions at the time of the site visit. No guarantees are given that determinations or functional assessments will concur with those performed by regulatory agencies or other qualified professionals. This report is provided for the use of the named recipient only and is not intended for use by others parties for any other purpose.

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1.0 INTRODUCTION

1.1 Scope of Work

The City of Bellingham Public Works Department contracted with Northwest Ecological Services, LLC (NES) to conduct a wetland delineation within the road right-of-way (ROW) of Fairhaven Avenue west of 18th Street (referred to hereafter as "action area"). This report describes existing site conditions, including wetlands, streams, fish and wildlife habitat. This assessment also includes a wetland functional assessment. This report is intended for inclusion with future wetland, stream, and wildlife habitat permit submissions to City of Bellingham, the U.S. Army Corps of Engineers (Corps), Washington State Department of Ecology (WDOE), and Washington State Department of Fish and Wildlife (WDFW) as may be required.

This report identifies the presence of wetlands, streams, and priority wildlife habitat as observed within or near the action area. It does not include review of the following critical areas: geologically hazardous areas, frequently flooded areas, or critical aquifer recharge areas.

1.2 Project Location

The project review area was limited the Fairhaven Avenue ROW west of 18th Street, in Bellingham, WA (Section 13, Township 37N, Range 02E, W.M.) (Figure 1, Appendix B). Only wetlands within the ROW were flagged and formally delineated. Other identified wetlands are indicated on the wetlands delineation map for reference.

1.3 Background

NES identified three wetlands within the action area (Figure 2, Appendix B). Identified wetlands are palustrine forested, sloped and depressional palustrine forested and estuarine wetlands with categories ranging from I to III.

2009 Wetland Delineation Report Prepared by NES staff:
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2.0 METHODS

NES's scope of services included conducting a wetland delineation and critical areas site assessment to determine the extent of wetlands, streams, and fish and wildlife habitats (HCA's) within the project area. The investigation consisted of an office review of existing documentation followed by a site investigation. NES conducted the site investigation in accordance with methodology specific to each critical area (wetlands, streams, and HCA's) as described below.

2.1 Document Review

NES conducted a review of available maps, drawings, and applicable reports pertaining to the subject property. Specifically, NES reviewed existing documents related to soils, hydrology, vegetation, wetlands, and fish and wildlife habitats. The following is a list of resources reviewed for this project:

- Aerial Photograph- Bing Map
- Whatcom County Wildlife Habitat Conservation Areas (HCA's) GIS Map (PDS, 2005)
- City of Bellingham, Wetland Inventories Map (COB Planning, 20004)
- Whatcom County Fish HCA's GIS Map (PDS, 2005)
- City of Bellingham Shoreline Management Program (SMP) Map (COB 1989)
- WDFW SalmonScape Interactive Map (WDFW, 2009a)
- WDFW Species of Concern Listing (WDFW, 209b)
- WDNR Forest Practices Interactive Water Typing Map (WDNR, 2009)
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) *Soil Survey of Whatcom County Area, Washington* (2009), NRCS Web Soil Survey (www.websoilsurvey.nrcs.usda.gov), and NRCS Whatcom County Area Hydric Soil List (2001)
- Wetland Characterization: Chuckanut Village Marsh (NES 2008)

2.2 Field Methods

2.2.1 Wetlands

The wetland delineation was conducted in accordance with the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Corps, 2008) and the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987). This methodology requires evidence that at least one positive wetland indicator must be found for each of three parameters (vegetation, soils, and hydrology) to make a positive wetland determination. An area is not considered a regulatory wetland if indicators for any

one of these three parameters are not observed under normal environmental conditions. Upland/wetland boundaries are delineated by locating the transition where soils, vegetation, or hydrology no longer indicate that wetland parameters are met. Methods for each of these parameters are as follows:

- **Vegetation:** The plant community at each sample site is considered to be hydrophytic (wetland) vegetation if the vegetation exhibits indicators of hydrophytic vegetation as defined in the delineation methodology (Corps, 2008). Most often the "Dominance Test" is used as the indicator. The sample plot meets the dominance test for hydrophytic vegetation if more than 50 percent of the dominant species from all strata have obligate wetland, facultative wetland, and/or facultative indicator status. Indicator status is taken from U.S. Fish and Wildlife Service (Reed, 1988 and 1993). Dominant species are the most abundant species that individually or collectively account for more than 50 percent of the total coverage of vegetation in the stratum (absolute percent cover), plus any other species that, by itself, accounts for at least 20 percent of the total. The wetland indicator status for each dominant species is then used to determine whether the plant community is dominated by hydrophytic vegetation. Occasionally, the "Prevalence Index" is used as the indicator of hydrophytic vegetation. The Prevalence Index is a weighted-average of all plant species in the sample plot.
- **Soils:** Soil test pits are hand dug to approximately 20 inches and soils are examined for hydric soil indicators. These formal soil test pits are labeled with a data point number and located on the delineation map. Colors of the soil, including concentrations, depletions, or gleying, if present, are colored using a Munsell color chart (Gretag-Macbeth, 2000). *Field Indicators of Hydric Soils in the United States* (USDA, 2006) was used to determine hydric soils presence or absence.
- **Hydrology:** Site specific hydrology is assessed by an inspection of each site. Depth to shallow groundwater and/or saturation in each test pit is recorded, as are observations of other indicators of hydrology including but not limited to water marks, drift lines, sediment deposits, and drainage patterns. These data provide information on timing and duration of ponding and/or saturation in the study area.
- **Growing Season:** Vegetation and hydrology indicators are dependent upon conditions during the "growing season". The growing season, as defined by *the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*, is when non-evergreen plants show biological activity (plant growth) and/or the soil temperature at 12 inches below the surface is a minimum of 41 degrees Fahrenheit (F) (Corps, 2008, pp.66-67).

Wetlands were flagged in the field with orange field flagging. NES also flagged three sample plots associated with this project. The wetland delineation took place during at the end of the dry season. The wetlands were not professionally surveyed, but locations were field measured as indicated in Figure 2, Appendix B. Data sheets from the delineation are located in Appendix C of this report. Photographs taken at the time of the site visit are included in Appendix D.

2.2.2 Streams

Stream characterization included data collection of basic stream attributes including depth, vegetation, substrate, and habitat features. NES ecologists did not flag the OWHM of the stream within the review area, but it is documented in the Wetland Characterization report prepared by NES (NES 2008) (Figure 3, Appendix B).

2.2.3 Fish and Wildlife (HCA's)

Observations of any state Priority or federal Endangered Species Act (ESA) protected species presence was documented during the on-site review. NES also reviewed the site for general wildlife habitat conditions and habitat connectivity. If streams were present, NES documented any obvious fish passage barriers, characterized general stream attributes (as described above), and documented any observations of fish during the site visit.

2.2.4 Shorelines

The project area was located on City of Bellingham SMP maps to determine if shorelines of the state exist on-site and, if present, their documented Shoreline Area Designation. During the site visit, NES ecologists noted any obvious discrepancies with the SMP map. If shorelines were present, NES determined the lateral extent of the Shoreline jurisdiction based on floodplain, floodway, and/or wetland observations.

3.0 FINDINGS

3.1 Summary

NES staff conducted a site visit on October 23th of 2009. Three wetlands were identified within the review area (described in detail, below) (Figure 2, Appendix B). In addition a seasonal stream and a marine shoreline are located in the review area.

The project review area was limited the Fairhaven Avenue ROW west of 18th Street, in Bellingham, WA (Section 13, Township 37N, Range 02E, W.M.) (Figure 1, Appendix B). Only wetlands within the ROW were flagged and formally delineated. A more comprehensive review of the "Chuckanut Village Marsh" was documented in the "Wetland Characterization: Chuckanut Village Marsh" (NES 2008). An aerial photograph of the vicinity of the review area is included as Figure 3 (Appendix B).

3.2 Wetlands

Three wetlands (Wetlands A-C) were identified within the review area (Figure 2, Appendix B). Hydric vegetation, soils and primary indicators of hydrology were present within identified project wetlands. The wetland determination was based on the presence/ absence of vegetation, soils, and to a lesser degree hydrology (as wet season hydrology had not been restored to the site). Wetland hydrogeomorphic and Cowardin classifications, and wetland size are summarized in Table 1. A description of each wetland is provided below.

Table 1. Wetland Classification Summary

Wetland Unit	Hydrogeomorphic Class	Cowardin Classification	Wetland Size* (approx. square feet [s.f.])
Wetland A	Depressional outflow	PSS/PEM	3,700
Wetland B	Slope -outflow	Estuarine emergent	750
Wetland C	Depressional- outflow	Estuarine emergent	> 3 acres

(+ wetland extends off-site PFO: Palustrine Forested, PEM: Palustrine emergent:
*Wetland size based on field measurements, not a professional survey)

3.2.1 Wetland A

Wetland A is a palustrine scrub-shrub/emergent wetland. The wetland is dominated by native shrubs and herbaceous species, although non-native reed canarygrass (*Phalaris arundinacea*) is well established in portions of the wetland. Species observed include Hooker's willow (*Salix hookeriana*), hardhack (*Spiraea douglasii*), reed canarygrass (*Phalaris arundinacea*), bentgrass (*Agrostis* sp.), and Pacific silverweed (*Potentilla anserina*). Reed canarygrass is considered an invasive, non-native noxious species, and occupies a significant portion of the center of the wetland (Hruby, 2004 and Washington State Noxious Weed Control Board [NWCB], 2008).

The NRCS mapping indicates soils in the review area are dominated by Fishtrap Muck on 0 to 2% Slopes (54), tidal Hydraquents on 0 to 1% Slope (75), and Everett Urban Land Complex on 5 to 20% Slopes (52) (Figure 6). Fishtrap Muck is indicated to occur on 0 to 2 percent slopes and is listed as drained. This soil series is classified as a histosol and meets the criteria for a hydric soil. Everett-Urbanland complex is mapped along the southeastern and northern edge of the review area. This soil is a mineral soil that is not listed as a hydric soil on the NRCS hydric soils list. Tidal Hydraquents are mapped in the extreme southwest corner in the vicinity of the parking area and immediately to the east.

Soil observed in Wetland A had a black to a very dark brown (10YR 2/1 to 2/2) mucky peat that extended to beyond 20 inches. This soil appears consistent with the description of Fishtrap Muck. Soil in Wetland A meets NRCS hydric soil indicator A1 (histosol) (USDA, 2006).

Wetland A appears to be saturated throughout the year and may be shallowly inundated during the wet season. The wetland has an intermittently flowing, semi-constricted outlet that discharges via a culvert west under a driveway into Wetland B. At the time of the October 2009 site visit, soils were saturated to within four inches of the surface. The primary hydrology supporting this wetland appears to be from a mix of surface water runoff and a seasonal high water table possibly extending from Wetland C.

3.2.2 Wetland B

Wetland B is an estuarine emergent wetland dominated by native herbaceous species. The wetland is dominated by hydrophytic halophytes. Dominant species include saltgrass (*Distichlis spicata*) and Atriplex (*Atriplex patula*). Other representative species include Douglas aster (*Aster subspicatus*), marine plantain (*Plantago maritima*), pickleweed (*Salicornia virginica*) and field bindweed (*Convulvus arvensis*). Shrubs are present at the fringe of the wetland, but rooted more significantly in the upland. Shrubs include Nootka rose (*Rosa nutkana*), western crabapple (*Malus fusca*) and Himalayan blackberry (*Rubus armeniacus).*

Soil observed in Wetland B had a black to a very dark brown (10YR 2/1 to 2/2) mucky peat that extended to beyond 20 inches. Redox features with a color of 10YR 4/4 were present with a total percentage ranging from zero to thirty percent. This soil appears consistent with the description of Fishtrap Muck. Soil in Wetland B meets NRCS hydric soil indicator A1(Histosol) (USDA, 2006).

Wetland B is located in a sloped swale that has unrestricted outlet to the shoreline of Chuckanut Bay. The slope within the wetland is approximately 5%. The wetland is tidally influenced on regular basis. Other hydrology sources associated with this wetland include the outlet culvert from Wetland A. This culvert enters Wetland B at its eastern end. The outlet stream from Wetland C also has periodic flows that influence Wetland B. At the time of the site visit, Wetland B displayed saturated soils beginning at 5 inches from the surface. This wetland appears to be saturated year round and flooded by fresh and marine sources at frequent intervals.

3.2.3 Wetland C

Wetlands C is an estuarine emergent wetland commonly referred to as "Chuckanut Village Marsh". The marsh also includes Palustrine forested and palustine shrub-shrub and emergent vegetation classes outside of the review area for this project (see *Wetland Characterization: Chuckanut Village Marsh*, NES 2008 for more details). Wetland C is dominated by native hydrophytic plant species; many of which have a high tolerance to salt (halophyte). Dominant species include saltgrass (*Distichlis spicata*), Baltic rush (*Juncus balticus*), Douglas aster (*Aster subspicatus*), and Atriplex (*Atriplex patula*). Other representative species include marine plantain (*Plantago maritima*) and a well developed stand of Japanese knotweed (*Polygonum cuspidatum)* at the western edge of the wetland.

Soil observed in Wetland C had a black to a very dark brown (10YR 2/1 to 2/2) mucky peat that extended to beyond 20 inches. Redox features with a color of 10YR 4/4 were present with a total percentage ranging from zero to thirty percent. This soil appears consistent with the description of Fishtrap Muck. Soil in Wetland C meets NRCS hydric soil indicator A1 (Histosol) (USDA, 2006). Old fill material appears to be present at the western edge of the wetland, in the vicinity of the patch of Japanese knotweed.

Hydrology to Wetland C is provided via surface water runoff, tidal influence and groundwater. The Wetland Characterization report provides more specifics regarding the hydrology of this wetland (NES 2008). At the time of the site visit the soils were saturated to the surface within the review area of this wetland.

3.3 Wetland Categorization and Functional Assessment

NES completed a wetland rating and functional assessment of site wetlands using the WDOE's Wetland Rating System for Western Washington, revised 2004 (Rating System) (Hruby, 2004). This methodology identifies and quantifies the potential of various functions operating within a wetland. The determination is based on the physical characteristics of water quality, hydrologic, and habitat functions in the wetland and buffers. Using this system, wetlands are given a score based on the functions provided by the wetland, and are classified as Category I through Category IV.

Table 2. Wetland Functional Assessment

	Qualitative Rating of Function		
Functional Value or Score	**Wetland A**	**Wetland B**	**Wetland C**
Total WDOE Score	52	48	69
WDOE Category	III	II*	I*
Overall Water Quality Potential	H	M	H
Overall Water Quality Opportunity? (Y/N)	Y	Y	Y
Overall Hydrologic Potential	M	L	M
Overall Hydrologic Opportunity? (Y/N)	Y	Y	Y
Total Habitat Score	13	18	29
Overall Wildlife Habitat Potential	L	L	H
Overall Wildlife Habitat Opportunity	M	M	M
Specific Habitat Functions:			
Vegetation Structure	M	L	H
Habitat Features	L	H	H
Buffer Quality	L	L	H
Priority Habitats	M	M	H
Habitat Connectivity	M	M	H

(H: High, M: Medium, L: Low, Y: yes, N: no, * these wetland ratings were determined by using the Special Characteristics sheets)

Wetland function (potential and opportunity) was determined using the WDOE Rating System, per recent guidance from WDOE (WDOE, 2008). The NES ecologists converted the

Rating System scores to a qualitative rating of "High", "Medium", and "Low" based on WDOE guidance. The qualitative rating provides more accuracy when comparing wetlands and evaluating their current status. The ecologists did not include a qualitative rating for the opportunity for water quality and hydrologic functions because the opportunity is either present or not. Instead, the table reflects the presence of opportunity as "Yes" and absence as "No" based on answers provided in the rating sheets. The qualitative ratings for specific habitat functions are based on NES ecologists' best professional judgment. A summary of WDOE rating and scores is shown in Table 2.

3.3.1 Wetland A

Wetland A has a high potential to perform water quality functions. This rating is based on the wetlands intermittently flowing outlet, moderate size, and moderate holding capacity. These features result in prolonged water retention and subsequent increased water quality treatment within the wetland. Under lying soils have a high organic content which increases the wetland to remove pollutants from surface water. The wetland supports dense herbaceous vegetation which is able to provide pollutant capture and conversion. This wetland is a seasonally saturated to shallowly ponded depression which provides some pollutant capture and conversion. Wetland A is receives runoff from Fairhaven Avenue and adjacent residential yards which provides the wetland with the "Opportunity" to serve water quality improvement functions.

Wetland A has a moderate potential to perform hydrologic functions. The wetland is a depresssional wetland with a semi-constrained outlet which allows it to retain surface flows, providing water storage functions. However Wetland A is located very low in the drainage basin reducing its potential to provide flood de-synchronization and baseflow functions. Wetland A has the "Opportunity" to provide some erosion and flood protection as it is upstream of Chuckanut Bay which has documented salmonid presence, but its location low in the drainage limit these functions.

Overall, Wetland A has a low "Potential" and moderate "Opportunity" to provide wildlife habitat functions. These ratings are based on the wetland's moderate vegetation structure, presence and cover of non-native plant cover, and limited habitat features. The wetland is moderately connected to other habitats, although roads and a driveway fracture direct corridor cover.

The buffer surrounding Wetland A includes Fairhaven Avenue, a narrow band of mixed forested and residential yards. Canopy cover is near 100 percent within the buffer, however shrub and herbaceous cover is sparse. Habitat features were not detected within the buffer area in the ROW.

3.3.2 Wetland B

Wetland B has a moderate potential to perform water quality functions. This is based on the high percent cover of persistent vegetation and the presence of soil with a high percentage of

organic content. The wetland's function for water quality improvement is impeded by the lack of retention within the wetland due to it unconfined outlet and exposure to the marine system. Under lying soils have a high organic content increasing the wetland's ability to remove pollutants from surface water. The wetland has dense herbaceous vegetation cover in most areas which also increases its pollutant capture and conversion functions. Wetland B receives runoff from Fairhaven Avenue and adjacent residential yards providing the wetland with the "Opportunity" to serve water quality improvement functions.

Wetland B has a low potential to provide hydrologic functions. The wetland's ability to provide this suite of functions is due to its reduced capacity to retain and detain surface water. Surface water entering the wetland can move freely through, since the wetland does not have any restriction at its outlet and flows directly into the marine system. Ponding within the wetland is limited to the duration of a narrow tidal cycle, limiting the range of biochemical processes that can occur within the wetland. The wetland is also located at the bottom of a drainage basin which also limits its function to provide hydrologic support to this system. The wetland is associated with Chuckanut Bay which is documented fish habitat. This provides the wetland with the "Opportunity" to provide these functions.

Overall Wetland B has a low "Potential" and moderate "Opportunity" to provide wildlife habitat functions based on its moderate vegetation structure, and limited habitat features. The location of the wetland between residential uses and Fairhaven Avenue provides limited buffer function protecting the wetland. Wildlife habitat is well connected to other habitats via the marine shoreline.

The buffer surrounding Wetland B includes Fairhaven Avenue, residential yards and Chuckanut Bay to the west. No canopy exists within the buffer of this wetland. Habitat features are not located in the buffer area located in the ROW.

3.3.3 Wetland C

Wetland C has a high "Potential" to perform water quality functions. This is based on high percent cover of persistent vegetation and the presence of soil with a high organic content. The wetland function for water quality improvement is enhanced by a semi constrained outlet and by influence by the regular tidal inundation. This results in varying hydro periods providing a range of biochemical actions that can provide water quality improvement. Under lying soils have a high organic content increasing the wetland's ability to remove pollutants from surface water. The wetland has dense herbaceous vegetation cover in most areas which also increases its pollutant capture and conversion functions. Wetland C receives runoff from Fairhaven Avenue and adjacent residential yards which provides the wetland with the "Opportunity" to serve water quality improvement functions.

Wetland C has a moderate "Potential" to provide hydrologic functions. The wetland's ability to provide this suite of functions is due to its reduced capacity to retain and detain surface water. Surface water entering the wetland is partially retained within the wetland due to a

outlet that is semi restricted. Ponding within the wetland is significant and could assist in hydrologic function in the system, except that the wetland is located at the bottom of a drainage basin which limits its function. The wetland is associated with Chuckanut Bay which is documented fish habitat. This provides the wetland with the "Opportunity" to provide these functions.

Overall Wetland C has a high "Potential" and moderate "Opportunity" to provide wildlife habitat functions based on its diverse vegetation structure, high presence and cover of native plants, and a wide range of habitat features. The location of the wetland between residential uses and Fairhaven Avenue provides limited buffer function protecting the wetland in some locations, although wildlife habitat is well connected to other habitats via the marine shoreline.

Land use within the buffer of this wetland is mix of forested uplands and residential development. Fairhaven Avenue abuts the southern edge of this wetland. The buffer area within the ROW for this wetland is residential year maintained in lawn. No habitat features are present.

3.4 Streams

3.4.1 Document Review

The following provides a summary of the findings contained within documents reviewed:

- **Basins Map (COB, 2004)**

  The project area is located within the South Bellingham Bay Watershed. The stream associated with Wetland C is indicated on this mapping. Chuckanut Creek Watershed is immediately south of the project area.

- **Salmonscape (WDFW, online)**

  Salmonscape only indicates Chuckanut Creek, south of the action area. It is documented habitat for fall chum and coho salmon. The identified stream in the project area is not mapped.

- **WDNR Forest Practices Interactive Water Typing map (WDNR, 2009)**

  The WDNR Forest Practices map also documents Chuckanut Creek. WDNR lists it as a type "S" stream. A type "S" stream is an inventoried water of the State.

3.4.2 Field Observations

A ditched seasonal stream associated with Wetland C (Chuckanut Village Marsh) is located within the project area. Chuckanut Creek is located 700' feet south of the project. The stream within the project area has been ditched and flows under Fairhaven Avenue via a culvert (this culvert would be removed in the proposed restoration project).

3.5 Fish and Wildlife

3.5.1 Document Review

The following provides a summary of the findings contained within documents reviewed:

- **Whatcom County Wildlife HCA's GIS Map (PDS, 2005) (Figure 4**)

  Wildlife HCA's are mapped within the review area for Peregrine Falcon, Bald eagle and commercially important shellfish.

- **Whatcom County Fish HCA's GIS Map (PDS, 2005)**

  County mapping does not include the South Bellingham Bay Watershed, but mapping does indicate documented fish presence in Chuckanut Creek.

3.5.2 Field Observations

No state or federal Threatened, Sensitive, or Endangered plant or animal species, were observed in the review area at the time of the site visit. However, concentrations of waterfowl were observed immediately off-shore. Bald eagles are common residents of this bay.
No fish were observed in the stream during recent site visits, but fish have been reported in the stream during other recent reviews.

3.6 Shorelines

3.6.1 Document Review

The following provides a summary of the findings contained within documents reviewed:

- **City of Bellingham SMP Map (COB, 1989)**

  The project review area is located within and adjacent to a Water of the State – Chuckanut Bay and Chuckanut Creek. Chuckanut Bay has a Natural designation under the existing SMP.

3.6.2 Field Observations

The project abuts the marine shoreline. Ditches and wetlands associated with the project discharge directly into the marine waters.

3.7 Upland Areas

3.7.1 Document Review

The following provides a summary of the findings contained within documents reviewed:

- **Aerial Photograph- Bing Maps (Figure 3)**

  The aerial photograph shows the vicinity of the proposed project area.

- **USDA, NRCS *Soil Survey of Whatcom County Area, Washington*, NRCS Web Soil Survey (USDA, NRCS, 2009), and NRCS Whatcom County Area Hydric Soil List (2001) (Figure 4)**

The NRCS mapping indicates soils in the review area are dominated by Fishtrap Muck on 0 to 2% Slopes (54), tidal Hydraquents on 0 to 1% Slope (75), and Everett Urban Land Complex on 5 to 20% Slopes (52) (Figure 6). Fishtrap Muck is indicated to occur on 0 to 2 percent slopes and is listed as drained. This soil series is classified as a histosol and meets the criteria for a hydric soil. Everett-Urbanland complex is mapped along the southeastern and northern edge of the review area. This soil is a mineral soil that is not listed as a hydric soil on the NRCS hydric soils list. Tidal Hydraquents are mapped in the extreme southwest corner in the vicinity of the parking area and immediately to the east.

3.7.2 Field Observations

The upland vegetation has been influenced by surrounding residential land use. The upland area south of the road in the ROW is a mixed deciduous forest dominated by red alder (*Alnus rubra*), Sitka spruce (*Picea sitchensis*), walnut species, Indian plum (*Oemleria cerasiformis*), English holly (*Illex* sp) and sword fern (*Polystichum munitum*). Vegetation on the north side of the road is primarily a mowed lawn.

The review area slopes north and west on the south side of the ROW, but is generally flat on the north side. Surface water is conveyed in a shallow ditch and into Wetland A on the south side of the ROW; whereas it disperses across the lawn into Wetland C on the north side.

Soils observed within the sampled upland had very gravelly loam soils with a very dark brown color extending beyond 20 inches in depth. No redox features were observed. No hydric soil indicators were indicated for this sample plot.

No indicators of wetland hydrology were observed within areas designed as upland on the project site.

4.0 REGULATIONS

Agencies with regulatory authority over site wetlands and streams are summarized in Table 3. A regulatory summary for each agency is provided below.

Table 3. Regulatory Summary

Unit	Wetland Size* (s.f.)	WDOE Category (habitat pts)	Corps Hydrologic Classification	Regulatory Status				Regulated Buffer (ft)
				Corps	WDOE	WDFW	City of B'ham	
Wetland A	3,700	III (13)	Abutting an RPW	yes	yes	no	yes	80
Wetland B	750	II sc III f (18)	Abutting an TNW	yes	yes	yes	yes	100
Wetland C	>3 acres	I sc II f (29)	Abutting an TNW	yes	yes	yes	yes	200

(sc: rating using Special Characteristics, f: rated using function, RPW: Relatively Permanent Water, TNW: Traditional Navigable Water: *Wetland size based on field measurements and were not professionally surveyed)

4.1 City of Bellingham

4.1.1 Critical Areas Ordinance

The City of Bellingham Critical Areas Ordinance (CAO) states that no activity may be conducted within a regulated wetland, stream, or buffer without Critical Areas review and approval. Activities impacting regulated wetlands generally must provide mitigation sufficient to maintain or enhance the wetland functions. The City of Bellingham requires a buffer around regulated wetlands and streams to protect functions. The buffer must remain naturally vegetated except where it can be enhanced to improve the functions. Buffers are measured from the ordinary high water mark (OHWM) of the stream or the wetland edge.

The City of Bellingham requires a buffer on all wetlands and streams and shorelines in the project area. The regulated wetland buffer width is based on the overall DOE rating score, the DOE habitat score, and the proposed land use (moderate).

The City regulates stream buffers based on stream type (BMC 16.55.500 D). The unnamed stream appears to qualify as Type 3/ Type "F" (fish bearing) streams, and therefore requires 75 to 150 foot buffers. A summary of regulated wetland and stream buffers are shown in Table 4 below.

Table 4. City of Bellingham Regulated Buffer Widths

	DOE Wetland Category	DOE Habitat Score	Regulated Buffer (feet)
Wetland A	III	13	75'
Wetland B	II	18	100
Wetland C	I	29	200

The City of Bellingham requires that buildings and other structures are setback a minimum of 15 feet from the edge of critical area buffers, or from the critical area where no buffer is required, to the extend that the critical root zone of trees in the buffer are not disturbed. Uses allowed within the 15-foot setback include: landscaping; uncovered decks; roof eaves and overhangs; impervious surfaces such as driveways and patios, provided such improvements may be subject to water quality regulations (BMC 16.55.340 G).

The City of Bellingham CAO requires applicants to avoid all impacts to on-site critical areas and their buffers to the furthest extent possible. In some cases, if alteration to the critical area is deemed unavoidable, impacts may be allowed if all adverse impacts resulting from a development proposal are mitigated using best available science so as to result in no net loss of critical area functions and values. When alteration or impact to a critical area is proposed, the applicant shall demonstrate that all reasonable efforts have been taken to mitigate impacts in the following, prioritized, order: 1)Avoid, 2) Minimize, 3)Rectify, 4)Reduce, 5)Compensate (CAO, 16.55.250).

4.1.2 Shorelines

Shorelines are protected under the SMA, RCW 90.58, and regulations are administered under the City of Bellingham Shoreline Management Program (SMP) (1989). The SMP defines "shorelines" as all "shorelines of the state" and all "shorelands". Shorelines of the state are areas of Puget Sound and adjacent saltwaters, natural rivers or streams west of the Cascade range downstream of the point measured as having a mean annual flow of 1,000 cubic feet per second (cfs) or more, and natural and manmade lakes with a surface area greater or equal to 1,000 acres. Shorelands are lands extending 200 feet from the OHWM, floodways and all contiguous floodplains 200 feet from such floodways, and all wetlands and river deltas associated with jurisdictional shorelines. Each jurisdictional shoreline is associated with one or more Shoreline Use Designation for the purposes of administering the SMP. The project area is located within a regulated shoreline area associated with Chuckanut Bay.

The City is currently revising their Shoreline Master Program. Under the current designation this area is considered Natural.

4.2 U.S. Army Corps of Engineers

Activities altering wetlands, streams, and drainage ditches may require permit authorization from the Corps under Section 404 of the federal Clean Water Act (CWA) (33 U.S.C. § 1251 et seq.) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 401). For Corps regional conditions under the 2007 Nationwide Permits see **Special Public Notic*e*** dated 7 November 2007 issued by the Seattle District Regulatory Branch (Corps, 2007).

The Corps regulates wetlands, streams, and other drainages that connect to Waters of the United States. The Corps requires notification for **all** disturbances to wetlands, streams, and potentially to other drainages (ditches), and it is incumbent upon the landowner to disclose disturbances. The Corps will automatically assert jurisdiction over some wetlands and will need to complete a significant nexus determination for others, depending on the degree of connection to other waters, and the classification of these associated waters. Wetland hydrologic classification and connectivity is described in this report as the Corps "hydrologic classification" (Table 3) using definitions provided in current Corps guidance documents.

The ditch and stream serving as the outlet to Wetland A and C respectively appear to meet the definition of Relatively Permanent Waters (RPWs) based on an assumption of a continuous flow of more than three months out of the year. The ditch and stream outlet into Chuckanut Bay which is recognized Traditional Navigable Water (TNW). Wetland B appears to be abutting a TNW, as it outlets directly into Chuckanut Bay.

A disturbance under one-half acre of non-isolated wetland requires an application for a Nationwide Permit from the Corps. Fills exceeding one-half acre require an Individual Permit from the Corps. Mitigation is required for most wetland fill. In all cases the Corps requires concurrence with Section 7 of the ESA. The Corps also has discretion to disallow disturbance to

high quality wetlands. The Corps requires certification that no federally listed or known Endangered or Threatened animal species or areas protected under Section 106 of the National Historic Preservation Act are present on the site.

4.3 Washington State Department of Ecology

Activities altering wetlands may require permit authorization from WDOE per Section 401 of the federal CWA as directed by the U.S. Environmental Protection Agency. WDOE has authority over discharge into **all** wetlands (including isolated wetlands) and streams and can impose buffers and compensatory mitigation for impacts (RCW 90.48). **The WDOE appears to have jurisdiction over all project wetlands, and potentially the ditches.** The WDOE reviews all permits received by the Corps for Water Quality Certification. WDOE requires an "individual" review of all wetland disturbances greater than one-half acre. Water Quality Certification is required for all Individual Permit applications.

4.4 Washington Department of Fish and Wildlife

The WDFW requires issuance of a Hydraulic Project Approval (HPA) prior to any activities that may directly or indirectly affect streams or associated wetlands. Mitigation may be required for impacts to regulated streams. Prior to any work proposed the land owner must contact WDFW, to determine if an HPA is required for site development.

APPENDIX A: REFERENCES

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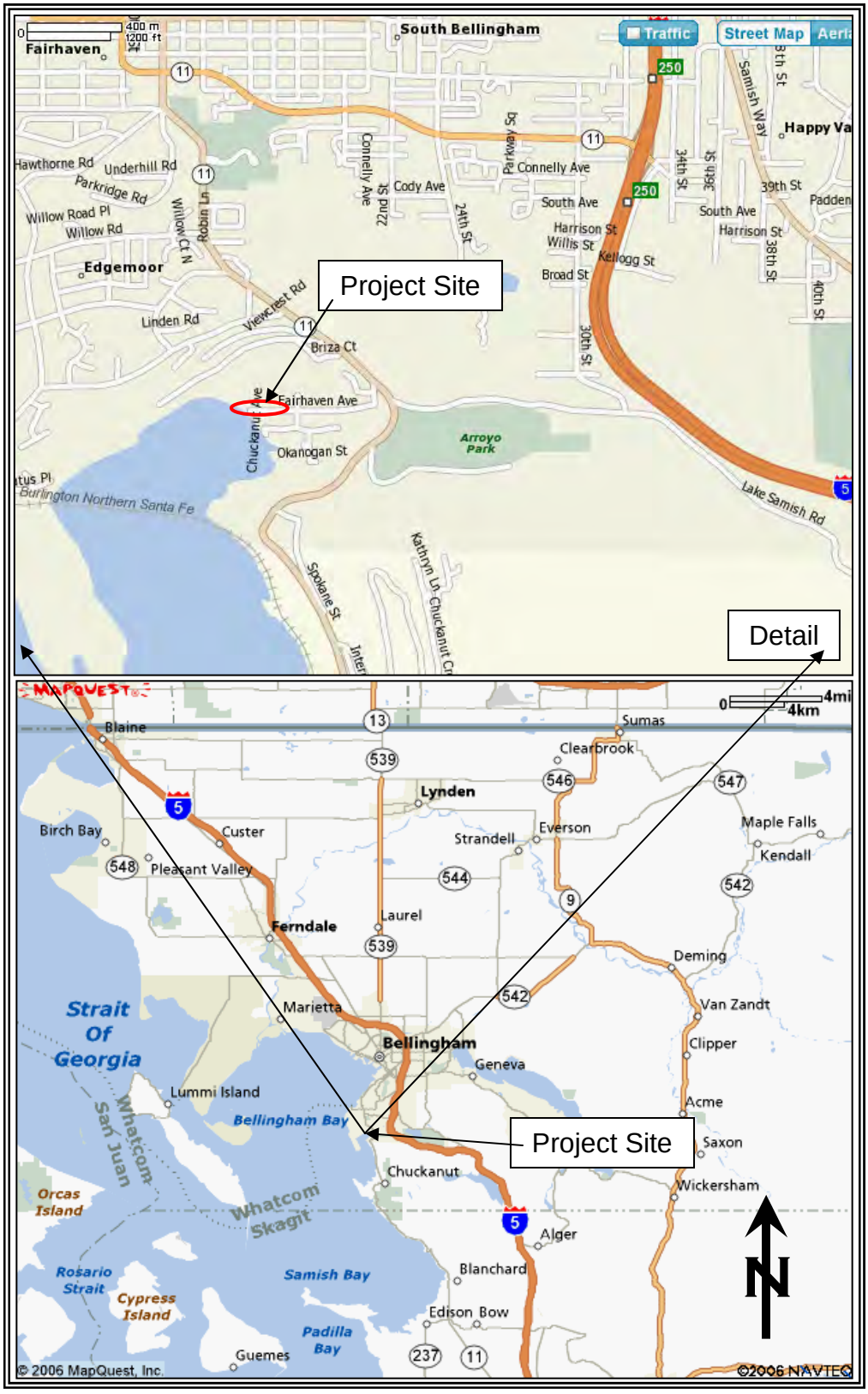
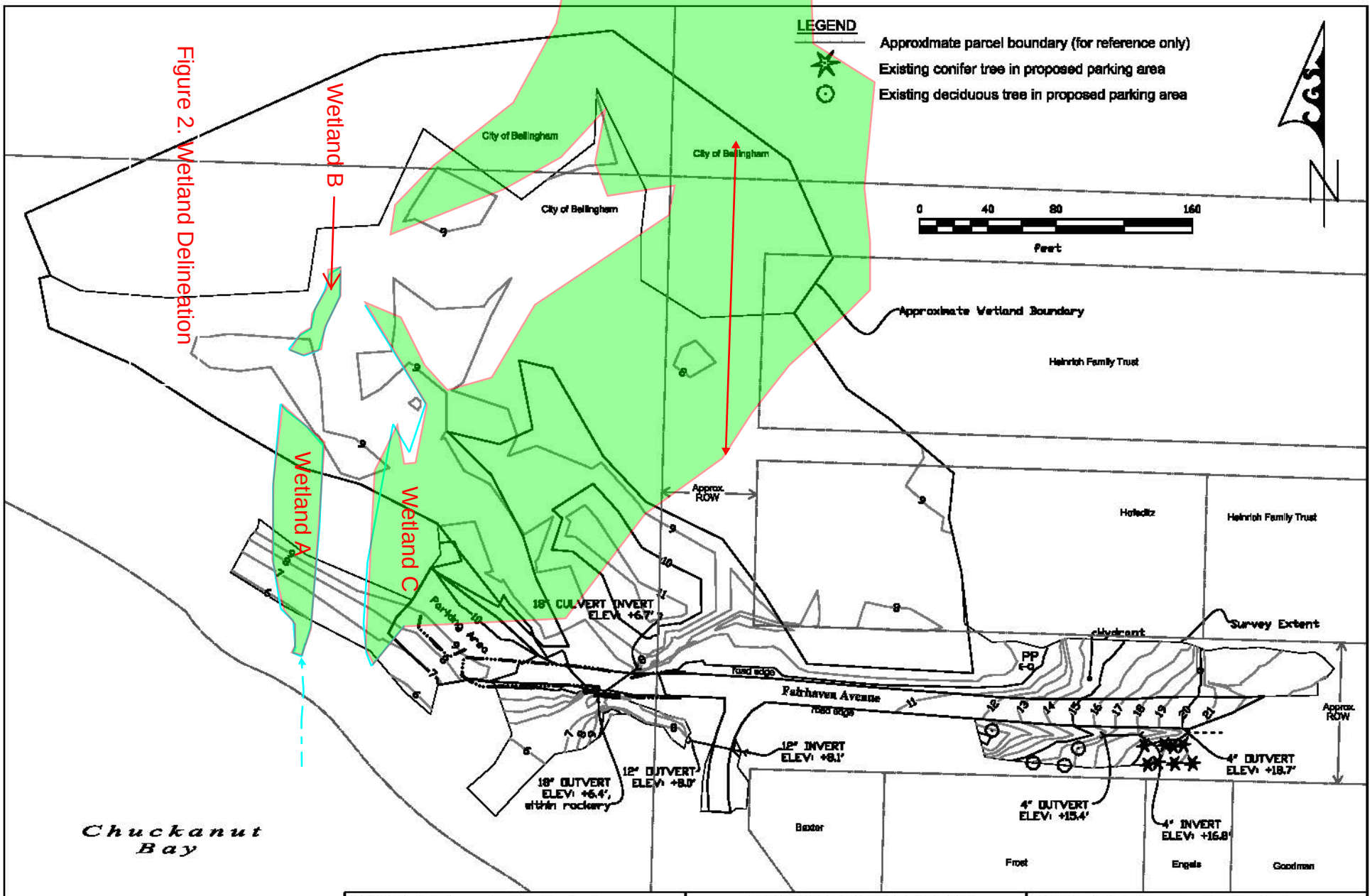
APPENDIX B: FIGURES



ECOLOGICAL NORTHWEST	**Vicinity Map** **City of Bellingham/ Chuckanut Village Marsh Delineation & Mitigation Report**	**Figure 1** **Oct. 2009**

Figure 2. Wetland Delineation



PURPOSE: Culvert removal and beach restoration
DATUM: MLLW (MHHW = +8.4' MLLW)
ADJACENT PROPERTY OWNERS:
Burton Baxter
Patrick & Mary Frost
Kevin Engels
Heinrich Family Trust
Stephen & Mamie Hofeditz
John Goodman

CHUCKANUT VILLAGE MARSH
Site Plan - Existing Conditions
1"=80'
OWNER AND ADDRESS
City of Bellingham
210 Lottie Street
Bellingham, WA 98225

PROPOSED: Culvert removal and beach restoration
IN: Chuckanut Bay
COUNTY: Whatcom **STATE:** WA
APPLICATION BY: City of Bellingham

Sheet 2 of 9 12AUG09

COASTAL GEOLOGIC SERVICES
701 Wilson Ave, Bellingham, WA 98225
(P) 360-647-1845, (F) 360-671-6654
www.coastalgeo.com

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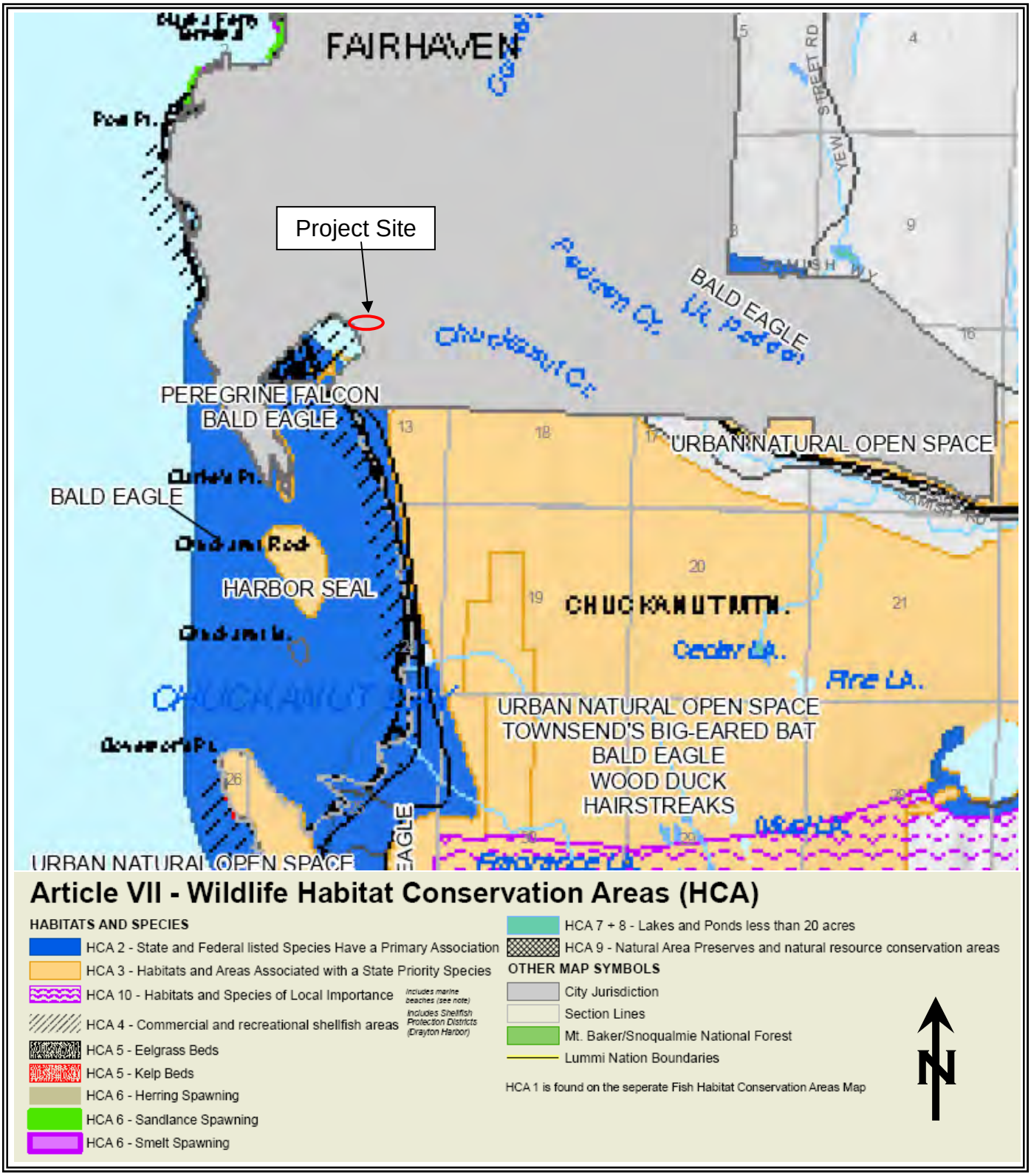
ECOLOGICAL NORTHWEST	**Aerial Photograph** **(Bing Maps)** **City of Bellingham/ Chuckanut Village Marsh** **Wetland Delineation and Mitigation Report**	**Figure 3** **Dec. 2009**

Soil Series: Everett Urban Land Complex on 5 to 20% Slopes (52)
Fishtrap Muck on 0 to 2% Slopes (54)
Hydraquents, tidal on 0 to 1% Slope (75)

ECOLOGICAL NORTHWEST	**Soils Map** **(USDA NRCS)** **City of Bellingham/ Chuckanut Village Marsh** **Wetland Delineation and Mitigation Report**	**Figure 4** **Oct. 2009**



ECOLOGICAL NORTHWEST	**Wildlife Habitat Conservation Areas Map** **(Whatcom County Critical Areas Ordinance Maps)** **City of Bellingham/ Chuckanut Village Marsh Wetland Delineation and Mitigation Report**	**Figure 5** **Oct. 2009**

APPENDIX C: DATA SHEETS

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: COB/ Chuckanut Village Marsh	City/County: COB	Sample Date: 09/28/09
Applicant/Owner: COB	State: WA	Sample Point: 01
Investigator: Jackson, Porter	Section/Township/Range: 13/37N/02E	
Landform (hillslope, terrace, etc):	Local Relief (concave, convex, none) :	Subregion: LRR A
Soil Map Unit Name: Everett Urban Land Complex (52)		NWI Classification:
Are climatic/hydrologic conditions on the site typical of this time of year? Yes ☒ No ☐ (if no, explain in Remarks)		
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?	Are "Normal Circumstances" present? Yes ☒ No ☐	
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?	(If needed, explain any answers in Remarks.)	

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

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** **Yes ☐ No ☒**
Remarks: Positive indicators for all three parameters were not observed at this location.	

VEGETATION

Tree Stratum (Plot size: 9 meters)	Absolute % Cover	Indicator Status	Dominant Species?
Picea sitchensis	30	FAC	☒
Alnus rubra	20	FAC	☒
Walnut	25	UPL	☒
		-	☐
Total Cover:	75		
Sapling/Shrub Stratum (Plot size: 3 meters)			
Oemleria cerasiformis	40	FACU	☒
Illex sp.	25	UPL	☒
Corylus cornuta	15	FACU	☐
Symphoricarpos albus	10	FACU	☐
Physocarpus capitatus	5	FACW	☐
Total Cover:	95		
Herb Stratum (Plot size: 1 meter)			
Polystichum munitum	5	FACU	☒
Hedera sp.	Trace	-	☐
		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:	5		
Woody Vine Stratum (Plot size:)			
n/a		-	☐
		-	☐
		-	☐
Total Cover: % Bare Ground in Herb Stratum:			

Dominance Test worksheet Number of Dominant Species that are OBL, FACW, or FAC:	2 (A)
Total number of dominant species across all strata:	6 (AB)
Percent of dominant species that or OBL, FACW, FAC:	33% (A/AB)

Prevalence Index worksheet	
OBL species:	x 1=
FACW species:	x 2=
FAC species:	x 3=
FACU species:	x 4=
UPL species:	x 5=
Total: (A)	(B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is > 50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Remarks: The majority of dominant species observed at this location were hydrophytic.	**Hydrophytic Vegetation Present?** **Yes ☐ No ☒**

SOIL

Sample Point: 01

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

Depth	Soil Color		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 2/2	100			-	-	L	Very gravelly. Soil dry.
					-	-		
					-	-		
					-	-		
					-	-		
					-	-		
					-	-		
					-	-		

[1]Type: C=concentration D=depletion RM=reduced matrix [2]Location: PL=pore lining RC=root channel M=matrix

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)

- ☐ Histosol (A1)
- ☐ Histic Epidedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (except MLRA 1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red parent material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☐ No ☒

Remarks: Soil observed at this location did not meet NRCS hydric soil indicators.

HYDROLOGY

Wetland hydrology Indicators:
Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-stained Leaves (B9) (**except NW coast)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along living roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-stained (B9) (**NW coast)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Front-heave Hummocks (D4)
- ☐ FAC-neutral (D5)

Field Observations:

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

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

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

Wetland Hydrology Present?

Yes ☐ No ☒

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

Remarks: Positive indicators of wetland hydrology were not observed at this location.

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: COB/ Chuckanut Village Marsh	City/County: COB	Sample Date: 09/28/09
Applicant/Owner: COB	State: WA	Sample Point: 02
Investigator: Jackson, Porter	Section/Township/Range: 13/37N/02E	
Landform (hillslope, terrace, etc):	Local Relief (concave, convex, none) :	Subregion: LRR A
Soil Map Unit Name: Everett Urban Land Complex (52)		NWI Classification:
Are climatic/hydrologic conditions on the site typical of this time of year? Yes ☒ No ☐ (if no, explain in Remarks)		
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?	Are "Normal Circumstances" present? Yes ☒ No ☐	
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?	(If needed, explain any answers in Remarks.)	

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

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** **Yes ☒ No ☐**
Remarks: **WETLAND A.** Positive indicators for all three parameters were observed at this location.	

VEGETATION

Tree Stratum (Plot size: 9 meters)	Absolute % Cover	Indicator Status	Dominant Species?
n/a		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:			
Sapling/Shrub Stratum (Plot size: 3 meters)			
Salix hookeriana	5	FACW	☐
		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:	5		
Herb Stratum (Plot size: 1 meter)			
Phalaris arundinacea	50	FACW	☒
Agrostis sp.	50	FAC	☒
Potentilla anserina	10	OBL	☐
		-	☐
		-	☐
		-	☐
Total Cover:	110		
Woody Vine Stratum (Plot size:)			
n/a		-	☐
		-	☐
		-	☐
Total Cover: % Bare Ground in Herb Stratum:			

Dominance Test worksheet Number of Dominant Species that are OBL, FACW, or FAC:	2 (A)
Total number of dominant species across all strata:	2 (AB)
Percent of dominant species that or OBL, FACW, FAC:	100% (A/AB)

Prevalence Index worksheet	
OBL species:	x 1=
FACW species:	x 2=
FAC species:	x 3=
FACU species:	x 4=
UPL species:	x 5=
Total: (A)	(B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is > 50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Remarks: The majority of dominant species observed at this location were hydrophytic.

Hydrophytic Vegetation Present?

Yes ☒ No ☐

SOIL

Sample Point: 02

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

Depth	Soil Color		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	mixed 10YR 2/1 & 2/2	100			-	-	Mucky peat	Soil disturbed, garbage at -5 and -14 inches.
					-	-		
					-	-		
					-	-		
					-	-		
					-	-		
					-	-		
					-	-		

[1]Type: C=concentration D=depletion RM=reduced matrix [2]Location: PL=pore lining RC=root channel M=matrix

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)

- ☒ Histosol (A1)
- ☐ Histic Epidedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (except MLRA 1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red parent material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks: Soil observed at this location met NRCS hydric soil indicators.

HYDROLOGY

Wetland hydrology Indicators:
Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-stained Leaves (B9) (**except NW coast)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along living roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-stained (B9) (**NW coast)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Front-heave Hummocks (D4)
- ☐ FAC-neutral (D5)

Field Observations:

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

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

Saturation Present? Yes ☒ No ☐ Depth (inches): **-4** (include capillary fringe)

Wetland Hydrology Present?

Yes ☒ No ☐

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

Remarks: Positive indicators of wetland hydrology were observed at this location.

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: COB/ Chuckanut Village Marsh	City/County: COB	Sample Date: 09/28/09
Applicant/Owner: COB	State: WA	Sample Point: 03
Investigator: Jackson, Porter	Section/Township/Range: 13/37N/02E	
Landform (hillslope, terrace, etc):	Local Relief (concave, convex, none) :	Subregion: LRR A
Soil Map Unit Name: Everett Urban Land Complex (52)		NWI Classification:
Are climatic/hydrologic conditions on the site typical of this time of year? Yes ☒ No ☐ (if no, explain in Remarks)		
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?	Are "Normal Circumstances" present? Yes ☒ No ☐	
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?	(If needed, explain any answers in Remarks.)	

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

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** **Yes ☒ No ☐**
Remarks: **WETLAND B.** Positive indicators for all three parameters were observed at this location.	

VEGETATION

Tree Stratum (Plot size: 9 meters)	Absolute % Cover	Indicator Status	Dominant Species?
n/a		-	☐
		-	☐
		-	☐
		-	☐
Total Cover:			
Sapling/Shrub Stratum (Plot size: 3 meters)			
Rosa nutkana	5	FAC	☒
Rubus discolor	Trace	FACU	☐
Malus fusca	5	FACW	☒
		-	☐
		-	☐
Total Cover:	10		
Herb Stratum (Plot size: 1 meter)			
Distichlis spicata	90	FAC	☒
Atriplex patula	40	FACW	☒
Aster subspicatus	25	FACW	☐
Plantago maritima	5	FACW	☐
Salicornia virginica	Trace	OBL	☐
Convolvulus arvensis	Trace	-	☐
Total Cover:	160		
Woody Vine Stratum (Plot size:)			
		-	☐
		-	☐
		-	☐
Total Cover: % Bare Ground in Herb Stratum:			

Dominance Test worksheet Number of Dominant Species that are OBL, FACW, or FAC:	4 (A)
Total number of dominant species across all strata:	4 (AB)
Percent of dominant species that or OBL, FACW, FAC:	100 (A/AB)

Prevalence Index worksheet	
OBL species:	x 1=
FACW species:	x 2=
FAC species:	x 3=
FACU species:	x 4=
UPL species:	x 5=
Total: (A)	(B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is > 50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1]

[1]Indicators of hydric soil and wetland hydrology must be present.

Remarks: The majority of dominant species observed at this location were hydrophytic.

Hydrophytic Vegetation Present?

Yes ☒ No ☐

SOIL

Sample Point: 03

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

Depth	Soil Color		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	mixed 10YR 2/1 & 2/2	70-100	10YR 4/4	0-30	C	M	Mucky peat	
					-	-		
					-	-		
					-	-		
					-	-		
					-	-		
					-	-		
					-	-		

[1]Type: C=concentration D=depletion RM=reduced matrix [2]Location: PL=pore lining RC=root channel M=matrix

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)

- ☒ Histosol (A1)
- ☐ Histic Epidedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (except MLRA 1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red parent material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks: Soil observed at this location met NRCS hydric soil indicators.

HYDROLOGY

Wetland hydrology Indicators:
Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-stained Leaves (B9) (**except NW coast)**
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along living roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stresses Plants (D1)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-stained (B9) (**NW coast)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Front-heave Hummocks (D4)
- ☐ FAC-neutral (D5)

Field Observations:

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

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

Saturation Present? Yes ☒ No ☐ Depth (inches): **-5** (include capillary fringe)

Wetland Hydrology Present?

Yes ☒ No ☐

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

Remarks: Positive indicators of wetland hydrology were observed at this location.

APPENDIX D: PHOTOGRAPHS

View of Project area looking west

Wetland A looking west

Wetland B looking east

Wetland B looking east (outlet and Chuckanut Bay)

Wetland C near outlet looking east

Outlet of Wetland C looking north from road

APPENDIX E: WDOE RATING FORMS

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

WETLAND TYPE Check off any criteria that apply to the wetland. Circle the appropriate Category when the appropriate criteria are met.	**CATEGORY**
SC 1.0 Estuarine Wetlands Does the wetland meet the following criteria for Estuarine wetlands? ☐ The dominant water regime is tidal ☒ Vegetated, and ☒ With a salinity of greater than 0.5 ppt. YES = go to question SC 1.1 NO = not an Estuarine for the purpose of rating.	
SC 1.1 Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park, or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? YES = Category I NO = go to question SC 1.2	Category I
SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and less than 10% cover of non-native plant species). If the non-native *Spartina* spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating of I/II. The area of Spartina would be rated as a Category II, while the relatively undisturbed upper marsh with native species should be rated a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. ☐ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	

SC. 2.0 Natural Heritage Wetlands. Natural Heritage Wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state threatened, endangered, or sensitive plant species.	
SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a Natural Heritage Wetland? Verified through: ☐ S/T/R information in Appendix D, or ☐ Accessed from WNHP/DNR website YES = Contact WNHP/DNR and go to question SC3.2 NO = go to question SC 2.2	
SC 2.2 Has DNR identified the wetland as a higher quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category I NO = not a Natural Heritage Wetland for rating purposes	Category I
SC 3.0 Bogs Does the wetland (or part of the wetland) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. NOTE: If the answer is YES, the wetland still needs to be rated based on its functions. 1. Does the wetland have organic soil horizons, either peats, or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? YES = go to question 3 NO = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? YES = go to question 3 NO = is not a bog for rating purposes 3. Does the wetland have more than 70% cover of mosses at ground level, AND other plants, is present, consist of the "bog" species listed in Table 3 as significant component of the vegetation (more than 30% of total shrub and herbaceous cover consists of "bog" species). YES = is a bog for purposes of rating NO = go to question 4 4. Is the wetland forested (>30% cover) with sitka spruce, sub alpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemenn's spruce, or western white pine, WITH any of the species (or combinations of species) on the bog species plant list as a significant component of the ground cover (>30% coverage of total shrub/herbaceous cover)? YES = Category I NO = is not a bog for the purposes of rating	Category I

SC 4.0 Forested Wetland Does the wetland have at least 1 acre of forest that meets one of the following criteria for the Department of Fish and Wildlife's forest as priority habitats? If the answer is YES the wetland still needs to be rated based on its functions. ☐ **Old-growth forests**: (west of the Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acres (20 trees/ha) that are at least 200 years of age OR have a dbh of 32 inches (81cm) or more. NOTE: The criterion for dbh is based on measurement for upland forests. Two-hundred year old trees in wetland will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do no necessarily have to have trees of this diameter. ☐ **Mature forests**: (west of the Cascade crest). Stands where the largest trees are 80 to 200 years old OR have average dbh exceeding 21 inches (53cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quality of large downed material is generally less than that found in old-growth forests. YES = Category I NO = not a forested wetland for purposes of rating	Category I
SC 5.0 Wetlands in Coastal Lagoons Does the wetland meet **all** of the following criteria of a wetland in a coastal lagoon? ☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by a sandbank, gravel bank, shingle, or less frequently by rocks. ☐ The lagoon in which the wetland is located contains surface water that is saline or brackish (>0.5ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom). YES = go to question SC 5.1 NO = not a wetland in a coastal lagoon	
SC 5.1 Does the wetland meet all of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species. ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. ☐ The wetland is larger than 1/10 acre (4350 square feet). YES = Category I NO = Category II	Category I Category II

SC 6.0 Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership of WBUO)? In practical terms that mean the following geographic areas: ☐ The Long Beach Peninsula- lands west of SR 103 ☐ Grayland, Westport- lands west of SR 105 ☐ Ocean Shores, Copalis- lands west of SR 115 and SR 109 If the answer is YES the wetland still need to be rated based on its functions. YES = go to question SC6.1 NO = not an interdunal wetland for rating purposes	
SC 6.1 Is the wetland one are or larger, or is it a mosaic of wetlands that is one acre or larger? YES = Category II NO = go to question SC 6.2	Category II
SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that are between 0.1 and 1 acre? YES = Category III	Category III
Category of wetland based on Special Characteristics Choose the "highest" rating if wetland falls into several categories, and record on p. 1. If NO was answered for all types enter "Not Applicable" on p. 1.	

Wetland Rating Field Data Form- Western Washington

Background Information:

Name of Rater: Porter Affiliation: NW Ecological Date of site visit: 09/28/09

Name of Wetland (if known): COB/ Chuckanut Village Marsh/ Wetland A

Government Jurisdiction of Wetland: COB, Corps, DOE, WDFW

Location (attach map with outline of wetland to rating form):

¼Section: NE Section: 13 Township: 37N Range: 02E

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I ☐ II ☐ III ☒ IV ☐

Category I = Score >70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for Water Quality Functions	18
Score for Hydrologic Functions	16
Score for Habitat Functions	13
TOTAL score for Functions	47

Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ III ☐ **Does not apply** ☒

Final Category (choose the "highest" category from above) III

Check the appropriate type and class of wetland being rated.

WETLAND TYPE		WETLAND CLASS	
Estuarine	☐	Depressional	☒
Natural Heritage Wetland	☐	Riverine	☐
Bog	☐	Lake-fringe	☐
Mature Forest	☐	Slope	☐
Old Growth Forest	☐	Flats	☐
Coastal Lagoon	☐	Freshwater Tidal	☐
Interdunal	☐		
None of the Above	☐		

Does the wetland being rated meet any of the criteria below?

If the answer to any of the questions below is YES than the wetland will need to be protected according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating	YES	NO
SP1. *Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.	☐	☒
SP2. *Has the wetland been documented as habitat for any State listed Threatened or Endangered animal species?* For the purpose of this rating system, "documented" means the wetland is on the appropriate state database.	☐	☒
SP3. *Does the wetland contain individuals of Priority species listed by the WDFW for the state?*	☐	☒
SP4. *Does the wetland have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.	☐	☒

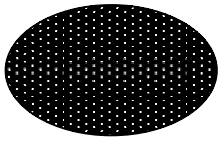
DEPRESSIONAL AND FLATS WETLANDS	Points
Water Quality Functions – Indicators that wetland functions to improve the water quality.	
D1 Does the wetland unit have the <u>potential</u> to improve water quality?	----------
D1.1 Characteristics of surface water which flows out of the wetland: ☐ Unit is a depression with no surface water leaving it (no outlet) 3 pts ☒ Unit has intermittently flowing, or highly constricted permanently flowing outlet 2 pts ☐ Unit has an un-constricted, or slightly constricted, surface outlet (permanently flowing) 1 pt ☐ Unit is a flat depression (Q.7), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch 1 pt *(If ditch is not permanently flowing, treat unit as intermittently flowing)*	2
D1.2 The soil two inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) ☐ YES 4 pts ☒ NO 0 pts	0
D1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): ☒ Wetland has persistent, ungrazed, vegetation in >95% of the area 5 pts ☐ Wetland has persistent, ungrazed, vegetation in ≥ ½ of the area 3 pts ☐ Wetland has persistent, ungrazed, vegetation in ≥ 1/10 of the area 1 pt ☐ Wetland has persistent, ungrazed, vegetation in< 1/10 of the area 0 pts	5
D1.4 Characteristics of seasonal ponding or inundation. *This is the area of the wetland unit that is ponded for at least two months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition five out of 10 years.* ☐ Area seasonally ponded is > ½ total area of the wetland 4 pts ☒ Area seasonally ponded is > ¼ total area of the wetland 2 pts ☐ Area seasonally ponded is < ¼ total area of the wetland 0 pts	2
Total for D1 *Add the points in the boxes above*	9
D2 Does the wetland unit have the <u>opportunity</u> to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce quality in streams, lakes, or groundwater down gradient from the wetland. *Note which of the following conditions provide the sources of pollutants, A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ☐ Grazing in the wetland or within 150 feet ☒ Untreated stormwater discharges to the wetland ☐ Tilled fields or orchards within 150 feet of the wetland ☐ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging ☒ Residential, urban areas, or golf courses are within 150 feet of wetland ☐ Wetland is fed by groundwater high in phosphorus or nitrogen ☐ Other YES = multiplier is 2 NO = multiplier is 1	Multiplier =2
<u>Total- Water Quality Functions</u> Multiply the score from D1 by D2 *Add the score to the table on page 1*	18

DEPRESSIONAL AND FLATS WETLANDS	Points
Hydrologic Functions Indicators that wetland functions to reduce flooding and stream degradation.	
D3 Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	----------
D3.1 Characteristics of surface water flows out of the wetland unit: ☐ Unit is a depression with no surface water leaving (no outlet) 4 pts ☒ Unit has an intermittently flowing, OR highly constricted permanently flowing outlet 2 pts ☐ Unit is flat depression (Q.7), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch 1 pt *(If ditch is not permanently flowing, treat unit as intermittently flowing)* ☐ Unit has an un-constricted, or slightly constricted, surface outlet (*permanently flowing*) 0 pts	2
D3.2 Depth of Storage during wet periods *Estimate the height of ponding above the bottom of the outlet. For units with no outlet, measure from the surface of permanent water or deepest part (if dry).* ☐ Marks of ponding are 3 ft or more above the surface or bottom of outlet 7 pts ☐ The wetland is a headwater wetland 5 pts ☐ Marks of ponding between 2 ft to < 3 ft from the surface or bottom of outlet 5 pts ☒ Marks are at least 0.5 ft to < 2 ft from the surface or bottom of outlet 3 pts ☐ Unit is flat (yes to Q.2 or Q.7) but has small depressions on the surface that trap water 1 pt ☐ Marks of ponding less than 0.5 ft 0 pts	3
D3.3 Contribution of wetland unit to storage in the watershed *Estimate the ratio of: the area of upstream basin contributing surface water to the wetland, to the area of the wetland unit itself.* ☐ The area of the basin is less than 10 times the area of the unit 5 pts ☒ The area of the basin is 10 to 100 times the area of the unit 3 pts ☐ The area of the basin is more than 100 times the area of the unit 0 pt ☐ Entire unit is in the FLATS class 5 pts	3
Total for D3 *Add the points in the boxes above*	8
D4 Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion? Answer YES if the wetland is in a location in the watershed where it provides flood storage, or reduction in water velocity; it helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as floodgate, tide gate, flap valve, reservoir, etc.; OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ☐ Wetland is in a headwater of a river or stream that has flooding problems ☐ Wetland drains to a river or stream that has flooding problems ☐ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ☒ Other: downstream fish habitat in Chuckanut Bay YES = multiplier is 2 NO = multiplier is 1	Multiplier =2
<u>Total- Hydrologic Functions</u> Multiply the score from D3 by D4 *Add score to table on page 1*	16

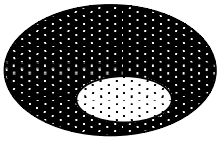
HABITAT FUNCTIONS Indicators that the wetland functions to provide important habitat			Points
H1 Does the wetland unit have the <u>potential</u> to provide habitat for many species?			----------
H1.1 Vegetation structure *Check the types of vegetation classes present (as defined in Cowardin) - Size threshold for each class is ¼ acre or more than 10% of the area if unit is smaller that 2.5 acres.* ☐ Aquatic bed ☒ Emergent plants ☒ Scrub/shrub- areas where shrubs have >30% cover ☐ Forested- areas where trees have >30% cover *If the unit has a forested class, check if:* ☐ Forested areas have three out of five strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon *Add the number of vegetation types that qualify. If you have:*	4 or more structures 3 structures 2 structures 1 structure	4 pts 2 pts 1 pt 0 pts	1
H1.2 Hydroperiods *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count.* ☐ Permanently flooded or inundated ☐ Seasonally flooded or inundated ☒ Occasionally flooded or inundated ☒ Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ **Lake-fringe wetland** ☐ **Freshwater tidal wetland**	4 or more present 3 present 2 present 1 present	3 pts 2 pts 1 pt 0 pts **2 pts** **2 pts**	1
H1.3 Richness of Plant Species Count the number of plant species in the wetland that cover at least 10 square feet. *(Different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* Do no include Eurasian Milfoil, reed canary grass, purple loosestrife, or Canadian thistle Number of Species Counted: ☐ >19 species ☒ 5-19 species ☐ <5 species List of species counted (not required):		2 pts 1 pt 0 pts	1

H1.4 Interspersion of Habitats

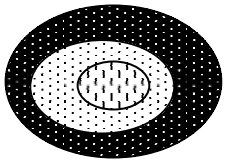
Decide from the diagrams below, whether interspersion between Cowardin vegetation classes (described in H1.1), or the classes and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.

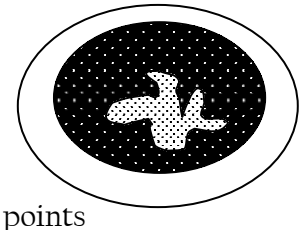


None = 0 points

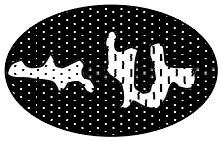


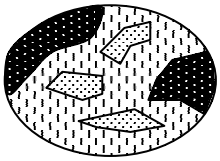
Low = 1 point

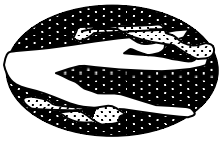




Moderate = 2 points







(Riparian braided channels)

High = 3 points

NOTE: If you have four or more classes or three vegetation classes and open water, the rating is always "high".

2

H1.5 Special Habitat Features

Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the points column.

- ☐ Large, downed, woody debris within the wetland (>4 inches diameter and 6ft long)
- ☐ Standing snags in the wetland (diameter at bottom >4 inches)
- ☐ Undercut banks are present for at least 6.6ft (2m) and/or overhanging vegetation which extends at least 3.3ft (1m) over a stream for at least 33 ft (10m)
- ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present
- ☐ At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in area that are permanently or seasonally inundated (structures for egg-laying by amphibians)
- ☐ Invasive plants cover less than 25% of the wetland area in each stratum of plants

0

H1. Total Score – potential for providing habitat

Add the scores in all H1 columns above

5

Comments:

H2. Does the wetland unit have the <u>opportunity</u> to provide habitat for many species?	Points
H2.1 Buffers *Choose the description that best represents the condition of the buffer of the wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."* ☐ 100m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. No structures are within undisturbed part of buffer. (Relatively undisturbed also means no-grazing, no landscaping, no daily human use.) **5 pts** ☒ 100m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >50% circumference. **4 pts** ☐ 50m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **4 pts** ☐ 100m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >25% circumference. **3 pts** ☐ 50m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >50% circumference. **3 pts** **If the buffer does not meet any of the above criteria** ☐ No paved areas (except paved trails) or buildings within 25m (80ft) of wetland >95% circumference. Light to moderate grazing, or lawns are OK. **2 pts** ☐ No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **2 pts** ☐ Heavy grazing in the buffer. **1 pt** ☐ Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland). **0 pts** ☒ Buffer does not meet any of the criteria above. **1 pt**	1
H2.2 Corridors and Connections **H2.2.1** Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150ft wide, has at least 30% cover of shrubs, forest, or native undisturbed prairie, that connects to estuaries, other wetlands, or undisturbed uplands that are at least 250 acres in size? Dams in riparian corridors, heavily used gravel roads, and paved roads are considered breaks in the corridor. YES = **4 points** (go to question H 2.3) NO = go to question H2.2.2 **H2.2.2** Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands, or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in the question above. ☐ YES = **2 points** (go to question H2.3) NO = go to question H2.2.3. **H2.2.3** Is the wetland: ☒ within five miles (8km) of a brackish or salt water estuary OR ☐ within three miles of a large field or pasture (>40 acres) OR ☐ within one mile of a lake greater than 20 acres? YES = **1 point** NO = **0 points**	1

H2.3 Near or adjacent to other priority habitats listed by WDFW *(updated Oct 2008)*	**Points**
Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.*	
☐ **Aspen Stands**: Pure or mixed stands of aspen greater than 0.4ha (1 acre).	3
☒ **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife. (Full description in WDFW PHS report p. 152).	
☐ **Herbaceous Balds**: Variable size patches of grass and forbs on shallow soils over bedrock.	
☐ **Old-growth/ Mature Forests**: Old growth west of Cascade crest- Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) which are >81 cm (32 in) dbh or > 200 yrs of age. Mature Forests- Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100% ; decay, decadence, numbers of snags, and quality of large downed material is generally less than that found in old-growth; 80-200 yr old west of the Cascade crest.	
☐ **Oregon White Oak**: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (full description in WDFW PHS report p. 158)	
☐ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.	
☐ **Westside Prairies**: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or wet prairie (full description in WDFW PHS report p. 161).	
☐ **Instream**: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.	
☒ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore (full description in WDFW PHS report p. 167-169, and glossary in Appendix A).	
☐ **Caves**: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice or other geological formations and is large enough to contain a human.	
☐ **Cliffs**: Greater than 7.6 m (25ft) high and occurring below 5000ft.	
☐ **Talus**: Homogeneous areas of rock rubble ranging in average size from 0.15 to 2.0 m (0.5 to 6.5ft), composed as basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.	
☐ **Snags and Logs**: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/ use by wildlife. Priority snags have a DBH of >51 cm (20 in) in Western Washington and are >2M (6.5 ft) in height. Priority logs are >30 cm (12 in) in diameter at the largest end and >6 m (20 ft) long.	
If the wetland has 3 or more priority habitats **4 pts**	
2 priority habitats **3 pts**	
1 priority habitat **1 pt**	
no priority habitats **0 pts**	

H2.4 Wetland Landscape (*see p.85)*	Points
Choose the one description of the landscape around the wetland that best fits. ☐ There are at least three other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, field, or other development). **5 pts** ☐ The wetland is Lake-fringe on a lake with little disturbance and there are three other lake-fringe wetlands within ½ mile. **5 pts** ☒ There are at least three other wetlands with in ½ mile, BUT the connection between them is disturbed. **3 pts** ☐ The wetland is Lake-fringe on a lake WITH disturbance and there are three other lake-fringe wetlands within ½ mile. **3 pts** ☐ There is at least one other wetland within ½ mile. **2 pts** ☐ There are no other wetlands within ½ mile. **0 pts**	3
H2. Total Score - opportunity to provide habitat *Add the scores in all of the H2 columns above*	8
Total for H1	5
Total Score for Habitat Functions- *Add the points from the total H1 and H2 boxes* *Add the score to table on page 1*	13

Wetland Rating Field Data Form- Western Washington

Background Information:

Name of Rater: Porter Affiliation: NW Ecological Date of site visit: 09/28/09

Name of Wetland (if known): COB/ Chuckanut Village Marsh/ Wetland B

Government Jurisdiction of Wetland: COB, Corps, DOE, WDFW

Location (attach map with outline of wetland to rating form):

¼Section: NE Section: 13 Township: 37N Range: 02E

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I ☐ II ☐ III ☒ IV ☐

Category I = Score >70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for Water Quality Functions	24
Score for Hydrologic Functions	8
Score for Habitat Functions	18
TOTAL score for Functions	50

Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ III ☐ Does not apply ☒

Final Category (choose the "highest" category from above) III

Check the appropriate type and class of wetland being rated.

WETLAND TYPE		WETLAND CLASS	
Estuarine	☐	Depressional	☒
Natural Heritage Wetland	☐	Riverine	☐
Bog	☐	Lake-fringe	☐
Mature Forest	☐	Slope	☐
Old Growth Forest	☐	Flats	☐
Coastal Lagoon	☐	Freshwater Tidal	☐
Interdunal	☐		
None of the Above	☐		

Does the wetland being rated meet any of the criteria below?

If the answer to any of the questions below is YES than the wetland will need to be protected according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating	YES	NO
SP1. *Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.	☐	☒
SP2. *Has the wetland been documented as habitat for any State listed Threatened or Endangered animal species?* For the purpose of this rating system, "documented" means the wetland is on the appropriate state database.	☐	☒
SP3. *Does the wetland contain individuals of Priority species listed by the WDFW for the state?*	☐	☒
SP4. *Does the wetland have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.	☐	☒

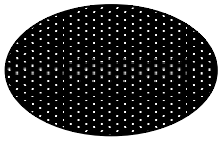
DEPRESSIONAL AND FLATS WETLANDS	Points
Water Quality Functions – Indicators that wetland functions to improve the water quality.	
D1 Does the wetland unit have the <u>potential</u> to improve water quality?	----------
D1.1 Characteristics of surface water which flows out of the wetland: ☐ Unit is a depression with no surface water leaving it (no outlet) 3 pts ☐ Unit has intermittently flowing, or highly constricted permanently flowing outlet 2 pts ☒ Unit has an un-constricted, or slightly constricted, surface outlet (permanently flowing) 1 pt ☐ Unit is a flat depression (Q.7), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch 1 pt *(If ditch is not permanently flowing, treat unit as intermittently flowing)*	1
D1.2 The soil two inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) ☒ YES 4 pts ☐ NO 0 pts	4
D1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): ☒ Wetland has persistent, ungrazed, vegetation in >95% of the area 5 pts ☐ Wetland has persistent, ungrazed, vegetation in ≥ ½ of the area 3 pts ☐ Wetland has persistent, ungrazed, vegetation in ≥ 1/10 of the area 1 pt ☐ Wetland has persistent, ungrazed, vegetation in< 1/10 of the area 0 pts	5
D1.4 Characteristics of seasonal ponding or inundation. *This is the area of the wetland unit that is ponded for at least two months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition five out of 10 years.* ☐ Area seasonally ponded is > ½ total area of the wetland 4 pts ☒ Area seasonally ponded is > ¼ total area of the wetland 2 pts ☐ Area seasonally ponded is < ¼ total area of the wetland 0 pts	2
Total for D1 *Add the points in the boxes above*	12
D2 Does the wetland unit have the <u>opportunity</u> to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce quality in streams, lakes, or groundwater down gradient from the wetland. *Note which of the following conditions provide the sources of pollutants, A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ☐ Grazing in the wetland or within 150 feet ☒ Untreated stormwater discharges to the wetland ☐ Tilled fields or orchards within 150 feet of the wetland ☐ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging ☒ Residential, urban areas, or golf courses are within 150 feet of wetland ☐ Wetland is fed by groundwater high in phosphorus or nitrogen ☐ Other YES = multiplier is 2 NO = multiplier is 1	Multiplier =2
<u>Total- Water Quality Functions</u> Multiply the score from D1 by D2 *Add the score to the table on page 1*	24

DEPRESSIONAL AND FLATS WETLANDS	Points
Hydrologic Functions Indicators that wetland functions to reduce flooding and stream degradation.	
D3 Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	----------
D3.1 Characteristics of surface water flows out of the wetland unit: ☐ Unit is a depression with no surface water leaving (no outlet) 4 pts ☐ Unit has an intermittently flowing, OR highly constricted permanently flowing outlet 2 pts ☒ Unit is flat depression (Q.7), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch 1 pt *(If ditch is not permanently flowing, treat unit as intermittently flowing)* ☐ Unit has an un-constricted, or slightly constricted, surface outlet (*permanently flowing*) 0 pts	1
D3.2 Depth of Storage during wet periods *Estimate the height of ponding above the bottom of the outlet. For units with no outlet, measure from the surface of permanent water or deepest part (if dry).* ☐ Marks of ponding are 3 ft or more above the surface or bottom of outlet 7 pts ☐ The wetland is a headwater wetland 5 pts ☐ Marks of ponding between 2 ft to < 3 ft from the surface or bottom of outlet 5 pts ☐ Marks are at least 0.5 ft to < 2 ft from the surface or bottom of outlet 3 pts ☐ Unit is flat (yes to Q.2 or Q.7) but has small depressions on the surface that trap water 1 pt ☒ Marks of ponding less than 0.5 ft 0 pts	0
D3.3 Contribution of wetland unit to storage in the watershed *Estimate the ratio of: the area of upstream basin contributing surface water to the wetland, to the area of the wetland unit itself.* ☐ The area of the basin is less than 10 times the area of the unit 5 pts ☒ The area of the basin is 10 to 100 times the area of the unit 3 pts ☐ The area of the basin is more than 100 times the area of the unit 0 pt ☐ Entire unit is in the FLATS class 5 pts	3
Total for D3 *Add the points in the boxes above*	4
D4 Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion? Answer YES if the wetland is in a location in the watershed where it provides flood storage, or reduction in water velocity; it helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as floodgate, tide gate, flap valve, reservoir, etc.; OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ☐ Wetland is in a headwater of a river or stream that has flooding problems ☐ Wetland drains to a river or stream that has flooding problems ☐ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ☒ Other: downstream fish habitat in Chuckanut Bay YES = multiplier is 2 NO = multiplier is 1	Multiplier =2
<u>Total- Hydrologic Functions</u> Multiply the score from D3 by D4 *Add score to table on page 1*	8

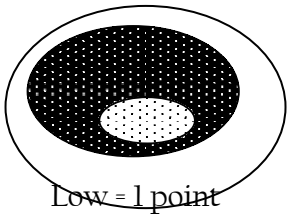
HABITAT FUNCTIONS Indicators that the wetland functions to provide important habitat	Points
H1 Does the wetland unit have the <u>potential</u> to provide habitat for many species?	----------
H1.1 Vegetation structure *Check the types of vegetation classes present (as defined in Cowardin) - Size threshold for each class is ¼ acre or more than 10% of the area if unit is smaller that 2.5 acres.* ☐ Aquatic bed ☒ Emergent plants ☐ Scrub/shrub- areas where shrubs have >30% cover ☐ Forested- areas where trees have >30% cover *If the unit has a forested class, check if:* ☐ Forested areas have three out of five strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon *Add the number of vegetation types that qualify. If you have:* 4 or more structures 4 pts 3 structures 2 pts 2 structures 1 pt 1 structure 0 pts	0
H1.2 Hydroperiods *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count.* ☐ Permanently flooded or inundated — 4 or more present — 3 pts ☐ Seasonally flooded or inundated — 3 present — 2 pts ☒ Occasionally flooded or inundated — 2 present — 1 pt ☒ Saturated only — 1 present — 0 pts ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☒ Seasonally flowing stream in, or adjacent to, the wetland ☐ **Lake-fringe wetland** **2 pts** ☐ **Freshwater tidal wetland** **2 pts**	2
H1.3 Richness of Plant Species Count the number of plant species in the wetland that cover at least 10 square feet. *(Different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* Do no include Eurasian Milfoil, reed canary grass, purple loosestrife, or Canadian thistle Number of Species Counted: ☐ >19 species 2 pts ☒ 5-19 species 1 pt ☐ <5 species 0 pts List of species counted (not required):	1

H1.4 Interspersion of Habitats

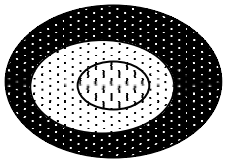
Decide from the diagrams below, whether interspersion between Cowardin vegetation classes (described in H1.1), or the classes and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.

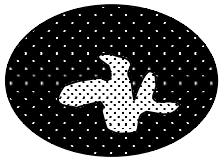


None = 0 points

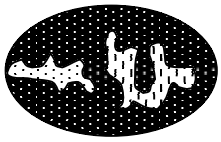


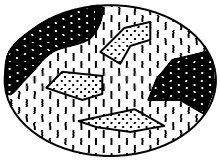
Low = 1 point





Moderate = 2 points





(Riparian braided channels)

High = 3 points

NOTE: If you have four or more classes or three vegetation classes and open water, the rating is always "high".

1

H1.5 Special Habitat Features

Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the points column.

- ☒ Large, downed, woody debris within the wetland (>4 inches diameter and 6ft long)
- ☐ Standing snags in the wetland (diameter at bottom >4 inches)
- ☐ Undercut banks are present for at least 6.6ft (2m) and/or overhanging vegetation which extends at least 3.3ft (1m) over a stream for at least 33 ft (10m)
- ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present
- ☐ At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in area that are permanently or seasonally inundated (structures for egg-laying by amphibians)
- ☒ Invasive plants cover less than 25% of the wetland area in each stratum of plants

2

H1. Total Score – potential for providing habitat

Add the scores in all H1 columns above

6

Comments:

H2. Does the wetland unit have the <u>opportunity</u> to provide habitat for many species?	Points
H2.1 Buffers *Choose the description that best represents the condition of the buffer of the wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."* ☐ 100m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. No structures are within undisturbed part of buffer. (Relatively undisturbed also means no-grazing, no landscaping, no daily human use.) **5 pts** ☐ 100m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >50% circumference. **4 pts** ☐ 50m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **4 pts** ☐ 100m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >25% circumference. **3 pts** ☐ 50m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >50% circumference. **3 pts** **If the buffer does not meet any of the above criteria** ☐ No paved areas (except paved trails) or buildings within 25m (80ft) of wetland >95% circumference. Light to moderate grazing, or lawns are OK. **2 pts** ☐ No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **2 pts** ☐ Heavy grazing in the buffer. **1 pt** ☐ Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland). **0 pts** ☒ Buffer does not meet any of the criteria above. **1 pt**	1
H2.2 Corridors and Connections **H2.2.1** Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150ft wide, has at least 30% cover of shrubs, forest, or native undisturbed prairie, that connects to estuaries, other wetlands, or undisturbed uplands that are at least 250 acres in size? Dams in riparian corridors, heavily used gravel roads, and paved roads are considered breaks in the corridor. YES = **4 points** (go to question H 2.3) NO = go to question H2.2.2 **H2.2.2** Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands, or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in the question above. ☒YES = **2 points** (go to question H2.3) NO = go to question H2.2.3. **H2.2.3** Is the wetland: ☐ within five miles (8km) of a brackish or salt water estuary OR ☐ within three miles of a large field or pasture (>40 acres) OR ☐ within one mile of a lake greater than 20 acres? YES = **1 point** NO = **0 points**	2

H2.3 Near or adjacent to other priority habitats listed by WDFW *(updated Oct 2008)* Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.*	**Points**
☐ **Aspen Stands**: Pure or mixed stands of aspen greater than 0.4ha (1 acre). ☒ **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife. (Full description in WDFW PHS report p. 152). ☐ **Herbaceous Balds**: Variable size patches of grass and forbs on shallow soils over bedrock. ☐ **Old-growth/ Mature Forests**: Old growth west of Cascade crest- Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) which are >81 cm (32 in) dbh or > 200 yrs of age. Mature Forests- Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100% ; decay, decadence, numbers of snags, and quality of large downed material is generally less than that found in old-growth; 80-200 yr old west of the Cascade crest. ☐ **Oregon White Oak**: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (full description in WDFW PHS report p. 158) ☒ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ☐ **Westside Prairies**: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or wet prairie (full description in WDFW PHS report p. 161). ☒ **Instream**: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ☒ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore (full description in WDFW PHS report p. 167-169, and glossary in Appendix A). ☐ **Caves**: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice or other geological formations and is large enough to contain a human. ☐ **Cliffs**: Greater than 7.6 m (25ft) high and occurring below 5000ft. ☐ **Talus**: Homogeneous areas of rock rubble ranging in average size from 0.15 to 2.0 m (0.5 to 6.5ft), composed as basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ☐ **Snags and Logs**: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/ use by wildlife. Priority snags have a DBH of >51 cm (20 in) in Western Washington and are >2M (6.5 ft) in height. Priority logs are >30 cm (12 in) in diameter at the largest end and >6 m (20 ft) long. If the wetland has 3 or more priority habitats **4 pts** 2 priority habitats **3 pts** 1 priority habitat **1 pt** no priority habitats **0 pts**	4

H2.4 Wetland Landscape (*see p.85)*	**Points**
Choose the one description of the landscape around the wetland that best fits. ☒ There are at least three other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, field, or other development). **5 pts** ☐ The wetland is Lake-fringe on a lake with little disturbance and there are three other lake-fringe wetlands within ½ mile. **5 pts** ☐ There are at least three other wetlands with in ½ mile, BUT the connection between them is disturbed. **3 pts** ☐ The wetland is Lake-fringe on a lake WITH disturbance and there are three other lake-fringe wetlands within ½ mile. **3 pts** ☐ There is at least one other wetland within ½ mile. **2 pts** ☐ There are no other wetlands within ½ mile. **0 pts**	5
H2. Total Score - opportunity to provide habitat *Add the scores in all of the H2 columns above*	12
Total for H1	6
Total Score for Habitat Functions- *Add the points from the total H1 and H2 boxes* *Add the score to table on page 1*	18

Wetland Rating Field Data Form- Western Washington

Background Information:

Name of Rater: V.Jackson, C.Muters Affiliation: NW Ecological Date of site visit: 4.16.08

Name of Wetland (if known): Fairhaven Marsh – Wetland C

Government Jurisdiction of Wetland: Whatcom Co., Army Corps of Engineers, Dept. of Ecology

Location (attach map with outline of wetland to rating form):

¼Section: Section:13 Township:37N Range: 02E

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I ☐ II ☒ III ☐ IV ☐

Category I = Score >70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for Water Quality Functions	26
Score for Hydrologic Functions	14
Score for Habitat Functions	29
TOTAL score for Functions	69

Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ III ☐ **Does not apply** ☒

Final Category (choose the "highest" category from above) II

Check the appropriate type and class of wetland being rated.

WETLAND TYPE		WETLAND CLASS	
Estuarine	☐	Depressional	☒
Natural Heritage Wetland	☐	Riverine	☐
Bog	☐	Lake-fringe	☐
Mature Forest	☐	Slope	☐
Old Growth Forest	☐	Flats	☐
Coastal Lagoon	☐	Freshwater Tidal	☐
Interdunal	☐		
None of the Above	☒		

Does the wetland being rated meet any of the criteria below?

If the answer to any of the questions below is YES than the wetland will need to be protected according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating	YES	NO
SP1. *Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.	☐	☒
SP2. *Has the wetland been documented as habitat for any State listed Threatened or Endangered animal species?* For the purpose of this rating system, "documented" means the wetland is on the appropriate state database.	☐	☒
SP3. *Does the wetland contain individuals of Priority species listed by the WDFW for the state?* **Pileated Woodpecker**	☒	☐
SP4. *Does the wetland have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.	☒	☐

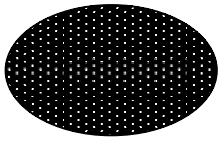
DEPRESSIONAL AND FLATS WETLANDS	Points
Water Quality Functions – Indicators that wetland functions to improve the water quality.	
D1 Does the wetland unit have the <u>potential</u> to improve water quality?	----------
D1.1 Characteristics of surface water which flows out of the wetland: ☐ Unit is a depression with no surface water leaving it (no outlet) 3 pts ☒ Unit has intermittently flowing, or highly constricted permanently flowing outlet 2 pts ☐ Unit has an un-constricted, or slightly constricted, surface outlet (permanently flowing) 1 pt ☐ Unit is a flat depression (Q.7), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch 1 pt *(If ditch is not permanently flowing, treat unit as intermittently flowing)*	2
D1.2 The soil two inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) ☒ YES 4 pts ☐ NO 0 pts	4
D1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): ☒ Wetland has persistent, ungrazed, vegetation in >95% of the area 5 pts ☐ Wetland has persistent, ungrazed, vegetation in ≥ ½ of the area 3 pts ☐ Wetland has persistent, ungrazed, vegetation in ≥ 1/10 of the area 1 pt ☐ Wetland has persistent, ungrazed, vegetation in< 1/10 of the area 0 pts	5
D1.4 Characteristics of seasonal ponding or inundation. *This is the area of the wetland unit that is ponded for at least two months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition five out of 10 years.* ☐ Area seasonally ponded is > ½ total area of the wetland 4 pts ☒ Area seasonally ponded is > ¼ total area of the wetland 2 pts ☐ Area seasonally ponded is < ¼ total area of the wetland 0 pts	2
Total for D1 *Add the points in the boxes above*	13
D2 Does the wetland unit have the <u>opportunity</u> to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce quality in streams, lakes, or groundwater down gradient from the wetland. *Note which of the following conditions provide the sources of pollutants, A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ☐ Grazing in the wetland or within 150 feet ☐ Untreated stormwater discharges to the wetland ☐ Tilled fields or orchards within 150 feet of the wetland ☐ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging ☒ Residential, urban areas, or golf courses are within 150 feet of wetland ☐ Wetland is fed by groundwater high in phosphorus or nitrogen ☐ Other YES = multiplier is 2 NO = multiplier is 1	Multiplier =2
<u>Total- Water Quality Functions</u> Multiply the score from D1 by D2 *Add the score to the table on page 1*	26

DEPRESSIONAL AND FLATS WETLANDS	Points
Hydrologic Functions Indicators that wetland functions to reduce flooding and stream degradation.	
D3 Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	----------
D3.1 Characteristics of surface water flows out of the wetland unit: ☐ Unit is a depression with no surface water leaving (no outlet) 4 pts ☒ Unit has an intermittently flowing, OR highly constricted permanently flowing outlet 2 pts ☐ Unit is flat depression (Q.7), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch 1 pt *(If ditch is not permanently flowing, treat unit as intermittently flowing)* ☐ Unit has an un-constricted, or slightly constricted, surface outlet (*permanently flowing*) 0 pts	2
D3.2 Depth of Storage during wet periods *Estimate the height of ponding above the bottom of the outlet. For units with no outlet, measure from the surface of permanent water or deepest part (if dry).* ☐ Marks of ponding are 3 ft or more above the surface or bottom of outlet 7 pts ☐ The wetland is a headwater wetland 5 pts ☐ Marks of ponding between 2 ft to < 3 ft from the surface or bottom of outlet 5 pts ☐ Marks are at least 0.5 ft to < 2 ft from the surface or bottom of outlet 3 pts ☐ Unit is flat (yes to Q.2 or Q.7) but has small depressions on the surface that trap water 1 pt ☒ Marks of ponding less than 0.5 ft 0 pts	0
D3.3 Contribution of wetland unit to storage in the watershed *Estimate the ratio of: the area of upstream basin contributing surface water to the wetland, to the area of the wetland unit itself.* ☒ The area of the basin is less than 10 times the area of the unit 5 pts ☐ The area of the basin is 10 to 100 times the area of the unit 3 pts ☐ The area of the basin is more than 100 times the area of the unit 0 pt ☐ Entire unit is in the FLATS class 5 pts	5
Total for D3 *Add the points in the boxes above*	7
D4 Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion? Answer YES if the wetland is in a location in the watershed where it provides flood storage, or reduction in water velocity; it helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as floodgate, tide gate, flap valve, reservoir, etc.; OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ☐ Wetland is in a headwater of a river or stream that has flooding problems ☐ Wetland drains to a river or stream that has flooding problems ☐ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ☒ Other: Released into Chuckanut Bay YES = multiplier is 2 NO = multiplier is 1	Multiplier =2
<u>Total- Hydrologic Functions</u> Multiply the score from D3 by D4 *Add score to table on page 1*	14

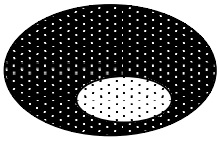
HABITAT FUNCTIONS Indicators that the wetland functions to provide important habitat			Points
H1 Does the wetland unit have the <u>potential</u> to provide habitat for many species?			----------
H1.1 Vegetation structure *Check the types of vegetation classes present (as defined in Cowardin) - Size threshold for each class is ¼ acre or more than 10% of the area if unit is smaller that 2.5 acres.* ☐ Aquatic bed ☒ Emergent plants ☒ Scrub/shrub- areas where shrubs have >30% cover ☒ Forested- areas where trees have >30% cover *If the unit has a forested class, check if:* ☒ Forested areas have three out of five strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon *Add the number of vegetation types that qualify. If you have:*	4 or more structures 3 structures 2 structures 1 structure	4 pts 2 pts 1 pt 0 pts	4
H1.2 Hydroperiods *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count.* ☐ Permanently flooded or inundated ☒ Seasonally flooded or inundated ☒ Occasionally flooded or inundated ☒ Saturated only ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☒ Seasonally flowing stream in, or adjacent to, the wetland ☐ **Lake-fringe wetland** ☐ **Freshwater tidal wetland**	4 or more present 3 present 2 present 1 present	3 pts 2 pts 1 pt 0 pts **2 pts** **2 pts**	3
H1.3 Richness of Plant Species Count the number of plant species in the wetland that cover at least 10 square feet. *(Different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* Do no include Eurasian Milfoil, reed canary grass, purple loosestrife, or Canadian thistle Number of Species Counted: ☒ >19 species ☐ 5-19 species ☐ <5 species List of species counted (not required):		2 pts 1 pt 0 pts	2

H1.4 Interspersion of Habitats

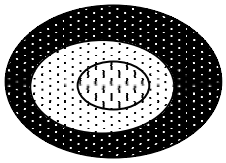
Decide from the diagrams below, whether interspersion between Cowardin vegetation classes (described in H1.1), or the classes and un-vegetated areas (can include open water or mudflats) is high, medium, low, or none.

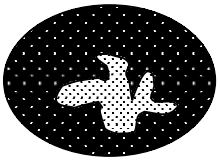


None = 0 points

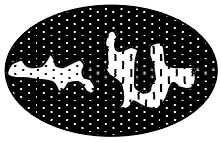


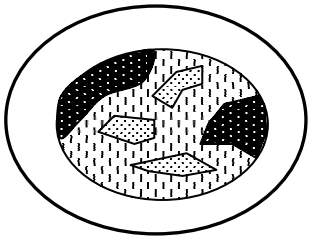
Low = 1 point





Moderate = 2 points





(Riparian braided channels)

High = 3 points

NOTE: If you have four or more classes or three vegetation classes and open water, the rating is always "high".

3

H1.5 Special Habitat Features

Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the points column.

- ☒ Large, downed, woody debris within the wetland (>4 inches diameter and 6ft long)
- ☒ Standing snags in the wetland (diameter at bottom >4 inches)
- ☐ Undercut banks are present for at least 6.6ft (2m) and/or overhanging vegetation which extends at least 3.3ft (1m) over a stream for at least 33 ft (10m)
- ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present
- ☒ At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in area that are permanently or seasonally inundated (structures for egg-laying by amphibians)
- ☒ Invasive plants cover less than 25% of the wetland area in each stratum of plants

4

H1. Total Score – potential for providing habitat

Add the scores in all H1 columns above

16

Comments:

H2. Does the wetland unit have the opportunity to provide habitat for many species?	Points
H2.1 Buffers *Choose the description that best represents the condition of the buffer of the wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."* ☐ 100m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. No structures are within undisturbed part of buffer. (Relatively undisturbed also means no-grazing, no landscaping, no daily human use.) **5 pts** ☒ 100m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >50% circumference. **4 pts** ☐ 50m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **4 pts** ☐ 100m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >25% circumference. **3 pts** ☐ 50m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >50% circumference. **3 pts** **If the buffer does not meet ay of the above criteria** ☐ No paved areas (except paved trails) or buildings within 25m (80ft) of wetland >95% circumference. Light to moderate grazing, or lawns are OK. **2 pts** ☐ No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **2 pts** ☐ Heavy grazing in the buffer. **1 pt** ☐ Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland). **0 pts** ☐ Buffer does not meet any of the criteria above. **1 pt**	4
H2.2 Corridors and Connections **H2.2.1** Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150ft wide, has at least 30% cover of shrubs, forest, or native undisturbed prairie, that connects to estuaries, other wetlands, or undisturbed uplands that are at least 250 acres in size? Dams in riparian corridors, heavily used gravel roads, and paved roads are considered breaks in the corridor. YES = **4 points** (go to question H 2.3) NO = go to question H2.2.2 **H2.2.2** Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands, or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in the question above. YES = **2 points** (go to question H2.3) NO = go to question H2.2.3. **H2.2.3** Is the wetland: ☒ within five miles (8km) of a brackish or salt water estuary OR ☐ within three miles of a large field or pasture (>40 acres) OR ☐ within one mile of a lake greater than 20 acres? YES = **1 point** NO = **0 points**	2

H2.3 Near or adjacent to other priority habitats listed by WDFW *(see p. 82)* Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.*	**Points**
☒ **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.	4
☐ **Aspen Stands**: Pure or mixed stands of aspen greater than 0.8ha (2acres).	
☐ **Cliffs**: Greater than 7.6 m (25ft) high and occurring below 5000ft.	
☐ **Old-growth** forests: Old growth west of Cascade crest. Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) which are >81 cm (32 in) dbh or > 200 yrs of age.	
☐ **Mature forests**: Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100% ; decay, decadence, numbers of snags, and quality of large downed material is generally less than that found in old-growth; 80-200 yr old west of the Cascade crest.	
☐ **Prairies**: Relatively undisturbed areas (as indicated y dominance of native plants) where grasses and/or forbs form the natural climax plant community.	
☐ **Talus**: Homogeneous areas of rock rubble ranging in average size from 0.15 to 2.0 m (0.5 to 6.5ft), composed as basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.	
☐ **Caves**: A naturally occurring cavity, recess, void, or system of interconnected passages.	
☐ **Oregon White Oak**: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.	
☒ **Urban Natural Open Space**: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and /or the open space functions as a corridor connecting other priority habitats, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4ha (10 acres) and is surrounded by urban development.	
☒ **Estuary/Estuary-like**: Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low- energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5% during the period of average annual low flow. Includes both estuaries and lagoons.	
☒ **Marine/ Estuarine Shorelines**: Shorelines include the inter-tidal and sub-tidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g. cliffs, snags, mature trees, dunes, meadows) that are important to shoreline and associated fish and wildlife, and that contribute to shoreline function (e.g. sand/rock/log recruitment, nutrient contribution, erosion control).	
If the wetland has 3 or more **priority** habitats **4 pts** 2 priority habitats **3 pts** 1 priority habitat **1 pt** no priority habitats **0 pts**	

H2.4 Wetland Landscape (*see p.85)*	Points
Choose the one description of the landscape around the wetland that best fits. ☐ There are at least three other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, field, or other development). **5 pts** ☐ The wetland is Lake-fringe on a lake with little disturbance and there are three other lake-fringe wetlands within ½ mile. **5 pts** ☒ There are at least three other wetlands with in ½ mile, BUT the connection between them is disturbed. **3 pts** ☐ The wetland is Lake-fringe on a lake WITH disturbance and there are three other lake-fringe wetlands within ½ mile. **3 pts** ☐ There is at least one other wetland within ½ mile. **2 pts** ☐ There are no other wetlands within ½ mile. **0 pts**	3
H2. Total Score - opportunity to provide habitat *Add the scores in all of the H2 columns above*	13
Total for H1	16
Total Score for Habitat Functions- *Add the points from the total H1 and H2 boxes* *Add the score to table on page 1*	29

WASHINGTON STATE
Joint Aquatic Resources Permit Application (JARPA) Form[1,2] [help]

US Army Corps of Engineers
Seattle District

USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.

AGENCY USE ONLY

Date received:

Agency reference #: _____

Tax Parcel #(s): _____

_____

_____

Part 1–Project Identification

1. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [help]
North Chuckanut Bay Pilot Olympia Oyster Restoration Project

Part 2–Applicant

The person and/or organization responsible for the project. [help]

2a. Name (Last, First, Middle)			
Austin Rose			
2b. Organization (If applicable)			
Whatcom County Marine Resources Committee			
2c. Mailing Address (Street or PO Box)			
322 N. Commercial St.			
2d. City, State, Zip			
Bellingham, WA 98225-4042			
2e. Phone (1)	**2f.** Phone (2)	**2g.** Fax	**2h.** E-mail
360-778-6286			arose@co.whatcom.wa.us

[1]Additional forms may be required for the following permits:
- If your project may qualify for Department of the Army authorization through a Regional General Permit (RGP), contact the U.S. Army Corps of Engineers for application information (206) 764-3495.
- If your project might affect species listed under the Endangered Species Act, you will need to fill out a Specific Project Information Form (SPIF) or prepare a Biological Evaluation. Forms can be found at http://www.nws.usace.army.mil/Missions/CivilWorks/Regulatory/PermitGuidebook/EndangeredSpecies.aspx.
- Not all cities and counties accept the JARPA for their local Shoreline permits. If you need a Shoreline permit, contact the appropriate city or county government to make sure they accept the JARPA.

[2]To access an online JARPA form with [help] screens, go to http://www.epermitting.wa.gov/site/alias__resourcecenter/jarpa_jarpa_form/9984/jarpa_form.aspx.

For other help, contact the Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.

Part 3–Authorized Agent or Contact

Person authorized to represent the applicant about the project. (Note: Authorized agent(s) must sign 11b of this application.) [help]

3a. Name (Last, First, Middle)			
Rose, Austin			
3b. Organization (If applicable)			
Whatcom County Public Works			
3c. Mailing Address (Street or PO Box)			
322 N. Commercial St.			
3d. City, State, Zip			
Bellingham, WA 98225-4042			
3e. Phone (1)	**3f.** Phone (2)	**3g.** Fax	**3h.** E-mail
360-778-6286			arose@co.whatcom.wa.us

Part 4–Property Owner(s)

Contact information for people or organizations owning the property(ies) where the project will occur. Consider both **upland and aquatic** ownership because the upland owners may not own the adjacent aquatic land. [help]

☐ Same as applicant. (Skip to Part 5.)

☐ Repair or maintenance activities on existing rights-of-way or easements. (Skip to Part 5.)

☐ There are multiple upland property owners. Complete the section below and fill out JARPA Attachment A for each additional property owner.

☐ Your project is on Department of Natural Resources (DNR)-managed aquatic lands. If you don't know, contact the DNR at (360) 902-1100 to determine aquatic land ownership. If yes, complete JARPA Attachment E to apply for the Aquatic Use Authorization.

4a. Name (Last, First, Middle)			
n/a			
4b. Organization (If applicable)			
City of Bellingham Finance Dept.- Asset Division			
4c. Mailing Address (Street or PO Box)			
210 Lottie St.			
4d. City, State, Zip			
Bellingham, WA 98225-4009			
4e. Phone (1)	**4f.** Phone (2)	**4g.** Fax	**4h.** E-mail

Part 5–Project Location(s)

Identifying information about the property or properties where the project will occur. [help]

☐ There are multiple project locations (e.g. linear projects). Complete the section below and use JARPA Attachment B for each additional project location.

5a. Indicate the type of ownership of the property. (Check all that apply.) [help]

☐ Private
☐ Federal
☒ Publicly owned (state, county, city, special districts like schools, ports, etc.)
☐ Tribal
☐ Department of Natural Resources (DNR) – managed aquatic lands (Complete JARPA Attachment E)

5b. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5p.) [help]

5c. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [help]

Bellingham, WA

5d. County [help]

Whatcom

5e. Provide the section, township, and range for the project location. [help]

¼ Section	Section	Township	Range
	13	T37N	R02E

5f. Provide the latitude and longitude of the project location. [help]

- Example: 47.03922 N lat. / -122.89142 W long. (Use decimal degrees - NAD 83)

48.699142, -122.50408

5g. List the tax parcel number(s) for the project location. [help]

- The local county assessor's office can provide this information.

3702131514090000

5h. Contact information for all adjoining property owners. (If you need more space, use JARPA Attachment C.) [help]

Name	Mailing Address	Tax Parcel # (if known)
Lori L. Lawler	P.O. Box 885 Granite Falls, WA 98252-0885	370213017397
Elizabeth A. & Susan H. Jones	807 Chuckanut Shore Rd. Bellingham, WA 98229-8925	370213083499
Edward P. McAllister	608 E. Galloway Ave. Weiser, ID 83672-1424	370213112500
Ann C. Jones Family	807 Chuckanut Shore Rd. Bellingham, WA 98229-8925	370213113550

5i. List all wetlands on or adjacent to the project location. [help]

Chuckanut Village Marsh, Chuckanut Creek Marsh

5j. List all waterbodies (other than wetlands) on or adjacent to the project location. [help]

Chuckanut Bay (Mud Bay), Chuckanut Creek (adjacent to)

5k. Is any part of the project area within a 100-year floodplain? [help]

☒ Yes ☐ No ☐ Don't know

5l. Briefly describe the vegetation and habitat conditions on the property. [help]

North Chuckanut Bay is characterized as mostly mud/sand/silt mixture. Barnacles, oysters, clams, snails, mussels, and sand dollars can be found in the project area, with some areas heavily covered by these organisms while others very sparse. Eelgrass can be found at sites closer to the trestle. Macroalgae can cover the bay at low tides, but is ephemeral and is not a dominate presence.

5m. Describe how the property is currently used. [help]

N Chuckanut Bay is a rich and biologically diverse estuary within Bellingham city limits. Visitors to the area enjoy birding, beach walks, wildlife, shoreline geology, botanical observation, and shellfish gathering as allowed within State permit and Health regulations.

5n. Describe how the adjacent properties are currently used. [help]

The South Hill and Edgemoor neighborhoods are located to the north of the bay. Woodstock Farm Park, owned by the City of Bellingham, lies south of the bay.

5o. Describe the structures (above and below ground) on the property, including their purpose(s) and current condition. [help]

n/a

5p. Provide driving directions from the closest highway to the project location, and attach a map. [help]

From I5 North, take exit 250, head west on Old Fairhaven Parkway. Take a left of 30th St. and follow to Old Samish Rd., take a right. Heading north on Old Samish Rd. merges with Chuckanut Drive. Turn west off Chuckanut Drive (SR11) at 21st Street behind the Chuckanut Bay Art and Sculpture Gallery and then immediately turn west (right) on Fairhaven Avenue. Proceed straight to the shoreline of the bay.

Part 6–Project Description

6a. Briefly summarize the overall project. You can provide more detail in 6b. [help]

WDFW identified N. Chuckanut Bay as an ideal area for establishing a population of native oysters given the existing habitat conditions. A field evaluation was conducted in 2016, and seven test (pilot) plots were identified. The test plots are not intended as restoration themselves but only to provide information on feasibility of restoration in the seven habitat patches identified. The MRC purchased Olympia Oyster seed from the Puget Sound Restoration Fund and hope to place the seed in N. Chuckanut Bay by Spring 2018

6b. Describe the purpose of the project and why you want or need to perform it. [help]

Marine Resources Committees, in partnership with multiple organizations, are working to restore native Olympia oyster populations in their historic range in the Northwest Straits region. Native oyster beds create complex, three-dimensional habitat for invertebrates and small fishes and foraging locations for larger animals. Filter-feeding bivalves such as Olympia oysters feed on phytoplankton by filtering large volumes of water thereby improving water quality, removing pollutants and nutrients from the water column, and maintaining the water clarity necessary for eelgrass and kelp growth. Restoration and enhancement of this foundation species will provide significant benefits throughout the Northwest Straits marine ecosystem. Historic middens indicate past populations of Olympia oysters in N. Chuckanut Bay, but none are known to be present today.

6c. Indicate the project category. (Check all that apply) [help]

☐ Commercial ☐ Residential ☐ Institutional ☐ Transportation ☐ Recreational

☐ Maintenance ☒ Environmental Enhancement

6d. Indicate the major elements of your project. (Check all that apply) [help]

☒ Aquaculture	☐ Culvert	☐ Float	☐ Retaining Wall (upland)
☐ Bank Stabilization	☐ Dam / Weir	☐ Floating Home	☐ Road
☐ Boat House	☐ Dike / Levee / Jetty	☐ Geotechnical Survey	☐ Scientific Measurement Device
☐ Boat Launch	☐ Ditch	☐ Land Clearing	☐ Stairs
☐ Boat Lift	☐ Dock / Pier	☐ Marina / Moorage	☐ Stormwater facility
☐ Bridge	☐ Dredging	☐ Mining	☐ Swimming Pool
☐ Bulkhead	☐ Fence	☐ Outfall Structure	☐ Utility Line
☐ Buoy	☐ Ferry Terminal	☐ Piling/Dolphin	
☐ Channel Modification	☐ Fishway	☐ Raft	

☐ Other:

6e. Describe how you plan to construct each project element checked in 6d. Include specific construction methods and equipment to be used. [help]

- Identify where each element will occur in relation to the nearest waterbody.
- Indicate which activities are within the 100-year floodplain.

35 bags of seed on shell will be distributed within six test plots, each a 20'x20' square in size. Shell will not be placed within the seventh test plot as it will act as a reference site and will be monitored to see if there is any distribution of seed on native substrate. Each bag of seed has a minimum of 250 shells per bag and 3-5 spat or seed per shell. The seed used for the test plots will be on Pacific oyster shell and will be fairly robust from over-wintering in Fidalgo Bay; this also provides protection from trampling. Shell will be scattered evenly within plots at low tide, and routinely monitored for predators or other problems. The test plot area is located within a Special Flood Hazard Area (SFHA) or specifically Flood Zone "A" with a Community Determined Base Flood Elevation (BFE) of 12.0 feet (NAVD88).

6f. What are the anticipated start and end dates for project construction? (Month/Year) [help]

- If the project will be constructed in phases or stages, use JARPA Attachment D to list the start and end dates of each phase or stage.

Start Date: April 2018 End Date: ? April 2023 ☐ See JARPA Attachment D

6g. Fair market value of the project, including materials, labor, machine rentals, etc. [help]

Approx. $10,000

6h. Will any portion of the project receive federal funding? [help]

- **If yes**, list each agency providing funds.

☒ Yes ☐ No ☐ Don't know (Environmental Protection Agency)

Part 7–Wetlands: Impacts and Mitigation

☒ Check here if there are wetlands or wetland buffers on or adjacent to the project area.
(If there are none, skip to Part 8.) [help]

7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands. [help]

☒ Not applicable

The project does not impact the wetlands. Wetlands are adjacent to Chuckanut Bay. All activities are located within the marine waters and tidelands of the bay.

7b. Will the project impact wetlands? [help]

☐ Yes ☒ No ☐ Don't know

7c. Will the project impact wetland buffers? [help]

☐ Yes ☒ No ☐ Don't know

7d. Has a wetland delineation report been prepared? [help]

- **If Yes**, submit the report, including data sheets, with the JARPA package.

☐ Yes ☒ No

7e. Have the wetlands been rated using the Western Washington or Eastern Washington Wetland Rating System? [help]

- **If Yes**, submit the wetland rating forms and figures with the JARPA package.

☐ Yes ☒ No ☐ Don't know

7f. Have you prepared a mitigation plan to compensate for any adverse impacts to wetlands? [help]

- **If Yes**, submit the plan with the JARPA package and answer 7g.
- **If No, or Not applicable**, explain below why a mitigation plan should not be required.

☐ Yes ☒ No ☐ Don't know

As noted above, wetlands are not impacted by the project therefore no mitigation plan is required.

7g. Summarize what the mitigation plan is meant to accomplish, and describe how a watershed approach was used to design the plan. [help]

Not applicable.

7h. Use the table below to list the type and rating of each wetland impacted, the extent and duration of the impact, and the type and amount of mitigation proposed. Or if you are submitting a mitigation plan with a similar table, you can state (below) where we can find this information in the plan. [help]

Activity (fill, drain, excavate, flood, etc.)	Wetland Name[1]	Wetland type and rating category[2]	Impact area (sq. ft. or Acres)	Duration of impact[3]	Proposed mitigation type[4]	Wetland mitigation area (sq. ft. or acres)

[1] If no official name for the wetland exists, create a unique name (such as "Wetland 1"). The name should be consistent with other project documents, such as a wetland delineation report.
[2] Ecology wetland category based on current Western Washington or Eastern Washington Wetland Rating System. Provide the wetland rating forms with the JARPA package.
[3] Indicate the days, months or years the wetland will be measurably impacted by the activity. Enter "permanent" if applicable.
[4] Creation (C), Re-establishment/Rehabilitation (R), Enhancement (E), Preservation (P), Mitigation Bank/In-lieu fee (B)

Page number(s) for similar information in the mitigation plan, if available: _____

7i. For all filling activities identified in 7h, describe the source and nature of the fill material, the amount in cubic yards that will be used, and how and where it will be placed into the wetland. [help]

Not applicable

7j. For all excavating activities identified in 7h, describe the excavation method, type and amount of material in cubic yards you will remove, and where the material will be disposed. [help]

Not applicable.

Part 8–Waterbodies (other than wetlands): Impacts and Mitigation

In Part 8, "waterbodies" refers to non-wetland waterbodies. (See Part 7 for information related to wetlands.) [help]

☒ Check here if there are waterbodies on or adjacent to the project area. (If there are none, skip to Part 9.)

8a. Describe how the project is designed to avoid and minimize adverse impacts to the aquatic environment. [help]

☐ Not applicable

The project is a pilot project to determine if Olympia oyster restoration can be successful at this site. Placement of the shell with spat will enhance the aquatic environment and is supplemental to natural shell that already exists within Chuckanut Bay. Shell will be scattered evenly within plots, each a 20'x20' square in size, at low tide. Each plot will be routinely monitored to quantify abiotic and biotic changes that may occur due to the presence of native oyster beds. It is assumed, based on current knowledge of oyster ecosystem services, that this oyster species will enhance denitrification rates, increase fish and invertebrate abundance and diversity, filter the water column, provide food, and protect coastlines (Blake & Bradbury 2012; PSRF 2009).

8b. Will your project impact a waterbody or the area around a waterbody? [help]

☒ Yes ☐ No

8c. Have you prepared a mitigation plan to compensate for the project's adverse impacts to non-wetland waterbodies? [help]

- **If Yes**, submit the plan with the JARPA package and answer 8d.
- **If No, or Not applicable,** explain below why a mitigation plan should not be required.

☐ Yes ☒ No ☐ Don't know

The project is intended to determine if Olympia oyster restoration is feasible within Chuckanut Bay. An extensive citizen-science monitoring plan will be implemented to gauge success of the project and changes in the habitat structure and function. A draft plan is included as an attachment to this document.

8d. Summarize what the mitigation plan is meant to accomplish. Describe how a watershed approach was used to design the plan.

- If you already completed 7g you do not need to restate your answer here. [help]

Not applicable.

8e. Summarize impact(s) to each waterbody in the table below. [help]

Activity (clear, dredge, fill, pile drive, etc.)	Waterbody name[1]	Impact location[2]	Duration of impact[3]	Amount of material (cubic yards) to be placed in or removed from waterbody	Area (sq. ft. or linear ft.) of waterbody directly affected
Shell placement (fill)	Chuckanut Bay	In	Permanent	1.46	Six plots of 400 sq ft each

[1] If no official name for the waterbody exists, create a unique name (such as "Stream 1") The name should be consistent with other documents provided.
[2] Indicate whether the impact will occur in or adjacent to the waterbody. If adjacent, provide the distance between the impact and the waterbody and indicate whether the impact will occur within the 100-year flood plain.
[3] Indicate the days, months or years the waterbody will be measurably impacted by the work. Enter "permanent" if applicable.

8f. For all activities identified in 8e, describe the source and nature of the fill material, amount (in cubic yards) you will use, and how and where it will be placed into the waterbody. [help]

The seed used for the test plots will be on Pacific oyster shell and will be fairly robust from over-wintering both of which provides protection from trampling. 35 bags of oyster spat on shell (200-300 shell per bag and approx. 10 spat per shell) provided by the Puget Sound Restoration Fund hatchery will be dispersed within the test plots. 35 bags of shell equal to roughly 1.46 cubic yards. All seven test plots are located within in north end of the bay.

8g. For all excavating or dredging activities identified in 8e, describe the method for excavating or dredging, type and amount of material you will remove, and where the material will be disposed. [help]

Not applicable.

Part 9–Additional Information

Any additional information you can provide helps the reviewer(s) understand your project. Complete as much of this section as you can. It is ok if you cannot answer a question.

9a. If you have already worked with any government agencies on this project, list them below. [help]

Agency Name	Contact Name	Phone	Most Recent Date of Contact
WA Department of Fish and Wildlife	Brady Blake, Shellfish Biologist	360-302-3030 x301	August, 2017
City of Bellingham	Steve Sundin	360-778-8359	January 2018
Army Corps of Engineers, Seattle District Regulatory NW Field Office	Randel Perry	360-734-3165	August, 2017

9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 of this JARPA on the Washington Department of Ecology's 303(d) List? [help]

- **If Yes,** list the parameter(s) below.
- If you don't know, use Washington Department of Ecology's Water Quality Assessment tools at: http://www.ecy.wa.gov/programs/wq/303d/.

☒ Yes ☐ No

Chuckanut Creek – bacteria, dissolved oxygen

9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in? [help]

- Go to http://cfpub.epa.gov/surf/locate/index.cfm to help identify the HUC.

17110004

9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [help]

- Go to http://www.ecy.wa.gov/water/wria/index.html to find the WRIA #.

WRIA 1

9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity? [help]

- Go to http://www.ecy.wa.gov/programs/wq/swqs/criteria.html for the standards.

☐ Yes ☐ No ☒ Not applicable

9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline environment designation? [help]

- If you don't know, contact the local planning department.
- For more information, go to: http://www.ecy.wa.gov/programs/sea/sma/laws_rules/173-26/211_designations.html.

☒ Urban ☒ Natural ☐ Aquatic ☐ Conservancy ☐ Other: _____

9g. What is the Washington Department of Natural Resources Water Type? [help]

- Go to http://www.dnr.wa.gov/forest-practices-water-typing for the Forest Practices Water Typing System.

☒ Shoreline ☐ Fish ☐ Non-Fish Perennial ☐ Non-Fish Seasonal

9h. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual? [help]

- **If No**, provide the name of the manual your project is designed to meet.

☒ Yes ☐ No

Name of manual: _____

9i. Does the project site have known contaminated sediment? [help]

- **If Yes**, please describe below.

☐ Yes ☒ No

9j. If you know what the property was used for in the past, describe below. [help]

Historic use of the bay for fishing or tribal use is not known.

9k. Has a cultural resource (archaeological) survey been performed on the project area? [help]

- **If Yes**, attach it to your JARPA package.

☐ Yes ☒ No

9l. Name each species listed under the federal Endangered Species Act that occurs in the vicinity of the project area or might be affected by the proposed work. [help]

Fish Species ESU/DPS	ESA Listing Status/Date	ESA Critical Habitat	Jurisdiction
Coastal/Puget Sound Bull Trout *(Salvelinus confluentus)*	Threatened November 1, 1999 (64 FR 58910)	Designated: September 26, 2005 (70 FR 56212) Revised Final Rule: October 18, 2010 (75 FR 63898)	U.S Fish and Wildlife Service (USFWS)
Puget Sound Steelhead (Rainbow Trout) *(Oncorhynchus mykiss)*	Threatened May 11, 2007 (72 FR 26722) Updated April 14, 2014 (79 FR 20802)	Designated: September 2, 2005 (70 FR 52630) February 24, 2016 (81 FR 9252) **Not Applicable to Action Area**	NOAA Fisheries & National Marine Fisheries Service (NMFS)
Puget Sound Chinook Salmon *(Oncorhynchus tshawytscha)*	Threatened June 28, 2005 (70 FR 37160) Updated April 14, 2014 (79 FR 20802)	Designated: September 2, 2005 (70 FR 52630)	
Puget Sound/Georgia Basin DPS of Bocaccio *(Sebastes paucispinis)*	Endangered April 28, 2010 (75 FR 22276) Effective July 27, 2010	Designated: November 13, 2014 (79 FR 68042) Effective: February 11, 2015	
Puget Sound/Georgia Basin DPS of Yelloweye Rockfish *(Sebastes ruberrimus)*	Threatened April 28, 2010 (75 FR 22276) Effective July 27, 2010		
Puget Sound/Georgia Basin DPS of Canary Rockfish *(Sebastes pinniger)*	Threatened* April 28, 2010 (75 FR 22276) Effective July 27, 2010 Proposed for removal from ESA listing 2016 (81 FR 42979) July 6, 2016		
Southern DPS of Eulachon *(Thaleichthys pacificus)*	Threatened March 18, 2010 (75 FR 13012)	Designated: October, 20, 2011 (FR 76 65324) **Not Applicable to Action Area**	
Southern DPS of Green Sturgeon *(Acipenser medirostris)*	Threatened April 7, 2006 (71 FR 17757)	Designated: October 9, 2009 (74 FR 52300) **Not Applicable to Action Area**	
Birds:			
Marbled murrelet *(Brachyramphus marmoratus)*	Threatened October 1, 1992 (57 FR 45328)	Revised Final Rule October 5, 2011 (76 FR 61599) Designated: May 24, 1996 (61 FR 26255) **Not Applicable to the Site**	*USFWS*

9m. Name each species or habitat on the Washington Department of Fish and Wildlife's Priority Habitats and Species List that might be affected by the proposed work. [help]

Hardshell clam Shorebird concentrations Estuarine and marine wetlands

Part 10–SEPA Compliance and Permits

Use the resources and checklist below to identify the permits you are applying for.

- Online Project Questionnaire at http://apps.oria.wa.gov/opas/.
- Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.
- For a list of addresses to send your JARPA to, click on agency addresses for completed JARPA.

10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.) [help]

- For more information about SEPA, go to www.ecy.wa.gov/programs/sea/sepa/e-review.html.

☒ A copy of the SEPA determination or letter of exemption is included with this application.

☒ A SEPA determination is pending with City of Bellingham (lead agency). The expected decision date is _____.

☐ I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b.) [help]

☐ This project is exempt (choose type of exemption below).

☐ Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt?

_____

☐ Other: _____

☐ SEPA is pre-empted by federal law.

10b. Indicate the permits you are applying for. (Check all that apply.) [help]

LOCAL GOVERNMENT

Local Government Shoreline permits:

☐ Substantial Development ☐ Conditional Use ☐ Variance

☒ Shoreline Exemption Type (explain): _____

Other City/County permits:

☐ Floodplain Development Permit ☐ Critical Areas Ordinance

STATE GOVERNMENT

Washington Department of Fish and Wildlife:

☒ Hydraulic Project Approval (HPA) ☐ Fish Habitat Enhancement Exemption – Attach Exemption Form

Washington Department of Natural Resources:

☐ Aquatic Use Authorization

Complete JARPA Attachment E and submit a check for $25 payable to the Washington Department of Natural Resources. **Do not send cash.**

Washington Department of Ecology:

☒ Section 401 Water Quality Certification

FEDERAL GOVERNMENT

United States Department of the Army permits (U.S. Army Corps of Engineers):

☒ Section 404 (discharges into waters of the U.S.) ☒ Section 10 (work in navigable waters)

United States Coast Guard permits:

☐ General Bridge Act Permit ☐ Private Aids to Navigation (for non-bridge projects)

Part 11–Authorizing Signatures

Signatures are required before submitting the JARPA package. The JARPA package includes the JARPA form, project plans, photos, etc. [help]

11a. Applicant Signature (required) [help]

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities, and I agree to start work only after I have received all necessary permits.

I hereby authorize the agent named in Part 3 of this application to act on my behalf in matters related to this application. AR (initial)

By initialing here, I state that I have the authority to grant access to the property. I also give my consent to the permitting agencies entering the property where the project is located to inspect the project site or any work related to the project. AR (initial)

Applicant Printed Name	Applicant Signature	Date
Austin Rose	Austin Rose	02.12.18

11b. Authorized Agent Signature [help]

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities and I agree to start work only after all necessary permits have been issued.

Authorized Agent Printed Name	Authorized Agent Signature	Date
Austin Rose	Austin Rose	02.12.18

11c. Property Owner Signature (if not applicant) [help]

Not required if project is on existing rights-of-way or easements (provide copy of easement with JARPA).

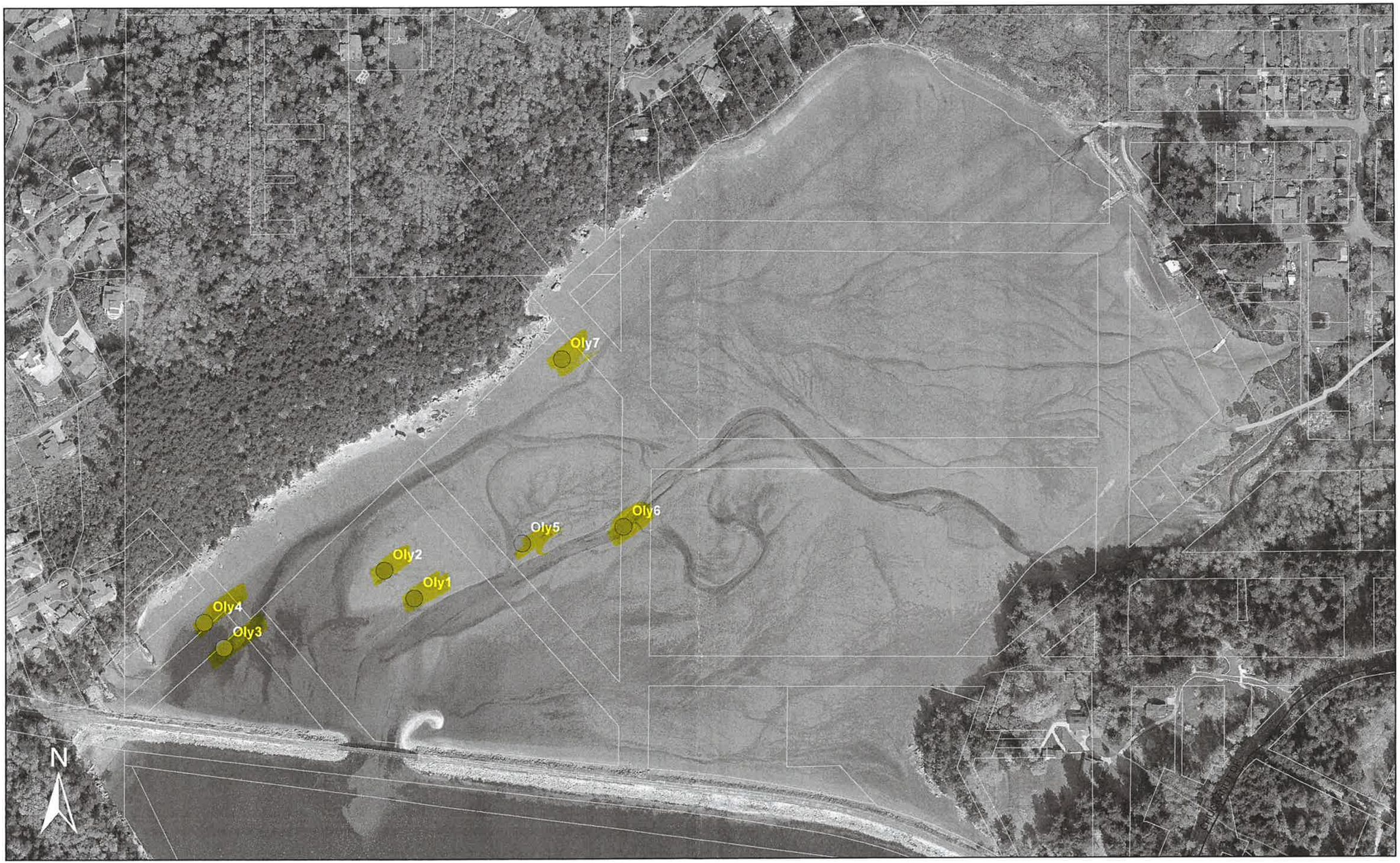
I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.

Property Owner Printed Name	Property Owner Signature	Date
Kelli Linville	Kelli Linville	2/5/18

18 U.S.C §1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than 5 years or both.

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341.
ORIA publication number: ORIA-16-011 rev. 07/2017

Whatcom MRC Olympia Oyster Test Plots - N. Chuckanut Bay



PLANNING and COMMUNITY DEVELOPMENT DEPARTMENT
210 Lottie Street, Bellingham, WA 98225
Phone: (360) 778-8300 Fax: (360) 778-8301 TTY: (360) 778-8382
Email: planning@cob.org Web: www.cob.org

SHORELINE PERMIT EXEMPTION AUTHORIZATION for TYPE I PROJECTS

SHR2018-0010 Date Issued: 3/26/2018

Project Address and Parcel #: Generally located within the waters of Chuckanut Bay inside of the BNSF railroad causeway / trestle.

Applicant and Contact Information: Austin Rose, Whatcom County Marine Resource Committee. 360-778-6286 or arose@co.whatcom.wa.us

Project Description: Reintroduction of Olympia oysters into Chuckanut Bay as a pilot restoration project. Project is proposed by the Marine Resource Committee of Whatcom County in coordination with other local, state and federal agencies and various aquaculture organizations.

35 bags of seed shell will be distributed among six 20' x 20' test plots at low tide water-ward of the ordinary high water mark and within the waters of Chuckanut Bay. This restoration pilot project does not require any in-water structures or substantial development as defined in the city's SMP.

Shoreline Designation and Reach #: Natural - Marine reach #19.

Buffer Width: zero. In-water work. Conforming Use - N/A

Conforming Development: N/A

Associated Development Permit #(s): USACOE 404 and Section 10. WDFW H.P.A.

Exempt pursuant to BMC 22.05.020.B.1: p. Project is intended to be a restoration project.

Rationale: Please see JARPA dated 2/12/2018.

Condition(s): Implement as proposed.

Exempt from SEPA pursuant to WAC 197-11-800: N/A (No construction or structures proposed.)

Authorized By:

Appeal: Any party aggrieved by the decision of the Director may file an appeal within 14 days of the decision on this permit in accordance with BMC 21.10.250. Any appeal must be filed with the Planning and Community Development Department on the appropriate forms and be accompanied by a filing fee as established by the City Council.

EXHIBIT D-3

PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT
210 Lottie Street, Bellingham, WA 98225
Telephone: (360) 778-8300 Fax: (360) 778-8302 TTY: (360) 778-8382

DEPARTMENT of ECOLOGY NOTICE OF DECISION

SHR2014-00016 & SHR2014-00025

The Washington State Department of Ecology approved a Shoreline Conditional Use Permit and a Shoreline Substantial Development Permit Variance with conditions for the following project on 7/30/2014:

Project Description: Development of a single family residence (SFR) on an existing platted and served lot. Project requires a shoreline conditional use permit because it is within a shoreline designated 'Natural.' A shoreline variance is required because it is within the required 200-foot buffer associated with Chuckanut (Mud) Bay. A land use variance is required in order to place the SFR as close to Sea Pines as possible in order to minimize impacts within the required buffer. (The Department of Ecology issues FINAL approval of both the Shoreline Conditional Use and Substantial Development Variance Permits.)

Project Location: 320 Sea Pines. Parcel #370213-154537 Edgemoor Neighborhood, Area 7, Residential Single Family zoning, Natural shoreline designation, Marine reach #19.

Applicant: Ali Taysi, AVT Planning and Consulting, 1708 F Street, Bellingham, WA 98225. ali@avtplanning.com

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DECISION DATE: 7/30/2014
DATE OF THIS NOTICE: 7/30/2014

ADMINISTRATIVE APPEAL PROCESS AND DEADLINE: This final decision by the Department of Ecology may be appealed in accordance with BMC 22.06.070. Appeals of Shoreline Permit decisions are heard the Washington State Shorelines Hearings Board.

Any property owner who believes they are affected by this decision may request a change in valuation for property tax purposes, notwithstanding any program of revaluation, through the Whatcom County Assessor's office.

Please contact the staff member listed below if you have any questions.

Name: **Steve Sundin, Planner** E-mail / Phone: **ssundin@cob.org or 360-778-8359**

Planning and Community Development Department
City Hall, 210 Lottie Street - Bellingham, WA 98225
Fax: 360-778-8302

The City of Bellingham seeks to comply with the American Disabilities Act. If you have special needs, please call 360.778.8300 (voice) or 360.778.8382 (TTY).

EXHIBIT D-3 Cont'd.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Bellingham Field Office • 1440 10th Street, Suite 102 • Bellingham, Washington 98225
(360)715-5200 • FAX (360) 715-5225

July 30, 2014

Toma Podorean
c/o Ali Taysi, AVT Consulting
1708 F Street
Bellingham, Washington 98225

Re: City of Bellingham Shoreline Substantial Development, Conditional Use Permit and Variance Permit No. SHR2014-00014
Toma Podorean - Applicant
Department of Ecology Project ID: 2415– **Conditional Approval**

Dear Mr. Podorean:

On July 2, 2014, the Department of Ecology (Ecology) received approval of the above-referenced shoreline substantial development permit, shoreline conditional use permit and shoreline variance permit from the City of Bellingham Planning and Community Development Department (PCDD). The permits authorize the construction of a new single-family residence along Chuckanut Bay within a natural shoreline environment designation. The variance requests relief from the 200-foot marine shoreline buffer in order to construct the residence along Sea Pines Road.

By law, Ecology must review shoreline substantial development, conditional use and variance permits for compliance with:

- The Shoreline Management Act (Chapter 90.58 RCW);
- Ecology's Substantial Development approval criteria (Chapter 173-27-150 WAC);
- Ecology's Conditional Use approval criteria (Chapter 173-27-160 WAC);
- Ecology's Shoreline Variance approval criteria (Chapter 173-27-170 WAC); and
- The Local Shoreline Master Program (SMP).

After review for compliance with the above provisions, Ecology must decide whether to approve, approve with conditions, or disapprove the shoreline conditional use and variance permits.

Ecology's Decision:

Ecology approves your shoreline conditional use and variance permit subject to compliance with the conditions required by PCDD and the additional Ecology conditions below:

1. The project shall be consistent with the revised site plan received by Ecology on July 28, 2014 by AVT Consulting (attached). Any deviation from the approved plan shall require additional review by Ecology.

2. Prior to start of construction, a tree protection plan shall be developed by an ISA certified arborist to ensure that construction practices will not damage or compromise the root systems of the remaining trees on the subject property. If damage to these trees is unavoidable, the development shall be moved landward and/or redesigned to avoid such damage. All BMPs recommended in the plan shall be adhered to throughout all phases of construction.

3. Any limbing of remaining trees for view enhancement shall be completed by, or at the direction of, an ISA certified arborist to ensure that the extent and method of limb removal does not affect the long-term health of the tree.

4. All significant trees (DBH > 6") authorized for removal by this permit, shall be replaced at a 3:1 ratio. No native vegetation of any kind shall be removed from remaining buffer areas on the subject property. Copies of the as-built tree planting plan shall be submitted to Ecology's Bellingham Field Office following plant installation. In addition, copies of the required monitoring and maintenance plans shall be submitted for years 3 and 5.

5. The property owner hereby authorizes the Department of Ecology staff and their designees to have access to the subject property for the purposes of compliance inspections associated with this permit. Except as otherwise conditioned by this approval, such right of access shall begin from the date of the receipt of this letter and extend for a period of five years following project completion. Ecology staff must provide reasonable notice to the property owner or their designee prior to coming onto the site.

Next Steps

Prior to any development authorized by this shoreline conditional use and variance permit, the law requires you wait at least 21-days from the date this letter was mailed, the "date of filing." This waiting period allows anyone (including you) who disagrees with any aspect of the permit to appeal the decision to the state Shoreline Hearings Board (SHB). If no appeal is submitted during that time, the shoreline conditional use and variance permit will be effective **August 20, 2014.**

Please note however, that other federal, state, and local permits may be required in addition to this shoreline conditional use permit.

The Shoreline Hearings Board will notify you by letter if an appeal is received. Ecology recommends that you contact the SHB before starting development to ensure no appeal has been received. The SHB can be reached at (360) 664-9160 or http://www.eho.wa.gov.

If you want to appeal this decision, you can find appeal instructions (Chapter 461-08 WAC) at the SHB website referenced above. The instructions are also available on the following Washington State Legislature website: http://apps.leg.wa.gov/wac/default.aspx?cite=461-08.

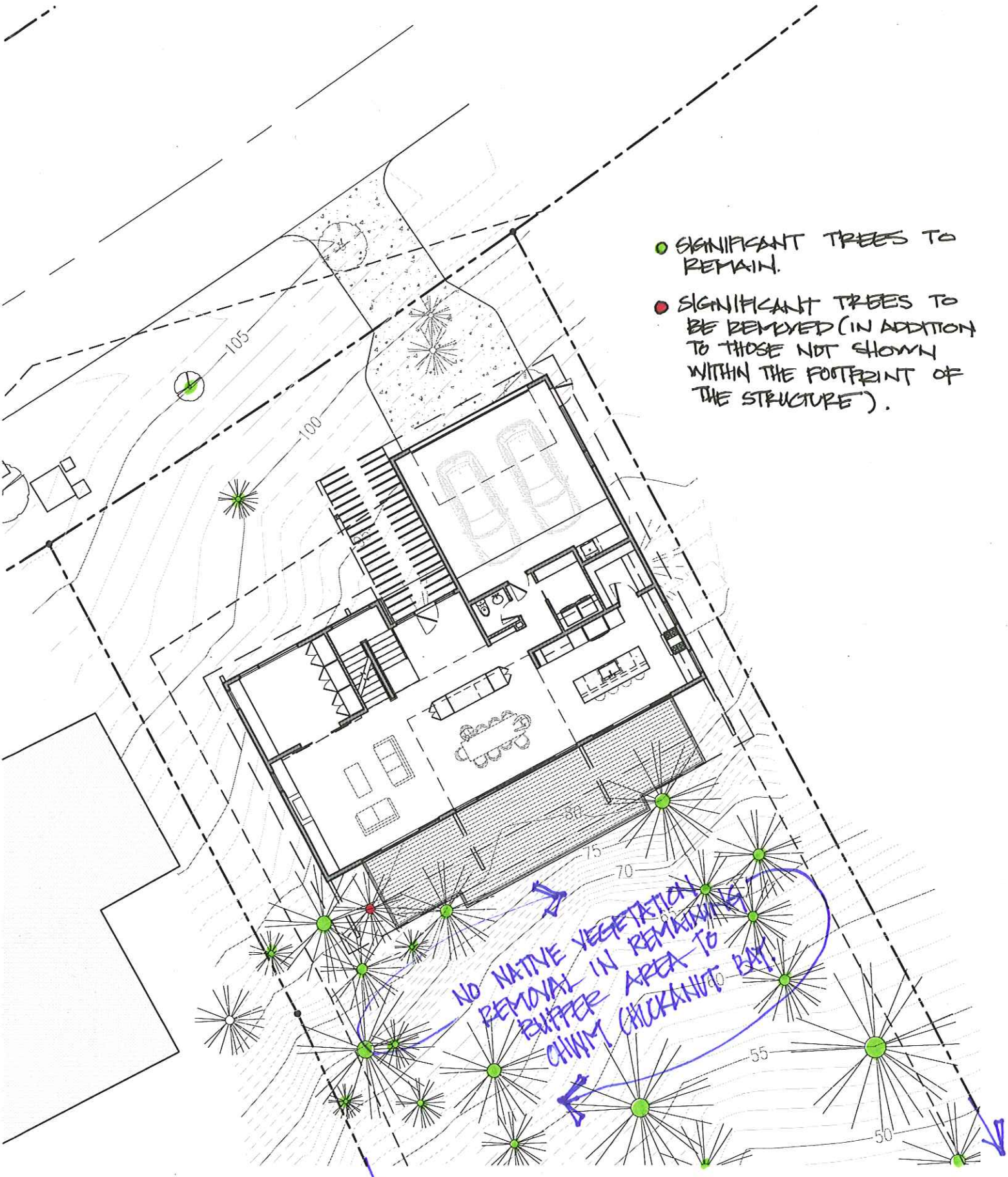
If you have any questions, please contact Chad Yunge at (360) 715-5206 or via e-mail at chad.yunge@ecy.wa.gov.

Sincerely,

Doug Allen
Manager

Attachment: Ecology-approved site plan.

cc: Steve Sundin, PCDD



JULY 28, 2014 - ECOLOGY APPROVED SITE PLAN.