



CRITICAL AREAS STUDY & BUFFER MITIGATION PLAN FOR

Estfin, LLC – 124XX Cyrus Way

Tax Parcel Nos. 00441300003900 & 00441300004000

Acre Project #21063
City of Mukilteo File No.

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ATTACHMENTS:

1. WETLAND DETERMINATION DATA FORMS (3 DATA POINTS)
2. WETLAND RATING FORM FOR WESTERN WASHINGTON: 2014 UPDATE (1 RATING FORM)
3. CRITICAL AREAS STUDY & MITIGATION MAP SHEET CA1.00

SITE DESCRIPTION

On February 20, 2018 and February 26, 2019 *Acre Environmental Consulting, LLC* visited the approximate 2.74-acre site (two parcels) located at 124XX Cyrus Way in the City of Mukilteo, Washington. The site is further located as a portion of Section 27, Township 28N, Range 6E, W.M. The parcel numbers for this property are 00441300003900 & 00441300004000. The purpose of this site visit was to locate regulated critical areas on and adjacent to the subject site. Surrounding land use is comprised of commercial buildings while the site itself is undeveloped.

Access to this site is gained from the west via Cyrus Way which runs along the western border of the property. This site contains a hill in the center of the property which slopes to the north, east, and west. Large portions of this hill appear to be historic fill material. Typical vegetation on this site is represented by a canopy of red alder (*Alnus rubra*, Fac) and black cottonwood (*Populus balsamifera*, Fac), with Himalayan blackberry (*Rubus armeniacus*, Fac), salmonberry (*Rubus spectabilis*, Fac), Scotch broom (*Cytisus scoparius*, Upl), reed canarygrass (*Phalaris arundinacea*, FacW), sword fern (*Polystichum munitum*, FacU), and colonial bentgrass (*Agrostis capillaris*, Fac), common in the understory. A Category III wetland (Wetland A) is located on the eastern portion of the site and extends off-site to the east. Hydrology from this wetland drains north to a Type 4 stream that flows west along the northern portion of the property. In the City of Mukilteo, Category III wetlands with habitat scores of 5 points receive 105-foot protective buffers from their delineated edge, while Type 4 streams with assumed low mass wasting receive 50-foot standard buffers.

PROJECT DESCRIPTION

The applicant is proposing to construct warehouses and associated parking on the south and western portions of this site. In order to gain sufficient space to create a viable project, the applicant is proposing to reduce the buffers of Wetland A and Stream A to a minimum of just under fifty percent (52.6 feet). Because no other section of the Mukilteo Code provides sufficient relief from the provisions of MMC Chapter 17, the applicant is proposing to permit this project pursuant to MMC 17.52.025 (Reasonable use provisions).

To accommodate the development, the applicant is proposing to reduce the buffers of Wetland A and Stream A to a minimum of fifty percent. This will result in a total of 14,973 square feet of reduced buffer. The buffer proposed to be reduced is degraded, generally comprised of fill material, and provides a relatively a low level of functions and limited protection to the subject wetland and stream. Vegetation in the buffer currently contains a sparse canopy of red alder (*Alnus rubra*, Fac) and black cottonwood (*Populus balsamifera*, Fac) with Himalayan blackberry (*Rubus armeniacus*, Fac) and Scotch broom (*Cytisus scoparius*, Upl) dominant in the understory.

As mitigation for the proposed buffer reduction, the applicant is offering to designate a total of 3,945 square feet of buffer on the subject site and enhance the remaining 31,607 square feet of buffer on the property. The additional buffer is proposed to be designated in a manner that provides a continuous corridor of protected buffer along the east and northern portions of the property. Buffer enhancement will consist of removing invasive species and planting native trees and shrubs. As mitigation for the 11,045 (14,973 – 3,945 = 11,028) square feet of reduced buffer that cannot be replaced on the subject site, the applicant is proposing to utilize the City of Mukilteo Critical Areas Mitigation Program (CAMP) and purchase fee in-lieu credits for a total of 11,028 square feet of buffer. This represents a 1:1 ratio of impacted buffer to purchased in-lieu fee credits. The proposed ratio is recommended by the CAMP document for impacts to areas dominated by non-native plants (blackberry and scotch broom in this case). Utilizing the CAMP program for mitigation is consistent with the document Selecting Wetland Mitigation Sites Using a Watershed Approach (DOE Publication #09-06-032), and will ensure that the biological and physical functions provided by the proposed buffer mitigation will remain within the City of Mukilteo. Use of this program will also allow the applicant to achieve a reasonable use of the subject lot while improving the overall function of critical areas and buffer within the City of Mukilteo. The proposed mitigation will result in long term improvements to the overall level of critical areas functions and values on the subject site and within the City of Mukilteo.

In addition to the buffer enhancement on the subject site, the applicant is proposing to install a two rail fence and signs around the perimeter of the enhanced buffer. The signs and fencing will serve to discourage intrusion in to the critical areas.

COMPLIANCE WITH MMC 17.52.025 (REASONABLE USE PROVISIONS)

The standards and requirements of these critical area regulations are not intended and shall not be construed or applied in a manner to deny all reasonable use of private property. If the applicant demonstrates to the satisfaction of the planning director or his or her designee that strict application of these standards would deny all reasonable use of a property, development may be permitted subject to appropriate conditions. A reasonable use exception is intended as a “last resort” when no plan and/or mitigation can meet the requirements of this chapter and allow the applicant a reasonable viable use of his or her property.

B. The applicant must demonstrate to the planning director or his or her designee all of the following:

- 1. That no reasonable use with less impact on the critical area and/or the buffer is feasible and reasonable;*

Due to the extent and location of the on-site critical areas, if the required buffers were applied, they would encumber a sufficient area of the lot so as to render a commercial development inviable and a reasonable use of the site would be denied.

2. *There is no feasible and reasonable on-site alternative to the proposed activity or use that would allow reasonable use with less adverse impacts to the critical area and/or buffer. Feasible on-site alternatives shall include, but are not limited to: reduction in density or building size, phasing of project implementation, change in timing of activities, and revision of road or parcel layout or related site planning considerations;*

Placement of the proposed development on the subject property is the minimum use that would result in a feasible and reasonable use of the subject site. There is no other use that strikes a better balance between allowing the applicant a use of their property and protecting the on-site critical areas.

3. *There are no practical alternatives available to the applicant for development of the property. An alternative is practical if the property or site is available and the project is capable of being done after taking into consideration existing technology, infrastructure, and logistics in light of the overall project purpose;*

Due to the underlying zoning on the subject site, the demand for commercial property in the region, the overall cost of development, and the proposed mitigation, there is no practical alternative available to the applicant for the development of the subject property.

4. *The proposed activity or use will be mitigated to the maximum practical extent and result in the minimum feasible alteration or impairment of functional characteristics of the site, including contours, vegetation and habitat, groundwater, surface water, and hydrologic conditions, and consideration has been given to best available science;*

To accommodate the development, the applicant is proposing to reduce a total of 14,973 square feet of low functioning buffer on the subject site. As mitigation for the proposed buffer reduction, the applicant is offering to designate a total of 3,945 square feet of area as additional buffer on the subject site and enhance the remaining 31,607 square feet of buffer (the additional buffer is included in the buffer enhancement). As mitigation for the 11,028 square feet of reduced buffer that cannot be replaced on the subject site, the applicant is proposing to utilize the City of Mukilteo Critical Areas Mitigation Program (CAMP) and purchase fee in-lieu credits for a total of 11,028 square feet of buffer. The proposed mitigation is consistent with best available science as well as with the document Selecting Wetland Mitigation Sites Using a Watershed Approach (DOE Publication #09-06-032), and will ensure that the biological and physical functions provided by the

proposed buffer mitigation will remain within the City of Mukilteo. The proposed mitigation will result in long term improvements to the overall level of critical areas functions and values within the City of Mukilteo.

In addition to the buffer enhancement on the subject site, the applicant is proposing to install a two rail fence and signs around the perimeter of the enhanced buffer. The signs and fencing will serve to discourage intrusion in to the critical areas.

5. *There will be no material damage to nearby public or private property and no material threat to the health or safety of people on or off the property;*

No material damage to nearby public or private property and no material threat to the health or safety of people on or off the property will occur as a result of this project. Furthermore, the proposed mitigation is expected to increase the overall level of functions and values provided by the site and the proposed development is commensurate with existing, allowed land use in the area.

6. *The proposed activity or use complies with all local, state, and federal laws and the applicant has applied for or obtained all required state and federal approvals; and*

The proposed development complies with all local, state, and federal laws. This report is a part of the applicants efforts to obtain all applicable permits.

7. *The inability to derive reasonable use is not the result of actions by the applicant in segregating or dividing the property and creating the undevelopable condition after March 23, 1992.*

The inability to derive a reasonable economic use of this legally created lot is due to the location and extent of the on-site wetlands, streams, and buffer, and not the result any actions by the applicant.

METHODOLOGIES OF CRITICAL AREAS DETERMINATION

On February 20, 2018, *Acre Environmental Consulting, LLC* conducted a visit to the adjacent property to the south to locate wetlands and streams on and adjacent to the subject site. The methods used for delineating, classifying, and rating the critical areas in the project area are consistent with current Federal, State, and City of Mukilteo requirements. At the time of our February 20, 2018 site investigation, the weather was sunny with a temperature of 35 degrees Fahrenheit.

Wetlands were identified using the routine methodologies described in the U.S. Army Corps of Engineers Wetland Delineation Manual produced in 1987 and the U.S. Army Corps of Engineers Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region produced in May 2010 (hereinafter referred to as “the Corps Regional Supplement”). The Corps Regional Supplement is designed for concurrent use with the 1987 Corps Wetland Delineation Manual and all subsequent versions. The 2010 Regional Supplement provides technical guidance and procedures for identifying and delineating wetlands that may be subject to regulatory jurisdiction under Section 404 of the Clean Water Act. Where differences in the two documents occur, the Corps Regional Supplement takes precedence over the Corps Manual for applications in the Western Mountains, Valleys, and Coast Region.

According to the federal methodologies described above, identification of wetlands is based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soils, and the presence or evidence of persistent hydrology. Except where noted in the manuals, the three-factor approach discussed above requires positive indicators of hydrophytic vegetation, hydric soils, and wetland hydrology, to make a determination that an area is a regulated wetland. Using the aforementioned manuals, the procedure for making a wetland determination include the following:

- 1.) Examination of the site for hydrophytic vegetation (species present/percent cover);
- 2.) Examination for the presence of hydric soils in areas where hydrophytic vegetation is present; and
- 3.) The final step is determining if wetland hydrology exists in the area examined under the first two steps.

Per industry standards, *Acre Environmental Consulting, LLC* examined the entire project site. Per current City of Mukilteo requirements, *Acre Environmental Consulting, LLC* also assessed adjacent properties within 225 feet of the proposed project limits, to the maximum extent possible without entering adjacent properties. While a detailed assessment of Critical Areas on adjacent properties was not possible due to the lack of legal access, *Acre Environmental Consulting, LLC* conducted a review of all available information to assess the presence of off-site Critical Areas within 225 feet of the subject site. This review is required by the City of Mukilteo to determine if

any regulated Critical Areas exist off-site which would cause associated protective buffers to extend onto the property and affect the development proposal.

In addition to on-site field reviews, *Acre Environmental Consulting, LLC* examined aerial photographs and topographical data (elevation contours) on Snohomish County's SCOPI and SnoScape map systems. Web soil survey maps produced by the Natural Resources Conservation Service (NRCS), National Wetlands Inventory (NWI) maps produced by the U.S. Fish and Wildlife Service (USFWS), SalmonScape fish distribution maps produced by the Washington Department of Fish and Wildlife (WDFW), and StreamNet fish distribution maps produced by Pacific States Marine Fisheries Commission.

BOUNDARY DETERMINATION FINDINGS

Wetlands were classified according to the U.S. Fish and Wildlife Service (USFWS) Cowardin system Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al., 1979) and rated, by categories, according to the Washington State Department of Ecology Wetland Rating Form for Western Washington: 2014 Update, as required by the City of Mukilteo Municipal Code, Chapter 17.52 (Critical Areas Regulations). Buffers are also determined by this chapter.

Wetland A

HGM Class: Slope

Cowardin: Palustrine, Forested wetland, Broad-leaved Deciduous, Seasonally Flooded /Saturated (PFO1E)

Ecology Rating: Category III

City of Mukilteo Rating: Category III, 105' Buffer

Wetland A is a Category III wetland located on the eastern portion of the property and extending off-site to the east. Hydrology from this wetland drains to Stream A. This hydrogeomorphic (HGM) class slope wetland received a total score for functions of 16 points (6 points for Water Quality Functions, 5 points for Hydrologic Functions, and 5 points for Habitat Functions) on the DOE Wetland Rating Form for Western Washington: 2014 Update. Wetlands with scores between 16 and 19 points for all functions are classified as Category III wetlands per per MMC 17.52B.090. In the City of Mukilteo, Category III wetlands with habitat scores of 5 points receive 105-foot protective buffers from their delineated edge.

Typical vegetation in this wetland is represented by a canopy of red alder (*Alnus rubra*, Fac) with salmonberry (*Rubus spectabilis*, Fac), Himalayan blackberry (*Rubus armeniacus*, Fac), creeping buttercup (*Ranunculus repens*, Fac), lady fern (*Athyrium filix-femina*, Fac), and reed canarygrass

(*Phalaris arundinacea*, FacW), prevalent in the understory. Typical soils in this wetland have a Munsell color of very dark grayish brown (10YR 3/2) with redoximorphic features of dark yellowish brown (10YR 4/4), and a texture of gravelly sandy loam from 0 to 18 inches below the surface. Soils in this wetland were saturated to the surface during our February 20, 2018 site visit.

Stream A - Type 4

Cowardin: Riverine, Upper Perennial, Streambed, Mud (R3SB5)

City of Mukilteo Rating: Type 4 stream, 50' Buffer

A tributary to the north fork of Picnic Point Creek drains north from Wetland A and enters a storm drain that runs along the northern border of the subject site. Based on MMC 17.52C.080, this reach of stream is designated as a Type 4 stream. This designation is supported by Snohomish County which depicts this feature as a perennial non-fish habitat stream on their PDS Map Portal map system. The Forest Practices Application Review System maps (Water Type Reference maps) produced by the Washington Department of Natural Resources and the Salmonscape maps produced by the Washington Department of Fish and Wildlife do not depict this reach of stream. In the City of Mukilteo, Type 4 streams with assumed low mass wasting receive a 50-foot standard buffer.

Non - Wetland

Typical vegetation in the non-wetland portions of the site is forested, represented by a canopy of red alder (*Alnus rubra*, Fac) and black cottonwood (*Populus balsamifera*, Fac), with Himalayan blackberry (*Rubus armeniacus*, Fac), salmonberry (*Rubus spectabilis*, Fac), Scotch broom (*Cytisus scoparius*, Upl), reed canarygrass (*Phalaris arundinacea*, FacW), sword fern (*Polystichum munitum*, FacU), and colonial bentgrass (*Agrostis capillaris*, Fac), common in the understory. Typical soils in the non-wetland portions of the adjacent site have a Munsell color of very dark grayish brown (10YR 3/2), with a texture of gravelly sandy loam from 0 to 18 inches below the surface. Soils in the non-wetland areas were moist throughout the profile during our February 20, 2018 site investigation.

NATURAL RESOURCE CONSERVATION SERVICE SOILS DESCRIPTION:

The Natural Resources Conservation Service (NRCS) mapped the subject site as being underlain by Everett very gravelly sandy loam, 15 to 30 percent slopes.

The NRCS describes Everett very gravelly sandy loam, 15 to 30 percent slopes as a very deep, somewhat excessively drained soil on terraces and outwash plains. It formed in glacial outwash. Typically, the surface layer, where mixed to a depth of about 6 inches, is dark brown gravelly sandy loam. The subsoil is dark brown very gravelly sandy loam about 12 inches thick. Included in this unit are small areas of Alderwood soils on till plains, Indianola soils on terraces and

outwash plains, and Ragnar soils on outwash plains. Included areas make up about 15 percent of the total acreage. Permeability of this Everett soil is rapid. Available water capacity is low.

EXISTING FUNCTIONS AND VALUES

The methodologies for this functions and values assessment are based on professional opinion developed through past field analyses and interpretation. This assessment pertains specifically to the subject wetland, stream, and associated buffer but is typical for assessments of similar systems common to western Washington. The three main functions provided by wetlands include water quality, stormwater / hydrologic control, and wildlife habitat. Buffers serve to protect and support the functions of wetlands and streams as well as provide their own wildlife habitat, water quality, and erosion control functions.

Wetland A is a hydrogeomorphic class slope wetland and as such, has a limited ability to retain stormwater. Due to the sloped nature of this system, rather than being stored in this wetland, water is released relatively quickly to downstream systems. Therefore, this wetland provides limited stormwater storage functions.

Wetlands in western Washington often contain necessary wildlife habitat resources such as food, water, thermal cover, and hiding cover in close proximity. The subject wetland and associated buffer provides protected habitat, which becomes increasingly important as areas become further populated with humans and habitat areas become fragmented. The subject wetland provides moderate levels of habitat for wildlife as evidenced by a Habitat Function score on the Wetland Rating Form for Western Washington: 2014 Update of 5. During our site visit a black-capped chickadee (*Poecile atricapillus*), bushtit (*Psaltirparus minimus*), and a dark-eyed junco (*Junco hyemalis*), were noted in the subject wetlands and buffers.

The vegetated wetlands and associated buffers on this site serve to intercept rain fall before it strikes the soil, thereby reducing erosion and improving water quality. The presence of adsorbent soils and the biological action of the wetland vegetation, serve to remove sediment and pollutants from the water. These materials are bound in the soil and plant material providing increased water quality to downstream systems.

BUFFER ENHANCEMENT

As partial mitigation for the proposed buffer reduction, the applicant is offering to enhance the remaining 31,607 square feet of buffer on the site. Buffer enhancement is proposed to consist of removing trash and invasive species and planting the enhancement area with native trees and shrubs. Part of the on-site buffer is located in an approximate thirty foot wide strip along the northern portion of the property. Due to the presence of an 8-inch sewer pipe in this area and the potential for tree roots to damage this pipe, no trees are proposed along the northern portion of the property. The remainder of the buffer enhancement area will be planted with native trees and shrubs. This will result of 22,847 square feet of buffer planted to trees and shrubs and 8,760 square feet of buffer planted to shrubs only, for a total of 31,607 square feet of buffer enhancement on the site. Required plant quantities were calculated by assuming 60 percent of the enhancement areas planted with native trees and 40 percent of the enhancement areas planted with native shrubs. All proposed species are native to the Puget Sound region and have been selected for their benefits to wildlife and their proven success on past mitigation projects. The following native trees and shrubs are proposed to be installed within the buffer enhancement areas.

Buffer Enhancement (trees & shrubs) – 22,847 square feet

Common Name	Latin Name	Size	Spacing	Quantity
Douglas fir	<i>Pseudotsuga menziesii</i>	1 gallon	10'	70
Western red cedar	<i>Thuja plicata</i>	1 gallon	10'	70
Vine maple	<i>Acer circinatum</i>	1 gallon	5'	73
Hazelnut	<i>Corylus cornuta</i>	1 gallon	5'	73
Osoberry	<i>Oemleria cerasiformis</i>	1 gallon	5'	73
Snowberry	<i>Symphoricarpos albus</i>	1 gallon	5'	73
Baldhip rose	<i>Rosa gymnocarpa</i>	1 gallon	5'	73

Buffer Enhancement (shrubs only) – 8,760 square feet

Common Name	Latin Name	Size	Spacing	Quantity
Vine maple	<i>Acer circinatum</i>	1 gallon	5'	70
Hazelnut	<i>Corylus cornuta</i>	1 gallon	5'	70
Osoberry	<i>Oemleria cerasiformis</i>	1 gallon	5'	70
Snowberry	<i>Symphoricarpos albus</i>	1 gallon	5'	70
Baldhip rose	<i>Rosa gymnocarpa</i>	1 gallon	5'	70

GRASS SEEDING

Any disturbed soil in critical areas or buffers shall be seeded to the recommended grass seed mixtures below, or similar approved mixtures.

Common Name	Latin Name	lbs/1,000 sf
Tall fescue	<i>Festuca arundinacea</i>	0.4
Colonial bentgrass	<i>Agrostis tenuis</i>	0.4
Annual ryegrass	<i>Lolium multiflorum</i>	0.5
Red clover	<i>Trifolium pratense</i>	0.2

PLANTING NOTES

Mitigation projects of this sort are typically more complex to install than can be described in plans. The City of Mukilteo requires that the applicant's qualified wetland specialist and the City to monitor installation of any construction to ensure mitigation is constructed or otherwise installed according to the approved mitigation plan requirements (MMC 17.52B.140(4)(B)).

Plant in the early spring or late fall. Order plants from a reputable nursery. Care and handling of plant materials is extremely important to the overall success of the project. All plant materials recommended in this plan should be available from local and regional sources, depending on seasonal demand. Some limited species substitution may be allowed, only with the agreement of the consulting wetland professional.

The plants shall be arranged with the appropriate numbers, sizes, species, and distribution to achieve the required vegetation coverage. The actual placement of individual plants shall mimic natural, asymmetric vegetation patterns found on similar undisturbed sites in the area.

Colored surveyors ribbon, or other approved marking device shall be placed next to each planted tree and shrub to assist in locating the plants while removing the competing non-native vegetation and to assist in monitoring the plantings.

Wood chips or other suitable material shall be used for mulching in the planting areas. Any existing vegetation is to be removed from a two-foot diameter area at each planting site. Mulch is to be placed in this two-foot diameter area at a depth of three to four inches. A four-inch diameter ring around the base of each plant shall be kept free of mulch.

Water should be provided during the dry season (July 1 through October 15) for the first two years after installation to insure plant survival and establishment. A temporary above ground

irrigation system and/or water truck should provide water. Water should be applied at a rate of 1 inch of water twice per week for year one and 1 inch per week during year two.

PROJECT SUCCESS AND COMPLIANCE

Goals and Objectives of the Proposed Mitigation: The primary goals of the proposed mitigation are as follow:

- Improve the water quality and habitat functions within the disturbed buffer;
- Improve vegetative structure within the disturbed buffer;
- Improve the quantity and diversity of native vegetation within the disturbed buffer; and
- Allow for responsible development and associated infrastructure, while maintaining the ecological functions provided by the subject site.

Definition of Success: The planting areas shall meet the following performance standards:

- a) Year 1: 100 percent survival of newly planted species,
- b) Year 3: at least 80 percent survival of installed plant species,
- c) Year 5: at least 80 percent survival of installed plant species,

This mitigation plan shall support at least 80% of the native plants set forth in the approved mitigation plan by the end of five years. The species mix should resemble that proposed in the planting plans, but strict adherence to obtaining all of the species shall not be a criterion for success.

Performance Standards:

Performance Standard 1: There shall be 100 percent survival of all the plantings after Year 1 or the installation contractor shall replace the material. At least 80 percent of the plant material installed shall survive in Year 5 after installation.

Performance Standard 2: There shall be a minimum of 30 percent cover of woody species (shrub and tree canopy layers considered together) in the buffer after the first year post-installation; and a minimum of 50 percent cover by woody material after the third year post-installation; and a minimum of 80 percent cover by woody material after the fifth year post-installation. Naturally occurring, native plants shall be included in the calculation of vegetation coverage.

Performance Standard 3: There shall be no more than 10 percent cover of weedy/invasive species in the mitigation areas at any time throughout the monitoring period.

If the project meets all of the criteria for success at the end of the five-year monitoring period, no further action will be required and the financial guarantee will be returned to the applicant in full. To insure that the performance standards of the approved mitigation plan have been met, the mitigation and/or buffer enhancement site(s) shall be monitored for a minimum of five years. The monitoring period required by the city may be extended an additional two years if the wetland or buffer is not performing as expected by the mitigation or enhancement plan. The monitoring reports shall be submitted on August 1st of each year during the monitoring period. Monitoring reports shall follow the recommendations contained in the Department of Ecology's publication Guidance on Wetland Mitigation in Washington State, Part Two. This mitigation plan and the accompanying maintenance and monitoring will not be considered fully complete until written confirmation is received from the City of Mukilteo.

PROJECT MONITORING PROGRAM

Requirements for monitoring project:

1. Initial compliance report
2. Semi-annual site inspection (twice yearly, in the spring and fall) for five years
3. Annual reports (One report submitted in the fall of each monitored year)

Purpose of Monitoring:

The purpose of monitoring this mitigation project is to evaluate the success of the mitigation plantings. Success will be determined if monitoring shows that at the end of five years the stated performance standards are being met. The property owner shall grant access to the site for inspection and maintenance to the contracted wetland specialist and to the City of Mukilteo during the period of the bond or until the project is evaluated as successful.

Inspection Schedule:

Upon completion of the mitigation project, an inspection by a qualified wetland biologist will be made to determine plan compliance. An "As Built" report will be supplied to the City of Mukilteo regarding the completeness of the project. Condition monitoring of the plantings will be done by a qualified wetland biologist in the fall annually for the five-year monitoring period. A written report describing the monitoring results will be submitted to the City of Mukilteo shortly after the inspection of each monitored year. Final inspection will occur five years after completion of planting. The contracted wetland professional will prepare a final report as to the success of the project.

MAINTENANCE

The mitigation areas will require periodic maintenance to remove undesirable species and replace plant mortality. The planting areas should be maintained in spring and fall of each year for the five-year monitoring period. Maintenance may include, but will not be limited to, removal of competing grasses and invasive species (by hand if necessary), irrigation, replacement of plant mortality, and the replacement of mulch for each maintenance period. Following each monitoring visit, the project biologist will make recommendations for maintenance.

CONTINGENCY PLAN (ADAPTIVE MANAGEMENT)

If it is determined at any time during the monitoring period that the goals of the mitigation plan are not being met, a contingency plan will be devised to improve or alter those elements that are deficient. If measures beyond standard maintenance are required, a plan containing these measures will be approved by the City of Mukilteo prior to implementation.

FINANCIAL ASSURANCE

A performance bond (assurance device) shall be provided to the City of Mukilteo in the amount of 15 percent of the estimated cost for plant material and labor, monitoring, and maintenance. This bond shall be released upon a successful determination by the City of Mukilteo for all portions of this mitigation project. This project shall be considered successful if it meets the performance standards listed in this plan.

TOTAL QUANTITY OF 1-GALLON PLANTS @ \$10.50 EACH	855
ESTIMATED COST OF PLANT MATERIAL AND LABOR	\$8,977.50
ESTIMATED COST OF MONITORING (5 YEARS @ \$1,000/yr.)	\$5,000.00
ESTIMATED COST OF MAINTENANCE (5 YRS. @ \$1,500/yr.)	\$7,500.00

<u>TOTAL ESTIMATED COSTS</u>	<u>\$21,477.50</u>
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TOTAL ESTIMATED COST OF BONDING (15% OF COST OF MATERIAL AND LABOR, MONITORING, & MAINTENANCE)	\$3,221.63
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POST-PROJECT FUNCTIONS AND VALUES

Although the applicant is proposing to reduce the on-site buffer to accommodate the development, no net loss of ecological functions is expected to occur. The buffer proposed to be reduced is degraded, contains a high percentage of invasive species and provides a relatively a low level of functions and limited protection to the subject wetland and stream. The proposed buffer enhancement will remove invasive species and will increase vegetative species diversity and vegetative structure. This will increase wildlife habitat as well as water quality and stormwater storage functions. The proposed buffer reduction and buffer averaging combined with the buffer enhancement is expected to generally increase the overall level of functions and values provided by the subject site. By purchasing credits through the City of Mukilteo Critical Areas Mitigation Program for the buffer reduction which cannot be mitigated on the subject site through buffer averaging, the applicant will ensure that the biological and physical functions provided by the proposed buffer mitigation will remain within the City of Mukilteo. The proposed mitigation will result in long term improvements to the overall level of critical areas functions and values on the subject site and within the City of Mukilteo.

TERMS & CONDITIONS

The environmental consulting work conducted, including this Critical Areas Study and Buffer Mitigation Plan (collectively the “Services”) is supplied to Estfin, LLC (the “Client”) as a means of determining whether any wetlands, streams, and/or fish and wildlife habitats regulated by the City of Mukilteo Critical Areas Regulations exist on, or adjacent to the site. The Services are provided in accordance with the following General Terms and Conditions (the “Terms”). In accepting the Services provided by *Acre Environmental Consulting, LLC* (“Acre”), the Client voluntarily enters into and agrees to the binding effect of the following Terms.

This report is intended to provide information deemed relevant in the Client's attempt to comply with the regulations currently in effect. The work for this report has conformed to the standard of care employed by professional ecologists in the Pacific Northwest. All other representations or warranties, whether express or implied, are hereby disclaimed concerning the work or this report. This report is based largely on readily observable conditions and, to a lesser extent, on readily ascertainable conditions. No attempt has been made to determine hidden or concealed conditions. If such conditions exist or arise, the information contained in this report may be rendered inaccurate or incomplete based upon those conditions. Acre acts solely as an independent contractor in providing the Services to the Client, and nothing in the provision of such Services shall be construed as creating an agency, partnership, joint venture or other similar legal relationship between Acre and the Client.

Please note that Acre did not provide detailed analyses of other permitting requirements not discussed in this report (i.e., structural, drainage, geotechnical, or engineering requirements).

The laws applicable to Critical Areas are subject to varying interpretations. While Acre observed professional industry standards when completing this review, the information included in this report does not guarantee approval by any federal, state, and/or local permitting agencies. Therefore, all work on this property should not commence until permits have been obtained from all applicable agencies. If there are any questions regarding this report, please contact me at 206.450.7746.

Acre Environmental Consulting, LLC.



Louis Emenhiser
Principal Wetland Ecologist
Professional Wetland Scientist #1680

REFERENCES

Cowardin, et al, 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S.D.I. Fish and Wildlife Service. FWS/OBS-79/31. December 1979.

Environmental Laboratory. (1987). "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

Hruby, T. 2014. Washington State wetland rating system for western Washington – 2014 Update. Publication #14-06-029. Olympia, WA: Washington Department of Ecology

Mukilteo Municipal Code. Chapter 17.52 (Critical Areas Regulations) Mukilteo, Washington.

SalmonScape. Interactive Mapping website administered by the Washington Department of Fish and Wildlife. <http://wdfw.wa.gov/mapping/salmonscape/index.html>. Website last visited on September 20, 2021.

Snohomish County Planning and Development Services PDS Map Portal. <http://gismaps.snoco.org/Html5Viewer/Index.html?viewer=pdsmapportal>. Website last visited on September 20, 2021.

StreamNet. Fish Data for the Northwest. Administered by the Pacific States Marine Fisheries Commission. <http://www.streamnet.org/>. Website last visited on September 20, 2021.

U.S. Army Corps of Engineers (2010). "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)," ERDC/EL TR-10-3, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4. <http://wetland-plants.usace.army.mil/> U.S. Army Corps of Engineers Engineer Research and Development Center Cold Regions Research and Engineering Laboratory, Hanover, NH.

U.S. Fish and Wildlife Service. National Wetlands Inventory Wetlands Mapper. <http://107.20.228.18/Wetlands/WetlandsMapper.html#>. Last modified May 1, 2021. Website last visited on September 20, 2021.

Web Soil Survey. United States Department of Agriculture. Natural Resources Conservation Service. <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>. Website last visited on September 20, 2021.

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

Project/Site: 12303 Cyrus Way City/County: Mukilteo / Snohomish County Sampling Date: 02.20.18
 Applicant/Owner: Estfin, LLC State: WA Sampling Point: DP1
 Investigator(s): Louis Emenhiser Section, Township, Range: S27, T28N, R4E, W.M.
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Convex Slope (%): 7 %
 Subregion (LRR): LRR-A Lat: 47.886807 Long: -122.285086 Datum: _____
 Soil Map Unit Name: Everett very gravelly sandy loam, 15 to 30 percent slopes. NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: Wetland A.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Alnus rubra</u>	<u>60</u>	<u>Y</u>	<u>Fac</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<u>60</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10 meters</u>) 1. <u>Rubus spectabilis</u> <u>30</u> <u>Y</u> <u>Fac</u> 2. <u>Rubus armeniacus</u> <u>10</u> <u>Y</u> <u>Fac</u> 3. _____ 4. _____ 5. _____				
<u>40</u> = Total Cover				
Herb Stratum (Plot size: <u>1 meter</u>) 1. <u>Ranunculus repens</u> <u>50</u> <u>Y</u> <u>Fac</u> 2. <u>Phalaris arundinacea</u> <u>20</u> <u>Y</u> <u>FacW</u> 3. <u>Athyrium filix-femina</u> <u>20</u> <u>Y</u> <u>Fac</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is $\bar{A}3.0^1$ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u>90</u> = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>5</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Remarks:				

SOIL

Sampling Point: DP1

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input checked="" type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |

- ___ 2 cm Muck (A10)
 ___ Red Parent Material (TF2)
 ___ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA |
| <input type="checkbox"/> High Water Table (A2) | 1, 2, 4A, and 4B) |
| <input checked="" type="checkbox"/> Saturation (A3) | Salt Crust (B11) |
| <input type="checkbox"/> Water Marks (B1) | Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| Drift Deposits (B3) | Oxidized Rhizospheres along Living Roots (C3) |
| Algal Mat or Crust (B4) | Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| Surface Soil Cracks (B6) | Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ✓ No Depth (inches): 0

Water Table Present? Yes ✓ No Depth (inches):

Saturation Present? Yes ✓ No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

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

Project/Site: 12303 Cyrus Way City/County: Mukilteo / Snohomish County Sampling Date: 02.20.18
 Applicant/Owner: Estfin, LLC State: WA Sampling Point: DP2
 Investigator(s): Louis Emehiser Section, Township, Range: S27, T28N, R4E, W.M.
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Convex Slope (%): 30 %
 Subregion (LRR): LRR-A Lat: 47.886726 Long: -122.285268 Datum: _____
 Soil Map Unit Name: Everett very gravelly sandy loam, 15 to 30 percent slopes. NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Non wetland west of Wetland A and data point 1.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
1. <u>Alnus rubra</u>	<u>40</u>	<u>Y</u>	<u>Fac</u>	
2. <u>Populus balsamifera</u>	<u>40</u>	<u>Y</u>	<u>Fac</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<u>80</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10 meters</u>) 1. <u>Rubus armeniacus</u> <u>70</u> <u>Y</u> <u>Fac</u> 2. <u>Rubus spectabilis</u> <u>5</u> <u>N</u> <u>Fac</u> 3. _____ 4. _____ 5. _____				
<u>75</u> = Total Cover				
Herb Stratum (Plot size: <u>1 meter</u>) 1. <u>Polystichum munitum</u> <u>20</u> <u>Y</u> <u>FacU</u> 2. <u>Phalaris arundinacea</u> <u>10</u> <u>Y</u> <u>FacW</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____				
<u>30</u> = Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is $\bar{A}3.0^1$ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>5</u>				
Remarks:				

SOIL

Sampling Point: DP2

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			Wetland Hydrology Indicators	
Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)		
Field Observations:				
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks:				

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

Project/Site: 12303 Cyrus Way City/County: Mukilteo / Snohomish County Sampling Date: 02.20.18
 Applicant/Owner: Estfin, LLC State: WA Sampling Point: DP3
 Investigator(s): Louis Emenhiser Section, Township, Range: S27, T28N, R4E, W.M.
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Convex Slope (%): 18 %
 Subregion (LRR): LRR-A Lat: 47.886807 Long: -122.285086 Datum: _____
 Soil Map Unit Name: Everett very gravelly sandy loam, 15 to 30 percent slopes. NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Non wetland in the center of the adjacent property to the south.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Alnus rubra</u>	<u>40</u>	<u>Y</u>	<u>Fac</u>	
2. <u>Populus balsamifera</u>	<u>30</u>	<u>Y</u>	<u>Fac</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<u>70</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10 meters</u>)				
1. <u>Rubus armeniacus</u>	<u>50</u>	<u>Y</u>	<u>Fac</u>	
2. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is $\bar{A}3.0^1$ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>50</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Herb Stratum (Plot size: <u>1 meter</u>)				
1. <u>Agrostis capillaris</u>	<u>50</u>	<u>Y</u>	<u>Fac</u>	
2. <u>Phalaris arundinacea</u>	<u>20</u>	<u>Y</u>	<u>FacW</u>	
3. <u>Polystichum munitum</u>	<u>10</u>	<u>N</u>	<u>FacU</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
<u>70</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>5</u>				
Remarks:				

SOIL

Sampling Point: DP3

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

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

- ____ 2 cm Muck (A10)
 ____ Red Parent Material (TF2)
 ____ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA |
| <input type="checkbox"/> High Water Table (A2) | 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

Saturation Present? Yes _____ No ✓ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes No ✓

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

Remarks:

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Esthyn Cyns - Wet A Date of site visit: 2-2-18
 Rated by: Emily Blaser Trained by Ecology? X Yes No Date of training: 9-30-14
 HGM Class used for rating: Slope Wetland has multiple HGM classes? Y X N

NOTE: Form is not complete without the figures requested (figures can be combined).
 Source of base aerial photo/map: PDS Map Portal, Google Earth
 OVERALL WETLAND CATEGORY III (based on functions X or special characteristics)

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 - 27
 Category II – Total score = 20 - 22
X Category III – Total score = 16 - 19
 Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	H M <u>(L)</u>	H M <u>(L)</u>	H M <u>(L)</u>	
Landscaping Potential	H <u>(M)</u> L	H <u>(M)</u> L	H M <u>(L)</u>	
Value	<u>(H)</u> M L	H <u>(M)</u> L	<u>(H)</u> M L	
Score Based on Ratings	<u>6</u>	<u>5</u>	<u>5</u>	<u>16</u>

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	<u>X</u>

Score for each function based on three ratings (order of ratings is not important)
 9 = H,H,H
 8 = H,H,M
 7 = H,H,L
 6 = H,M,M
 5 = M,M,M
 4 = M,M,L
 3 = L,L,L

Wetland name or number A

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Concave point classes	D1.3, H1.1, H1.4	
Hydroperiods	D1.4, H1.2	
Boundary of water from be added to map of hydroperiods	D1.3, D4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D2.2, D5.2	
Map of the contributing basin	D4.2, D5.5	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H2.1, H2.2, H2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D3.1, D3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (from web)	D3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Concave point classes	H1.2, H1.4	
Hydroperiods	H1.2	
Pointed depressions	H1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	H2.4	
Plant cover of trees, shrubs, and herbaceous plants	H1.2, H2.2	
Width of bank vs. width of stream (can be added to another figure)	H4.3	
Map of the contributing basin	H2.2, H2.3, H2.5	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H2.1, H2.2, H2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R3.1	
Screen capture of list of TMDLs for WRIA in which wetland is found (from web)	R3.2, R3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Concave point classes	L1.2, L1.3, H1.1, H1.4	
Plant cover of trees, shrubs, and herbaceous plants	L1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H2.1, H2.2, H2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L3.1, L3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (from web)	L3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Concave point classes	H1.1, H1.4	
Hydroperiods	H1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (can be added to figure above)	S4.1	
Boundary of 150 ft buffer (can be added to another figure)	S2.1, S5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H2.1, H2.2, H2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S3.1, S3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (from web)	S3.3	

Wetland name or number A

HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

NO - go to 2

YES - the wetland class is **Tidal Fringe** - go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

NO - Saltwater Tidal Fringe (Estuarine)

If your wetland can be classified as a **Freshwater Tidal Fringe** use the forms for **Riverine wetlands**. If it is **Saltwater Tidal Fringe** it is an **Estuarine wetland** and is not scored. This method cannot be used to score functions for estuarine wetlands.

YES - **Freshwater Tidal Fringe**

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

NO - go to 3

YES - The wetland class is **Flats**

If a wetland can be classified as a **Flats wetland**, use the form for **Depressional wetlands**.

3. Does the entire wetland unit meet all of the following criteria?

— The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac. (8 ha) in size;
— At least 70% of the open water area is deeper than 6.6 ft (2 m).

NO - go to 4

YES - The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit meet all of the following criteria?

X The wetland is on a slope (slope can be very gradual).

X The water flows through the wetland in one direction (unidirectional) and usually comes from steep slopes. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

X The water leaves the wetland **without being impounded**.

NO - go to 5

YES - The wetland class is **Slope**

NOTE: Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <1 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit meet all of the following criteria?

— The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

— The overbank flooding occurs at least once every 2 years.

Wetland name or number A

YES - The wetland class is **Riverine**

NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding.

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? This means that any outlet, if present, is higher than the interior of the wetland.

NO - go to 7

YES - The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO - go to 8

YES - The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

If you are still unable to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

Wetland name or number A

SLOPE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
5.1.0. Does the site have the potential to improve water quality?	
5.1.1. Characteristics of the average slope of the wetland: (a) 3% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance Slope is 1% or less Slope is > 1% to 3% Slope is > 3% to 5% Slope is greater than 5%	points = 3 points = 2 points = 1 points = 0
5.1.2. The soil is below the surface for dirt, sand, or true clay or true organic (use NRCS definitions): wa = 3 hn = 0	0
5.1.3. Characteristics of the plants in the wetland that help wetlands and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and without means not ground or mowed and plants are higher than 6 in. Dense, uncut, herbaceous plants > 90% of the wetland area Dense, uncut, herbaceous plants > 5% of area Dense, uncut, herbaceous plants > 1% of area Does not meet any of the criteria above for plants	points = 6 points = 3 points = 2 points = 1 points = 0
Total for 5.1	3
Add the points in the boxes above	
Rating of Site Potential If score is: $\underline{12} = H$ $\underline{6-11} = M$ $\underline{0-5} = L$ Record the rating on the first page	
5.2.0. Does the landscape have the potential to support the water quality function of the site?	
5.2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?	Yes = 1 No = 0
5.2.2. Are there other sources of pollutants coming into the wetland that are not listed in question 5.2.1?	Yes = 1 No = 0
Other sources	
Total for 5.2	0
Add the points in the boxes above	
Rating of Landscape Potential If score is: $\underline{X} \geq 2 = M$ $\underline{\quad} = 0 = L$ Record the rating on the first page	
5.3.0. Is the water quality improvement provided by the site valuable to society?	
5.3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0
5.3.2. Is the wetland in a basin or sub-basin where water quality is an issue? At least one separate resource in the basin is on the 303(d) list.	Yes = 1 No = 0
5.3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the basin in which site is found.	Yes = 2 No = 0
Total for 5.3	2
Add the points in the boxes above	
Rating of Value If score is: $\underline{X} \geq 4 = H$ $\underline{1-3} = M$ $\underline{0-1} = L$ Record the rating on the first page	

Based on surveyed topo, the slope in the wetland is 6 to 7%.

Wetland name or number A

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion	
5.4.0. Does the site have the potential to reduce flooding and stream erosion?	
5.4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > 1/4 in.) or dense enough to remain erect during surface flows. Dense, uncut, rigid plants cover > 90% of the area of the wetland All other conditions	points = 1 points = 0
5.4.2. The soil is below the surface for dirt, sand, or true clay or true organic (use NRCS definitions): wa = 3 hn = 0	0
5.4.3. Characteristics of the plants in the wetland that help wetlands and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and without means not ground or mowed and plants are higher than 6 in. Dense, uncut, herbaceous plants > 90% of the wetland area Dense, uncut, herbaceous plants > 5% of area Dense, uncut, herbaceous plants > 1% of area Does not meet any of the criteria above for plants	points = 6 points = 3 points = 2 points = 1 points = 0
Total for 5.4	0
Add the points in the boxes above	
Rating of Site Potential If score is: $\underline{1} = M$ $\underline{0} = L$ Record the rating on the first page	
5.5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
5.5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses that generate excess surface runoff?	Yes = 1 No = 0
5.5.2. Are there other sources of pollutants coming into the wetland that are not listed in question 5.5.1?	Yes = 1 No = 0
Other sources	
Total for 5.5	0
Add the points in the boxes above	
Rating of Value If score is: $\underline{3-4} = H$ $\underline{1} = M$ $\underline{0} = L$ Record the rating on the first page	

NOTES and FIELD OBSERVATIONS:

Wetland name or number **A**

These questions apply to wetlands of all HGM classes.
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

<p>H 2.0. Does the site have the potential to provide habitat?</p> <p>H 2.1. Structure of plant community indicates the Common class and score within the Forested class. Check the Canadian plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 2 or more than 10% of the wetland. If it is smaller than 2.5, or Add the number of structures checked.</p> <p>— Aquatic bed — Emergent — Shrubland (where shrubs have > 30% cover) — Forested (where trees have > 30% cover) — If the wetland is forested then check if: — The forested class has 3 out of 5 strata (canopy, sub-canopy, shrub, herbaceous, moss/ground cover) that each cover 20% within the forested polygon</p> <p>H 2.2. 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 5 ac to count. Use text for descriptions of hydroperiods.</p> <p>— Permanently flooded or inundated — Seasonally flooded or inundated — Occasionally flooded or inundated — Seasonally flooded only — Permanently flowing stream or flow in, or adjacent to, the wetland — Seasonally flowing stream in, or adjacent to, the wetland — Freshwater tidal wetland</p>	<p>4 structures or more: points = 4 3 structures: points = 3 2 structures: points = 2 1 structure: points = 1 0 structures: points = 0</p> <p>1 type present: points = 3 2 types present: points = 2 3 types present: points = 1 1 type present: points = 0</p> <p>2 points 2 points</p>	1
<p>H 2.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include <i>Equisetum hyemale</i>, <i>reed canarygrass</i>, <i>purple loosestrife</i>, <i>Canadian thistle</i>. If not counted: > 19 species 5 - 19 species ≤ 5 species</p> <p>H 2.4. Interspersion of habitats Decide from the diagrams below whether interspersions among Common plant classes (described in H 2.1), or the Common and Interspersed areas (can include open water or ruderals) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high.</p> <p>None = 0 points Low = 1 point Moderate = 2 points High = 3 points</p>	<p>points = 2 points = 1 points = 0</p>	1

Wetland name or number **A**

H 3.0. Special habitat features:

<p>Check the habitat features that are present in the wetland. The number of checks is the number of points.</p> <p>— Large, deep, woody debris within the wetland (≥ 4 in diameter and 5 ft long) — Standing water (depth > 4 in) within the wetland — Underwater banks are present for at least 5.6 ft (2 m) and/or overhanging plants extend at least 3.3 ft (1 m) over a stream (or ditch), or contiguous with the wetland (for at least 33 ft (10 m)) — Stable steep banks of fine material that might be used by beaver or muskrat for damming (≥ 50 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet woodyified where wood is exposed) — At least 5 ac of this stunted persistent stands or woody branches are present in areas that are permanently or seasonally inundated (structures for egg laying by amphibians) — Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 2.1 for list of strata)</p>	<p>points = 3</p>	3
<p>Total for H 3</p>	<p>6</p>	6
<p>Rating of Site Potential If score is: 15-18 = H 7-14 = M 0-6 = L</p>	<p>Record the rating on the first page</p>	
<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p> <p>H 2.1. Accessibility (include only habitat that directly abuts wetland soil): — % undisturbed habitat: 0 = 10% moderate and low intensity land uses (2/3 = 0.3) — If total accessible habitat is: — > 1/2 (33.3%) of 1 km polygon: points = 3 — 30-13% of 1 km polygon: points = 2 — 10-19% of 1 km polygon: points = 1 — < 10% of 1 km polygon: points = 0</p> <p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland: — % undisturbed habitat: 1 = moderate and low intensity land uses (2/3 = 0.3) — Undisturbed habitat 10-50% and 1-3 patches: points = 3 — Undisturbed habitat 10-50% and > 3 patches: points = 2 — Undisturbed habitat < 10% of 1 km Polygon: points = 1 — Undisturbed habitat < 10% of 1 km Polygon: points = 0</p> <p>H 2.3. Land use intensity in 1 km Polygon: If — > 50% of 1 km Polygon is high intensity land use: points = 1 (2) — 5-50% of 1 km Polygon is high intensity: points = 0</p> <p>Total for H 2</p>	<p>points = 3 points = 2 points = 1 points = 0</p> <p>points = 3 points = 2 points = 1 points = 0</p> <p>points = 1 (2) points = 0</p>	0
<p>Rating of Landscape Potential If score is: 4-6 = H 1-3 = M 0 = L</p>	<p>Record the rating on the first page</p>	
<p>H 3.0. Is the habitat provided by the site valuable to society?</p> <p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland from the following criteria:</p> <p>Site meets ANY of the following criteria:</p> <p>— It has 3 or more priority habitats within 100 m (see next page) — It provides habitat for threatened or endangered species (any plant or animal on the state or federal list) — It is proposed as a location for an individual WDFW priority species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, or a — Statewide Marine Plan, or in a watershed plan — Site has 1 or 2 priority habitats (listed on next page) within 100 m</p> <p>Site does not meet any of the criteria above</p>	<p>points = 2 points = 1 points = 0</p>	2
<p>Rating of Value If score is: 2 = H 1 = M 0 = L</p>	<p>Record the rating on the first page</p>	

Medicaid name or number A

WDFW Priority Habitats

Ectoparasitoids listed by WARE (here completed as species of WDPA), gravity tephritids, and the countries in which they are found in Washington Department of Fish and Wildlife 2008. Priority National and Species List Olympia, Washington.
177 Pp. http://wildlife.wa.gov/publications/docs/wdpa_national_species_list_olympia_washington.html

Count how many of the following priority habitats are within 2.50 ft (300 m) of the wetland unit. **NOTE:** This question is independent of the land use between the wetland unit and the priority habitat.

- **Aspen Stands:** rare or mixed stands of aspen greater than 1 ac (0.04 ha).
- **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (Full description in WOTF FWS report).
- **Herpetarian Bards:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **Old-growth/Kenote Forests:** Old-growth west of Cascade crest. Stands of at least 2 rare species, forming a multi-layered canopy with mechanical small openings with at least 8 trees/ha (20 trees/ha) ≥ 2.5 to 181 cm dbh or a 200 year-old tree diameter. Stands with average diameter exceeding 24 in (61 cm) dbh, even-age may be less than 100%; decay, decadence, number of snags, and quantity of fine woody material is generally less than true forest in old-growth. Sub-alpine old west of the Cascade crest.

- **Ureaprop White:** Weedless stands of pure oak or oak/cedar associations where canopy coverage of the non-compensating imperishable (*Juniperus* spp.) is 25% or less (*see note above*).
- **Repeating:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Weedless Pastures:** Herbaceous, non-forested plant communities that can tolerate the form of a dry prairie or wet prairie (*Juniperus* spp.) report 10% or less (*see note above*).

- **Infrastructure**: The combination of physical, technical, and chemical processes and conditions that intend to provide essential life history requirements for in-stream fish and wildlife resources.
- **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Plain marsh, open Coast Marsh zone, and Pigeon Sound Marsh zone. *Full* description of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page!
- **Caves**: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in rocks, rock, ice, or other geological formations and is large enough to contain a human.
- **Cutts**: Cuts are then 25 ft (7.6 m) high and occurring below 500 ft elevation
- **Tallies**: Homogeneous series of rock rubble ranging in average size 0.5 – 6.5 ft (0.15 – 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap, boulders and m- to b- large; they be associated with duffs.
- **Stumps and Logs**: These are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable snag extraction, use by wildlife. Privately snags have a diameter at breast height of > 20 in (51 cm) in western Washington and > 6.5 ft (2 m) in height. Privately logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are submersed elsewhere.

Wetland Rating System for Western WA- 2014 Update
Rating Form - Effective January 1, 2015

Wetland name or number A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type		Category
<p><i>Check off on criteria that apply to the wetland. Circle the category, unless the appropriate criteria are met.</i></p>		
<p>SC 1.0. Estuarine wetlands</p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <ul style="list-style-type: none"> — The dominant water regime is tidal. — Vegetated, and — With a salinity greater than 0.5 ppt. 	<p>Yes → Go to SC 1.1</p> <p>No → Not an estuarine wetland</p>	Cat. I
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Program, National Area Preserves, State Park, or Educational, Environmental, or Scientific Reserve designated under WAC 33C-30-1517?</p>	<p>Yes → Category I No → Go to SC 1.2</p>	
<p>SC 1.2. Is the wetland part of less than 1 acre and meet at least two of the following three conditions?</p> <ul style="list-style-type: none"> — The wetland is relatively undisturbed (has no clearing, ditching, filling, dewatering, grading, and has less than 10% cover of non-native plant species. If non-native species are spawning, see page 25) — At least 10 ft of live low-water edge of the wetland has a 100 lb buffer of shrubs, forbes, or ungrazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or continuous freshwater wetlands. 	<p>Yes → Category I No → Category II</p>	Cat. II
<p>SC 2.0. Wetlands of High Conservation Value (WHCV)</p> <p>SC 2.1. Has the WA Department of Natural Resources spotted their website to include the list of Wetlands of High Conservation Value?</p>	<p>Yes → Go to SC 2.2</p> <p>No → Go to SC 2.3</p>	Cat. I
<p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?</p>	<p>Yes → Category I No → Not a WHCV</p>	
<p>SC 2.3. Is the wetland in a section/ownership/region that contains a National Heritage wetland? (http://www2.dnr.wa.gov/ehp/departmental/departmental.html)</p>	<p>Yes → Category I No → Not a WHCV</p>	Cat. I
<p>SC 2.4. Has WDNR identified the wetland within the S717 as a Wetland of High Conservation Value on their website?</p>	<p>Yes → Category I No → Not a WHCV</p>	
<p>SC 3.0. Bogs</p> <p>Does the wetland (or any part of the unit) meet both the criteria for both wet-types in bogs? Use the key below. If you answer YES you will need to rate the wetland based on its function.</p>	<p>Yes → Go to SC 3.1</p> <p>No → Go to SC 3.2</p>	Cat. I
<p>SC 3.1. Does an area within the wetland type have organic soil functions, either peats or mucks, higher than 10 cm over the first 32 cm of the soil profile?</p>	<p>Yes → Go to SC 3.3</p> <p>No → Go to SC 3.4</p>	
<p>SC 3.2. Does an area within the wetland type have organic soils, either peats or mucks, that are less than 10 cm over the first 32 cm of the soil profile?</p>	<p>Yes → Go to SC 3.3</p> <p>No → Go to SC 3.4</p>	Cat. I
<p>SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses or ground cover AND at least 30% cover of plant species listed in Table 1?</p>	<p>Yes → Is a Category I bog</p> <p>No → Go to SC 3.4</p>	
<p>SC 3.4. Does an area with peats or mucks have more than 70% cover of mosses or ground cover AND at least 30% cover of plant species listed in Table 1?</p>	<p>Yes → Is a Category I bog</p> <p>No → Is not a bog</p>	Cat. I
<p>SC 3.4. Is an area with peats or mucks forested by Sitka spruce, subalpine fir, western hemlock, western redcedar, western hemlock, lodgepole pine, quaking aspen, larch, Douglas fir, western white pine, and any of the species (for identification of species) listed in Table 1?</p>	<p>Yes → Is a Category I bog</p> <p>No → Is not a bog</p>	

Wedding Rating Systems for Western WA: 2014 Update
Rating Period: Effective January 1, 2015



Wetland A Rating Unit

Pollution generating areas (typ.)

RATING ANSWERS FOR WETLAND A

S1.3 Dense, uncut, herbaceous plants > 1/2 the wetland area.

S4.1 Dense, uncut, rigid plants cover < 90% of the area of the wetland.

S2.1 & S5.1

Approximately 71% of the area within 150' of the uphill side of Wetland A is in land use that generates pollutants and excess runoff.

H1.1 & H1.4 The wetland contains forested vegetation with 3 out of 5 strata that each cover 20% within the forested polygon; and no interspersions.

H1.2 The wetland contains saturated only and seasonally flowing stream, hydroperiods.



SCALE 1" = 200'



Acre Job: 19003
Drawn By:
L. Emenhiser
Figure 1 of 4
Date: 02.23.2018
Rev #:

PREPARED FOR:
Estfin, LLC
Attn. Andrew Shubin
12303 Cyrus Way
Mukilteo, WA 98275






WETLAND RATING MAP
ESTFIN, LLC - 12303 CYRUS WAY
MUKILTEO, WA
TAX PARCEL NO. 0041300004100.

PREPARED BY:
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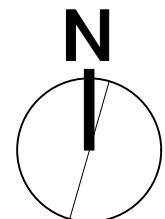


LEGEND

-  SUBJECT WETLANDS
-  HIGH INTENSITY LAND USE
-  MODERATE, AND LOW INTENSITY LAND USE
-  RELATIVELY UNDISTURBED LAND
-  ONE KILOMETER POLYGON LINE

Note: Land use definitions are derived from H2.0 Table 3 of the Wetland Rating System for Western WA: 2014 Update

This map was used to derive answers for questions H2.1, H2.2, and H2.3.



APPROX. SCALE 1" = 1,000'



Acre Job: 19003
 Drawn By:
 L. Emehiser
 Figure 2 of 4
 Date: 02.23.2018
 Rev #:

PREPARED FOR:
 Estfin, LLC
 Attn. Andrew Shubin
 12303 Cyrus Way
 Mukilteo, WA 98275

1KM POLYGON MAP (UNDISTURBED & ACCESIBLE HABITAT)
ESTFIN, LLC - 12303 CYRUS WAY
MUKILTEO, WA
TAX PARCEL NO. 0041300004100.

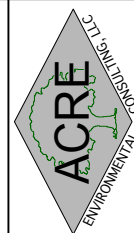
PREPARED BY:
 Acre Environmental Consulting, LLC
 17715 28th Avenue NE
 Lake Forest Park, WA 98155
 Phone: (206) 450-7746
 Email: louis@acreenvironmental.com





S3.1 The subject wetland drains directly (within 1 mile) of Picnic Point Creek listed on the 303(d) list.

S3.2 The subject wetland is located in a basin or sub-basin with an aquatic resource listed on the 303(d) list.

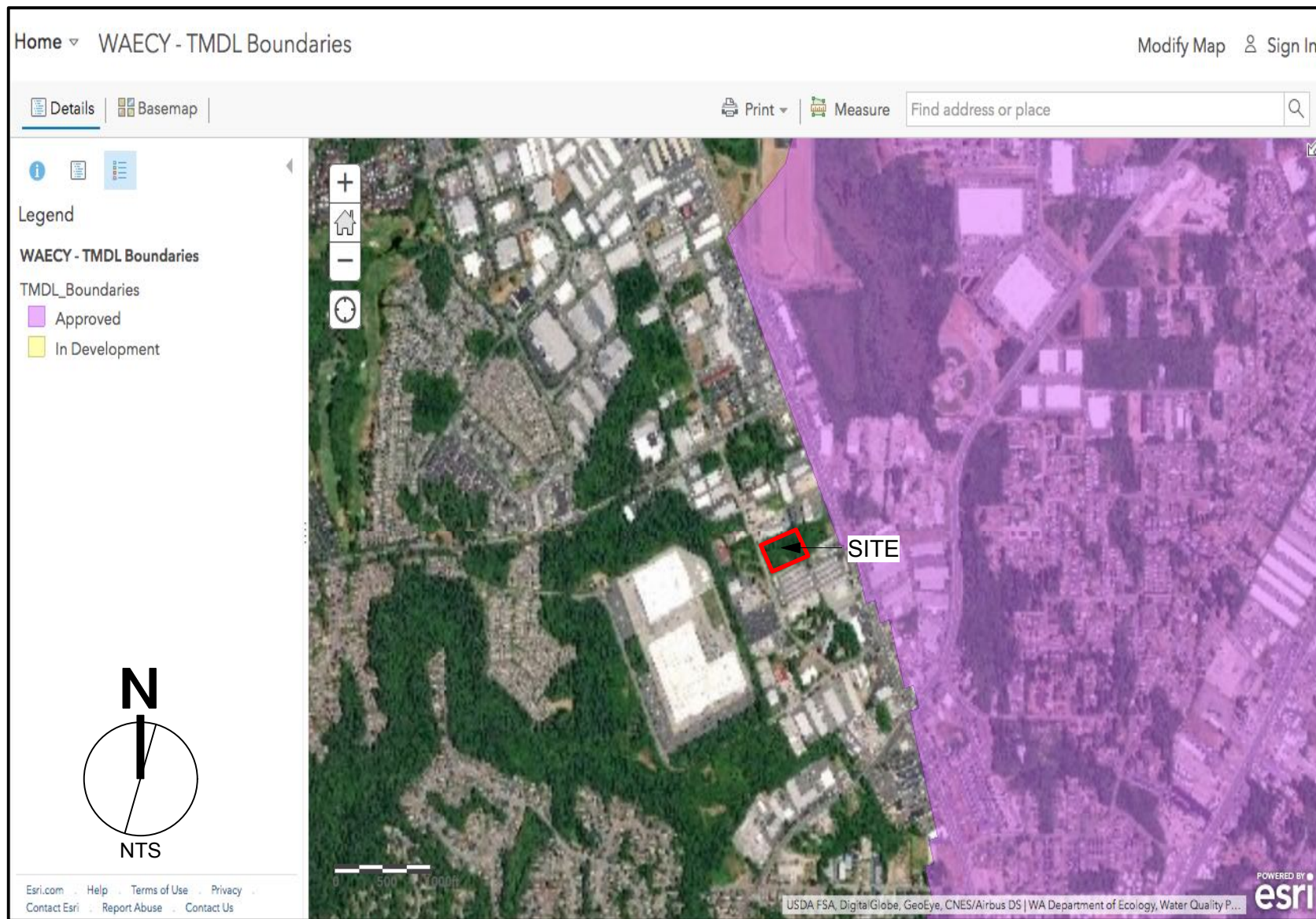


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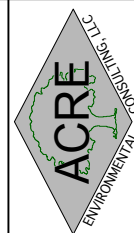
DOE 303(d) Waters in Basin (Screen Capture)
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MUKILTEO, WA
TAX PARCEL NO. 0041300004100.

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Estfin, LLC
Attn: Andrew Shubin
12303 Cyrus Way
Mukilteo, WA 98275

Acre Job: 19003
Drawn By:
L. Emmerhiser
Figure 3 of 4
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S3.3 Based on the Department of Ecology's TMDL Boundaries webpage, no TMDL's have been identified for the Picnic Point Creek Basin in which this wetland rating unit is found.



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TMDL'S FOR WRIA 8 (Screen Capture)
ESTFIN, LLC - 12303 CYRUS WAY
MUKILTEO, WA
TAX PARCEL NO. 0041300004100.

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Mukilteo, WA 98275

Acre Job: 19003
Drawn By:
L. Ementher
Figure 4 of 4
Date: 02.23.2018
Rev #:

STREAM A TYPE 4
50' STANDARD BUFFER
WITHIN EX. BIOSWALE

BUFFER
ENHANCEMENT
31,607 SF TOTAL
SHRUBS ONLY
8,760 SF

BUFFER
AVERAGING
(ADDITION)
3,945 SF TOTAL

BUFFER
PREVIOUSLY RESTORED
AS PART OF ADJACENT
PROJECT 1,482 SF

STREAM A TYPE 4
50' STANDARD BUFFER
(ASSUMES LOW MAS
WASTING)










WETLAND A
CATEGORY III
(5 HABITAT
POINTS)
105' BUFFER

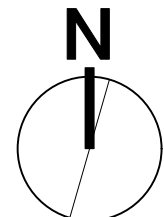
BUFFER
ENHANCEMENT
31,607 SF TOTAL
TREES & SHRUBS
22,847 SF

BUFFER
AVERAGING
(REDUCTION)
14,973 SF TOTAL

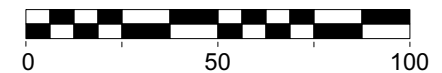
CYRUS WAY

LEGEND

-  WETLAND
-  STREAM
-  BUFFER
-  BUFFER AVERAGING
(REDUCTION)
-  BUFFER AVERAGING
(ADDITION)
-  BUFFER ENHANCEMENT
-  DATA POINT (3 TOTAL)
-  NGPA SIGN
-  TWO-RAIL FENCE



SCALE 1" = 50'



MAP
SHEET:
CA1.00



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CRITICAL AREA STUDY & MITIGATION MAP
ESTFIN, LLC - 124XX CYRUS WAY
MUKILTEO, WA
TAX PARCEL NOS. 0041300003900
& 0041300004000.

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Acre Job: 21063
Drawn By:
L. Emehiser
Date: 09.22.2021
Rev 1: 12.13.2021